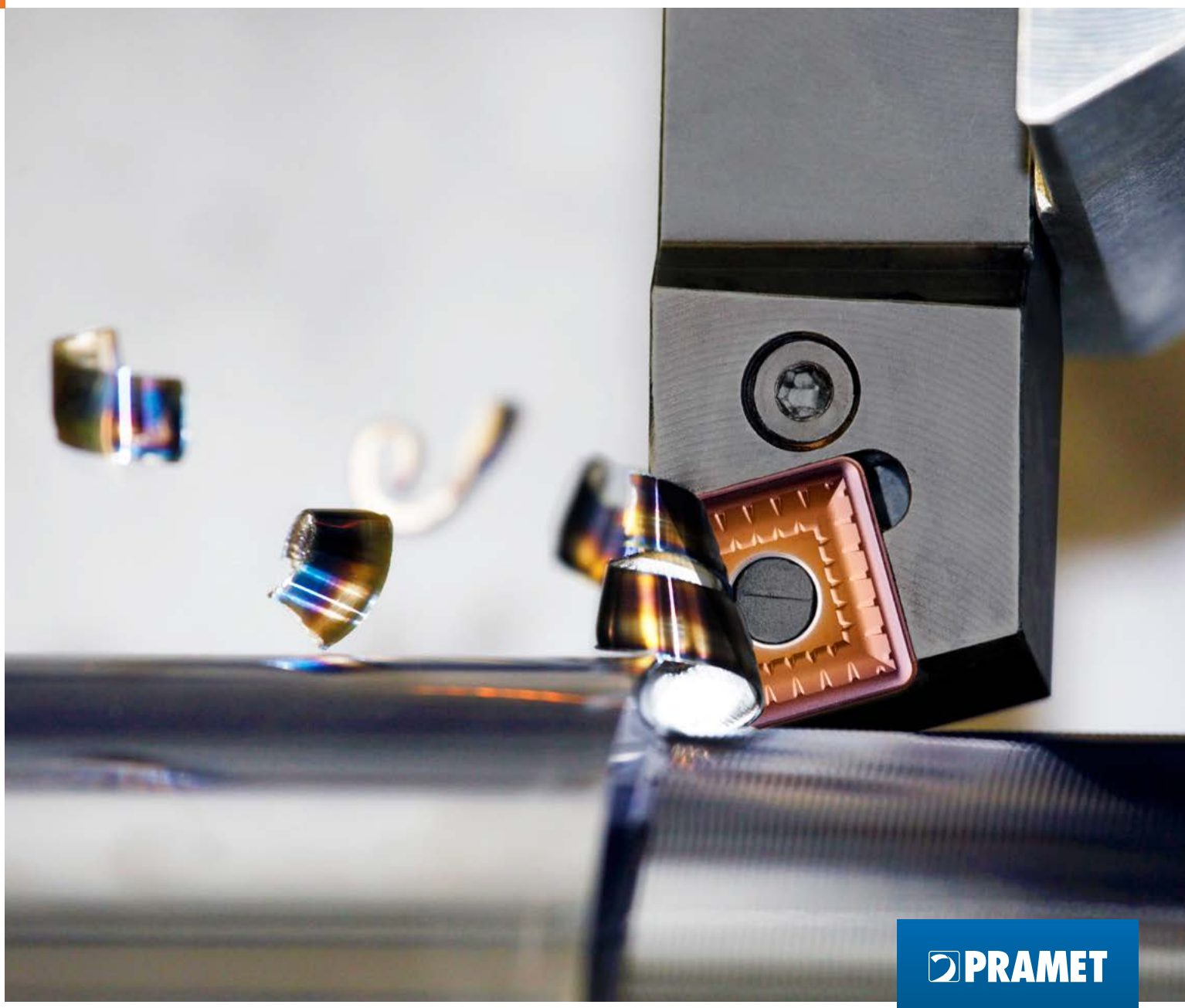
DORMER PRAMET

TORNEAMENTO 2021 – 2022



PRAMET

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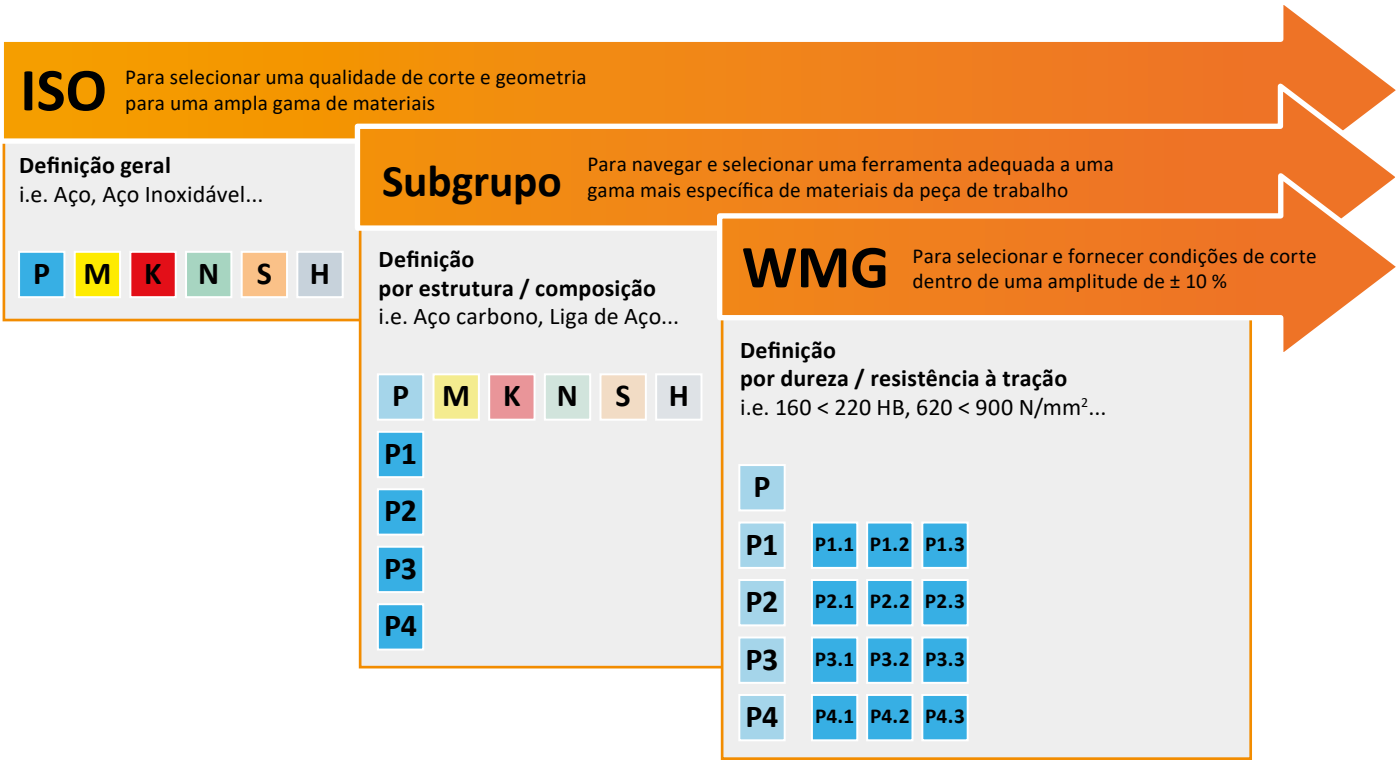
PESQUISA RÁPIDA

Faça uma pesquisa de texto fácil e rápida em qualquer publicação lançada pela Dormer Pramet na nossa recente aplicação de biblioteca. Descarregue hoje da sua loja de aplicações. **Simplesmente confiável.**



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GRUPOS DE MATERIAIS (WMG)



ACERCA DA CLASSIFICAÇÃO DORMER PRAMET SOBRE MATERIAIS DAS PEÇAS DE TRABALHO

(WMG) Tabela de Grupos de Materiais é utilizada para oferecer suporte fácil e seleção confiável da ferramenta de corte correta e valores iniciais para condições de maquinação em aplicações particulares. A Dormer Pramet classifica os materiais das peças em seis grupos de côr diferentes;

- **Azul:** Aço e aço fundido (grupo P)
- **Amarelo:** Aço inoxidável (grupo M)
- **Vermelho:** Ferro fundido (grupo K)
- **Verde:** Metais não ferrosos (grupo N)
- **Castanho:** Ligas de alta temperatura (grupo S)
- **Cinza:** Materiais endurecidos (grupo H)

Cada um deles é dividido em subgrupos com base na sua estrutura e / ou composição. Por exemplo, o aço do grupo P e o aço fundido são divididos em quatro subgrupos, nomeadamente;

- **P1** - Aço para maquinação livre
- **P2** - Aço carbono
- **P3** - Liga de aço
- **P4** - Aço ferramenta

Uma divisão final inclui propriedades do material, como dureza e resistência à tração. Isto é para fornecer aos nossos clientes uma recomendação completa da ferramenta, incluindo valores iniciais para velocidade de corte e avanço. A tabela na próxima página inclui uma descrição de cada grupo de materiais, bem como exemplos de designações mais frequentemente utilizadas.

WMG (GRUPO DE MATERIAL DE TRABALHO)

Grupo ISO		WMG (Work Material Group)			Dureza (HB or HRC)	Resistência à Tração (MPa)	Examples
P	P1	P1.1	Aço de maquinação livre (aços carbonos com maior maquinabilidade)	Sulfurado	< 240 HB	≤ 830	
		P1.2		Sulfurado e fosforizado	< 180 HB	≤ 620	
		P1.3		Enxofre/fosforado e com chumbo	< 180 HB	≤ 620	
	P2	P2.1	Aço carbono (aços compostos principalmente de ferro e carbono)	Contendo <0.25 % C	< 180 HB	≤ 620	
		P2.2		Contendo <0.55 % C	< 240 HB	≤ 830	
		P2.3		Contendo >0.55 % C	< 300 HB	≤ 1030	
	P3	P3.1	Liga de aço (aços carbonos com um teor de liga ≤ 10%)	Recozido	< 180 HB	≤ 620	
		P3.2		Endurecido e temperado	180 – 260 HB	> 620 ≤ 900	
		P3.3			260 – 360 HB	> 900 ≤ 1240	
	P4	P4.1	Aço ferramenta (liga de aço especial para ferramentas, moldes e matrizes)	Recozido	< 26 HRC	≤ 900	
		P4.2		Endurecido e temperado	26 – 39 HRC	> 900 ≤ 1240	
		P4.3			39 – 45 HRC	> 1240 ≤ 1450	
M	M1	M1.1	Aço inoxidável ferrítico (ligas não endurecíveis de cromo puro)		< 160 HB	≤ 520	
		M1.2			160 – 220 HB	> 520 ≤ 700	
	M2	M2.1	Aço inoxidável martensítico (ligas endurecíveis de cromo puro)	Recozido	< 200 HB	≤ 670	
		M2.2		Temperado e revenido	200 – 280 HB	> 670 ≤ 950	
		M2.3		Endurecido por precipitação	280 – 380 HB	> 950 ≤ 1300	
	M3	M3.1	Aço inoxidável austenítico (ligas de cromoníquel e cromo-níquel-manganês)		< 200 HB	≤ 750	
		M3.2			200 – 260 HB	> 750 ≤ 870	
		M3.3			260 – 300 HB	> 870 ≤ 1040	
	M4	M4.1	Aço inoxidável austenítico-ferrítico (DUPLEX) ou super-austenítico		< 300 HB	≤ 990	
		M4.2	Aço inoxidável austenítico de endurecimento por precipitação		300 – 380 HB	≤ 1320	
K	K1	K1.1	Ferro cinzento ou ferro cinzento automotivo (GG) (fundições de ferro carbono com microestrutura de grafite lamelar)	Ferrítico ou ferrítico-perlítico	< 180 HB	≤ 190	
		K1.2		Ferrítico-perlítico ou perlítico	180 – 240 HB	> 190 ≤ 310	
		K1.3		Perlítico	240 – 280 HB	> 310 ≤ 390	
	K2	K2.1	Ferro maleável (GTS / GTW) (fundições de ferro carbono com microestrutura livre de grafite)	Ferrítico	< 160 HB	≤ 400	
		K2.2		Ferrítico ou perlítico	160 – 200 HB	> 400 ≤ 550	
		K2.3		Perlítico	200 – 240 HB	> 550 ≤ 660	
	K3	K3.1	Ferro dúctil (GGG) (fundições de ferro carbono com microestrutura de grafite nodular)	Ferrítico	< 180 HB	≤ 560	
		K3.2		Ferrítico ou perlítico	180 – 220 HB	> 560 ≤ 680	
		K3.3		Perlítico	220 – 260 HB	> 680 ≤ 800	
	K4	K4.1	Ferro cinzento austenítico (ASTM A436) (fundições de liga de ferro carbono com microestrutura de grafite lamelar austenítica)		< 180 HB	≤ 190	
		K4.2	Ferro austenítico dúctil (ASTM A439 ou ASTM A571) (fundições de liga de ferro carbono com microestrutura de grafite nodular austenítica)		< 240 HB	≤ 740	
		K4.3	Ferro dúctil austemperado (ASTM A897) (fundições de liga de ferro carbono com microestrutura de ausferrita)		< 280 HB	> 840 ≤ 980	
		K4.4			280 – 320 HB	> 980 ≤ 1130	
		K4.5			320 – 360 HB	> 1130 ≤ 1280	
	K5	K5.1	CGI grafite de ferro compactado (ASTM A842) (fundições de ferro carbono com uma estrutura de grafite vermicular)	Ferrítico	< 180 HB	≤ 400	
		K5.2		Ferrítico ou perlítico	180 – 220 HB	> 400 ≤ 450	
		K5.3		Perlítico	220 – 260 HB	> 450 ≤ 500	
N	N1	N1.1	Alumínio forjado comercialmente puro		< 60 HB	≤ 240	
		N1.2	Ligas de alumínio forjado	Temperado meio duro	60 – 100 HB	> 240 ≤ 400	
		N1.3		Temperado totalmente duro	100 – 150 HB	> 400 ≤ 590	
	N2	N2.1	Ligas de alumínio fundido		< 75 HB	≤ 240	
		N2.2			75 – 90 HB	> 240 ≤ 270	
		N2.3			90 – 140 HB	> 270 ≤ 440	
	N3	N3.1	Materiais de liga de cobre de corte livre com excelentes propriedades de maquinação		–	–	
		N3.2	Ligas de cobre de apara curta com propriedades de maquinação boas a moderadas		–	–	
		N3.3	Cobre eletrolítico e ligas de cobre de apara longa com propriedades de maquinação moderadas a fracas		–	–	
	N4	N4.1	Polímeros termoplásticos		–	–	
		N4.2	Polímeros termofixos		–	–	
		N4.3	Polímeros reforçados ou compósitos		–	–	
	N5	N5.1	Grafite		–	–	
S	S1	S1.1	Titânio ou ligas de titânio		< 200 HB	≤ 660	
		S1.2			200 – 280 HB	> 660 ≤ 950	
		S1.3			280 – 360 HB	> 950 ≤ 1200	
	S2	S2.1	Ligas de alta temperatura à base de Fe		< 200 HB	≤ 690	
		S2.2			200 – 280 HB	> 690 ≤ 970	
	S3	S3.1	Ligas de alta temperatura à base de Ni		< 280 HB	≤ 940	
		S3.2			280 – 360 HB	> 940 ≤ 1200	
	S4	S4.1	Ligas de alta temperatura à base de Co		< 240 HB	≤ 800	
		S4.2			240 – 320 HB	> 800 ≤ 1070	
H	H1	H1.1	Ferro fundido refrigerado		< 440 HB	–	
	H2	H2.1	Ferro fundido endurecido		< 55 HRC	–	
		H2.2			> 55 HRC	–	
	H3	H3.1	Aço temperado < 55 HRC		< 51 HRC	–	
		H3.2			51 – 55 HRC	–	
	H4	H4.1	Aço temperado > 55 HRC		55 – 59 HRC	–	
		H4.2			> 59 HRC	–	

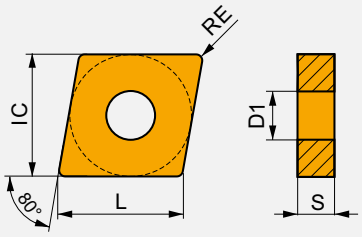
Exemplos de materiais a maquinar - consulte o capítulo FRESAS INDEXÁVEIS - INFORMAÇÕES TÉCNICAS (página 539).

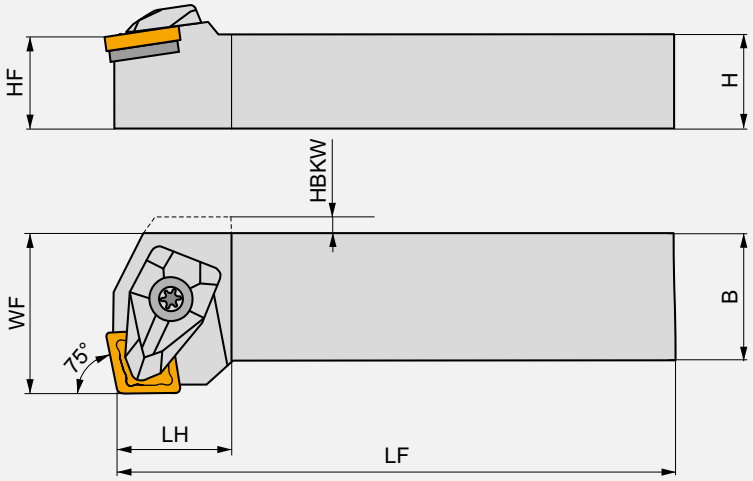
PARÂMETROS DA FERRAMENTA DE CORTE CONFORME NORMA ISO 13399

Todas as ferramentas de corte são definidas por uma série de parâmetros de acordo com a norma ISO 13399. Esta lista contém todos os parâmetros utilizados neste catálogo e suas definições.

ISO 13399 é uma norma internacional de informações sobre ferramentas de corte. Fornece dimensões e parâmetros num formato neutro que é independente de qualquer sistema específico ou nomenclatura de empresa. Quando as ferramentas de corte são claramente definidas de acordo com uma norma global, qualquer tipo de software
pode processar os dados eletrónicos com mais rapidez, melhorando a qualidade da comunicação e ajudando a tornar a troca de informações mais tranquila. A utilização de uma linguagem comum nas descrições de ferramentas de corte ajudará na comunicação entre sistemas. Isto economizará uma quantidade significativa de tempo, proporcionando uma recolha mais fácil de dados de alta qualidade nas nossas 40.000 ferramentas integrais e indexáveis. Ao usar um sistema compatível com a norma ISO 13399, não haverá necessidade de interpretar os dados e inseri-los no seu sistema manualmente.

APENAS EXEMPLOS!



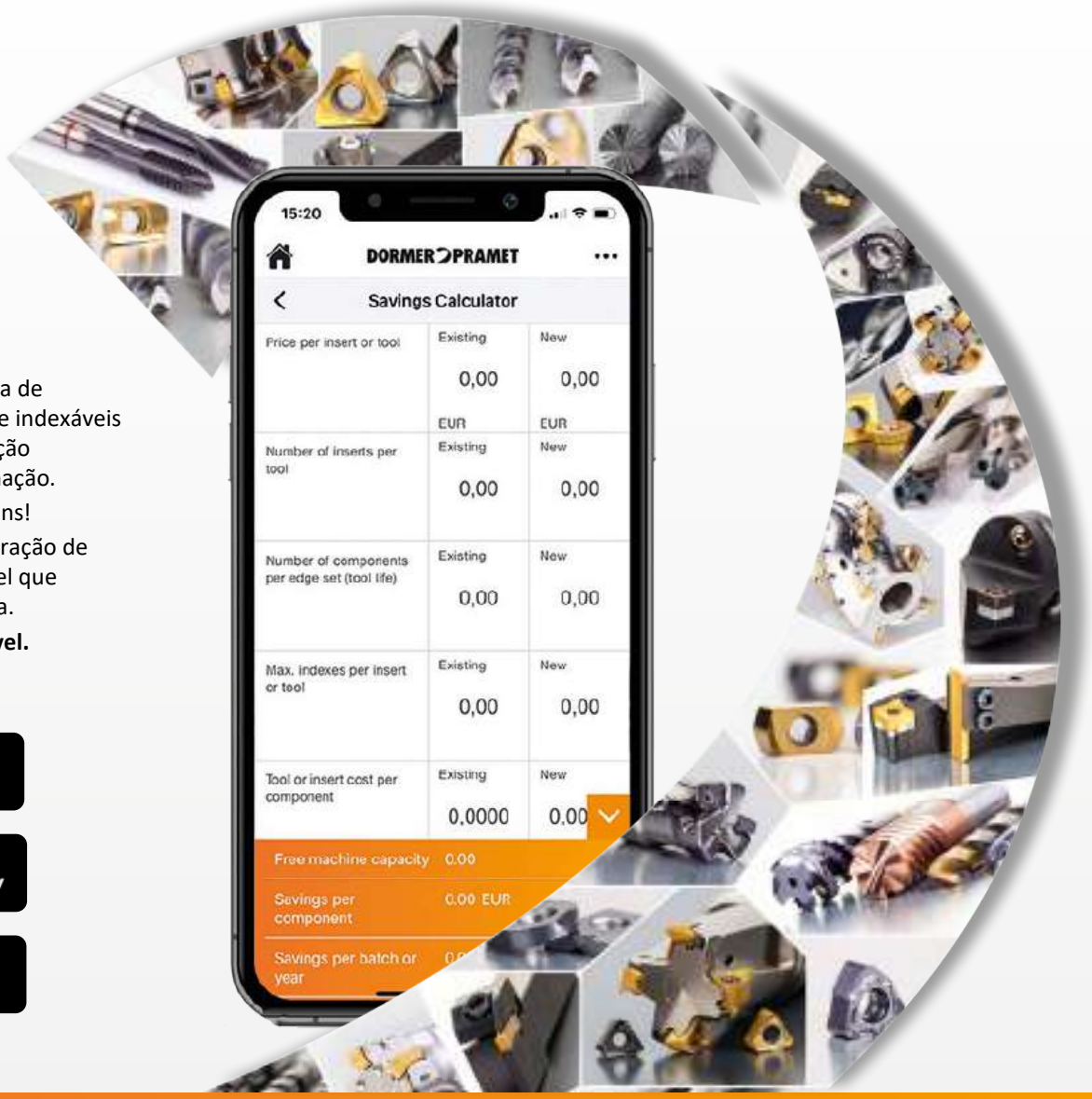


ISO 13399	Descrição
APMX	Profundidade de corte máxima
B	Largura do encabadouro
BD	Diâmetro do corpo
BLRAD	Raio de reforço da lâmina
BW	Largura do corpo da pastilha
CDX	Profundidade de corte máxima
CND	Diâmetro da entrada do refrigerante
CUTDIA	Diâmetro de corte máximo da peça
CW	Largura de corte
CWTOLL	Tolerância inferior da largura de corte
CWTOLU	Tolerância superior da largura de corte
D1	Diâmetro do furo de fixação
DAXIN	Diâmetro interior mínimo para ranhura axial
DAXN	Diâmetro exterior mínimo para ranhura axial
DAXX	Diâmetro exterior máximo para ranhura axial
DCON MS	Diâmetro de conexão
DMIN	Diâmetro mínimo do furo
DMINP	Diâmetro mínimo do furo perpendicular
GAMO	ângulo de saída ortogonal
GAMP	Ângulo de saída axial
H	Altura do encabadouro
HBH	Altura de compensação da parte inferior da cabeça
HBKW	Largura de compensação da parte inferior da cabeça
HF	Altura funcional
IC	Diâmetro do círculo inscrito
INSD	Diâmetro da pastilha
INSL	Comprimento da pastilha

ISO 13399	Descrição
KAPR	Ângulo da aresta de corte da ferramenta
L	Comprimento da aresta de corte
LAMS	Ângulo de inclinação
LB	Comprimento do corpo
LF	Comprimento funcional
LFA	Dimensão A na LF
LFS	Comprimento funcional secundário
LH	Comprimento da cabeça
LU	Comprimento útil
M	DIMENSÃO M
OAL	Comprimento total
PDX	Distância perfil X
PDY	Distância perfil Y
PSIRL	Ângulo de corte principal esquerdo
PSIRR	Ângulo de corte principal direito
RE	Raio de canto
S	Espessura da pastilha
S1	Espessura total da pastilha
TP	Passo de rosca
TPI	Fios por polegada
TPIN	Fios por polegada
TPIX	Fios por polegada
TPN	Passo de rosca mínimo
TPX	Passo de rosca máximo
W1	Largura da pastilha
WF	Largura funcional
WFS	Largura funcional secundária

DORMER PRAMET

TODAS AS FERRAMENTAS JUNTAS



A nossa gama completa de ferramentas rotativas e indexáveis está incluída na aplicação calculadora de maquinação.

São mais de 40.000 itens!

Seja qual for a sua operação de maquinação, é provável que tenhamos algo para ela.

Simplesmente Confiável.

Download on the App Store

GET IT ON Google Play

Download on AppGallery

TORNEAMENTO ISO

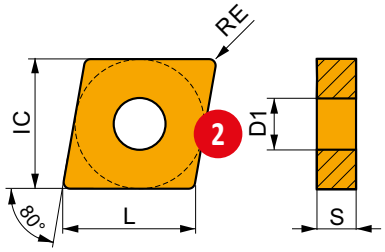


📖 6		WMG E ISO 13399
📖 10	TORNEAMENTO ISO	INSTRUÇÕES
📖 18		NAVEGADORES
📖 57		PASTILHAS POSITIVAS
📖 219		PASTILHAS NEGATIVAS
📖 386		SANGRAR E RANHURAR
📖 482		TORNEAMENTO DE ROSCAS
📖 526		ESCATELAR
📖 533		INFORMAÇÃO TÉCNICA GERAL

1 CNMM

PRAMET

	IC [mm]	D1 [mm]	L [mm]	S [mm]
1204	12.700	5.16	12.90	4.76
1606	15.875	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35
2509	25.400	9.12	25.80	9.53



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
4	5		6																	
			10 Geometria DR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMM 160612E-DR	T9315	1.2	225	0.45	6.0	–	–	–	210	0.45	6.0	–	–	–	–	–	–	–	–	–
7	8	9	200	0.45	6.0	120	0.41	6.0	190	[illegible]	6.0	–	–	–	–	–	–	–	–	–
	[illegible]	[illegible]	170	0.45	6.0	100	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190608E-DR	T9315	0.8	215	0.40	8.0	–	–	–	200	0.40	8.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.40	8.0	110	0.36	8.0	180	0.40	8.0	–	–	–	–	–	–	–	–	–
CNMM 190612E-DR	T9315	1.2	220	0.45	8.0	–	–	–	205	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.45	8.0	115	0.41	8.0	185	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	8.0	100	0.41	8.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190616E-DR	T9325	1.6	195	0.50	9.0	115	0.45	9.0	185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	170	0.50	9.0	100	0.45	9.0	–	–	–	–	–	–	–	–	–	–	–	–
			Geometria HR para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
CNMM 190616E-HR	6640	1.6	75	0.60	10.0	45	0.54	10.0	70	0.60	10.0	–	–	–	–	–	–	–	–	–
	T8345	1.6	55	0.60	10.0	30	0.54	10.0	50	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	105	0.60	10.0	60	0.54	10.0	95	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	80	0.60	10.0	45	0.54	10.0	–	–	–	–	–	–	–	–	–	–	–	–

CNMM190616E-HR:T8345 Use o código de especificação completo da pastilha ao fazer o pedido!

- Qualidade
- Incluir dois pontos
- Código ISO da pastilha

Página modelo de exibição para pastilhas - os detalhes específicos da página serão diferentes.

PASTILHAS - VISÃO GERAL DA PÁGINA

Pos.	Descrição
1	Designação da Pastilha
2	Desenho Esquemático da Pastilha
3	Tabela com tamanhos de pastilhas (mm)
4	Imagem representativa da pastilha
5	Perfil da aresta de corte principal
6	Símbolos - características específicas e tipo da aresta de corte

Pos.	Descrição
7	Código ISO da pastilha
8	Qualidade
9	Raios da Pastilha (mm)
10	Descrição da geometria
11	Área de aplicação da pastilha

1 DDUN(RL) INT

P M K N S H 2

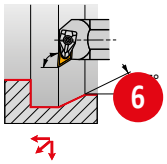
PRAMET 3 D

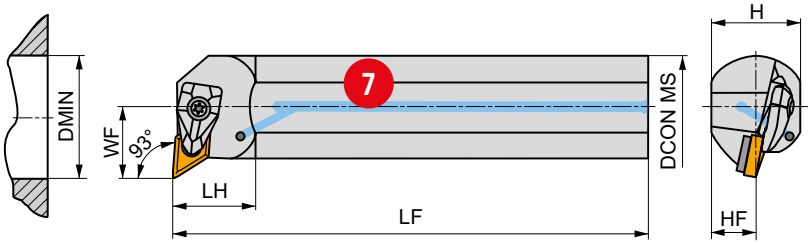
Porta-Ferramentas de Interior, Fixação Dupla, Ângulo de 93 °, para Pastilhas DN ..

Porta-ferramentas de interior à direita ou à esquerda com fixação dupla e refrigeração interna, ângulo de corte de 93 para pastilhas DN .. 11 e 15. Diâmetro mínimo de torneamento Ø32 mm. Adequado para uma ampla gama de aplicações de torneamento interno, de cópia de até 27 °. Disponível com hastes de Ø25 até Ø50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.

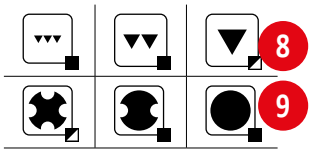

4

5


6



7


8 9

10

	Product	DCON MS [mm]	DMIN [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]	GAMO [°]		kg			
R	A25T-DDUNR 11	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNR 11	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI046	DD11	–
	A40T-DDUNR 15	40	50	27	37	18.5	300	36	-11	-6					
	A50U-DDUNR 15	50	63	35	47	23.5	350	39	-8	-6					
L	A25T-DDUNL 11	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNL 11	32	40	22	30	15	300	30	-10	-6	✓	1.69	GI046	DD11	–
	A40T-DDUNL 15	40	50	27	37	18.5	300	36	-11	-6	✓	2.59	GI044	DD154	AT002
	A50U-DDUNL 15	50	63	35	47	23.5	350	39	-8	-6	✓	5.25	GI044	DD154	AT002

11 12 13 14 15 16 17 18

19

GI044	DN.. 1506..
GI046	DN.. 1104..

20

		Nm			
DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P
DD154	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5

21

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–

Página modelo exibindo suporte de torneamento - os detalhes específicos da página serão diferentes.

SUPORTES DE TORNEAMENTO - VISÃO GERAL

Pos.	Descrição
1	Designação do suporte de torneamento
2	recomendações do grupo de material
3	Sistema de fixação da pastilha
4	Foto ilustrativa[1)]
5	Descrição da ferramenta
6	Perfil da peça de trabalho
7	Desenho esquemático da ferramenta
8	Qualidade de superfície alcançável
9	Tipo de corte / condições de trabalho
10	Aplicações do produto
11	Desenho da ferramenta

Pos.	Descrição
12	Código ISO do suporte
13	Dimensões (mm) e ângulos [2)] (°) do suporte
14	Alimentação de refrigeração interna
15	Peso (kg)
16	Grupo de pastilhas compatíveis[3)]
17	Grupo de peças sobressalentes [3), 4)]
18	Grupo de acessórios [3), 4)]
19	Pastilhas compatíveis
20	Peças sobressalentes
21	Acessórios especiais

1) Os porta ferramentas são apresentados em desenho à direita (R)

2) GAMO = ângulo ortogonal (ver secção técnica)
LAMS = ângulo de saída do fio de corte (ver secção técnica)

3) O código do grupo de pastilhas compatíveis, peças sobressalentes e acessórios especiais utiliza-se apenas para uso deste catálogo. Não pode ser utilizado para pedidos.

4) Os ícones das peças sobressalentes e acessórios especiais estão desenhados esquemáticamente para uma melhor compreensão. Não estão incluídos na lista de iconos. Em alguns casos, a informação dos parafusos completa-se com a informação de aperto em Nm, comprimento e tamanho de rosca.

SUPORTES DE TORNEAMENTO - VISÃO GERAL DOS SÍMBOLOS

SÍMBOLOS GERAIS

■	Utilização principal
◪	Utilização possível

▼▼▼	Acabamento - qualidade de superfície muito boa
▼▼	Maquinação média - boa qualidade de superfície
▼	Desbaste - rugosidade superficial ilimitada

●	Adequado para condições de trabalho estáveis
⬢	Adequado para condições de trabalho instáveis
✱	Adequado para condições de trabalho muito instáveis

CARACTERÍSTICAS

1	Primeira opção
	Para materiais de aparas curtas
	Para materiais difíceis (aparas longas)
	Condições de trabalho pesadas
HFC	Corte de alto avanço
HSC	Corte de alta velocidade

W	Pastilha com geometria Wiper
	Balanço grande
	Maquinação de roda ferroviária
	Peças finas e de paredes finas
U	Opção de ampla gama universal

F	Aresta afiada
E	Aresta arredondada
T	Aresta com faceta
S	Aresta arredondada com faceta
K	Aresta com faceta dupla
P	Aresta arredondada com faceta dupla

OPERAÇÕES DE TORNEAMENTO

	Torneamento Cónico - Exterior
	Torneamento Cónico - Interior
	Torneamento de cópia (maquinação multidirecional)
	facejamento em cópia
	facejamento em cópia em furo
	facejamento com esquadria
	Facejamento sem esquadria

	Chanfrar (biselado)
	Chanfrar (biselado) traseiro
	Chanfrar (biselado) em furo
	Torneamento longitudinal com esquadria - exterior
	Torneamento longitudinal com esquadria - interior
	Torneamento longitudinal sem esquadria - exterior
	Torneamento longitudinal sem esquadria - interior

	Facejamento traseiro (esquadria)
	Torneamento em cópia multidirecional exterior
	Torneamento em cópia multidirecional - interior
	Torneamento em cópia unidirecional - exterior
	Torneamento em cópia unidirecional - interior
	Ranhura radial pouco profunda

SUPORTES DE TORNEAMENTO - VISÃO GERAL DOS SÍMBOLOS

SECÇÃO TÉCNICA

FF	Acabamento fino
F	Acabamento
M	Mecanização média
R	Desbaste
HR	Desbaste pesado
X.V	Fator de multiplicação para a velocidade de corte
a_p	Profundidade de corte (mm)

f	Avanço (mm/rot)
	Durabilidade (min)
	Qualidade
(MT)CVD PVD	Revestimento
V	Velocidade de corte
	Perfil do fio de corte
	Refrigerante

	Velocidade de corte muito elevada (condições estáveis)
	Velocidade de corte elevada, alta rigidez do sistema (condicções estáveis)
	Velocidade de corte elevada, rigidez do sistema ligeiramente limitada (altera a profundidade de corte)
	Velocidade de corte média, rigidez do sistema limitada (corte ligeiramente interrompido)
	Velocidade de corte baixa, rigidez do sistema baixa (corte interrompido)
	Velocidade de corte muito baixa, rigidez do sistema muito baixa (condições muito instáveis)

OUTROS

Nm	Torque de aperto do parafuso (Nm)
	Grupo de cabeças para desbaste
	Alimentação de refrigerante interno

PASTILHAS POSITIVAS ISO - NAVEGADOR

CCGT



60

CCMT



62

CCMW



68

CCGW CBN



69

DCGT



86

DCMT



87

DCMW



92

DCGW CBN



92

DCMW PCD



93

ECGT



104

ECMT



105

ECMW



106

EPGX



110

EPMT



110

RCGT



118

RCMT



118

RCMW



120

RCMX



121

RCGX CER



123

SCGT



134

SCMT



135

SCMW



138

SPMR



146

SPUN



146

SPGN CER



147

TCGT



149

TCMT



150

TCMW



154

TCGW CBN



154

PASTILHAS POSITIVAS ISO - NAVEGADOR

TPGX



162

TPMR



163

TPUN



164

TPGN CER



164

VBMT



168

VBGW CBN



171

VCGT



186

VCGW



189

VCGX



189

VCMT



190

VCMW



191

VCMW PCD



192

WCGT



212

WCGX



213

WCMT



213

CNGG



222

CNMA



222

CNMG



223

CNMM



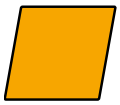
234

CNGA CER



238

CNGN CER



238

CNGA CBN



239

DNMA



260

DNMG



260

DNMM



270

DNGA CER



271

DNGN CER



271

DNGA CBN



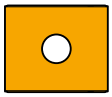
272

KNUX



284

LNUX 40, LN.X 50



289

RNMG



294

RNGN CER



294

PASTILHAS NEGATIVAS ISO - NAVEGADOR

SNMA



300

SNMG



301

SNMM



307

SNMX



311

SNGA CER



311

SNGN CER



312

TNMA



334

TNMG



335

TNMM



342

TNGA CER



343

TNGN CER



344

TNGA CBN



344

VNMG



356

VNGA CER



359

VNGA CBN



359

WNMA



366

WNMG



366

WNMM



375

WNGA CBN



376

P

Primeira escolha

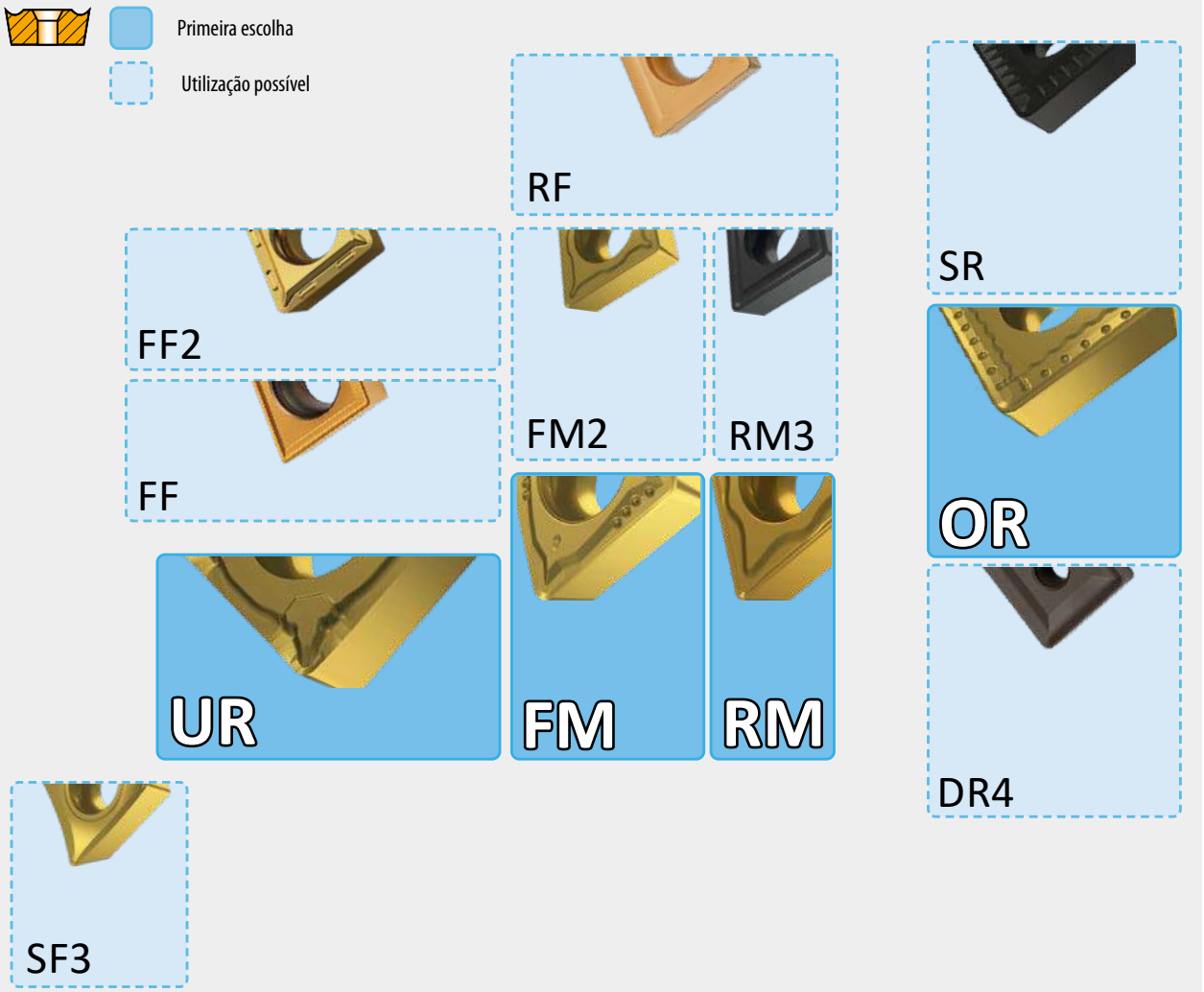
Utilização possível

Condições de trabalho muito instáveis

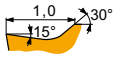
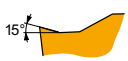
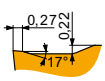
Condições de trabalho instáveis

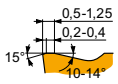
Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

UR		Adequado para operações de maquinação fino a operações de acabamento, aços e ferros fundidos e potencialmente aço inoxidável, cortes contínuos e interrompidos
FM		Adequado para operações de maquinação de acabamento a semi desbaste, aços e aços inoxidáveis, potencialmente ferros fundidos e materiais não ferrosos, cortes contínuos e moderadamente interrompidos
RM		Adequado para operações de maquinação de semi desbaste, aços, aço inoxidáveis e ferros fundidos, potencialmente superligas e materiais endurecidos, cortes contínuos e interrompidos

OR		Adequado para operações de maquinação de desbaste e desbaste pesado, aços, aços inoxidáveis e ferros fundidos, potencialmente superligas, cortes contínuos e interrompidos

M

Primeira escolha

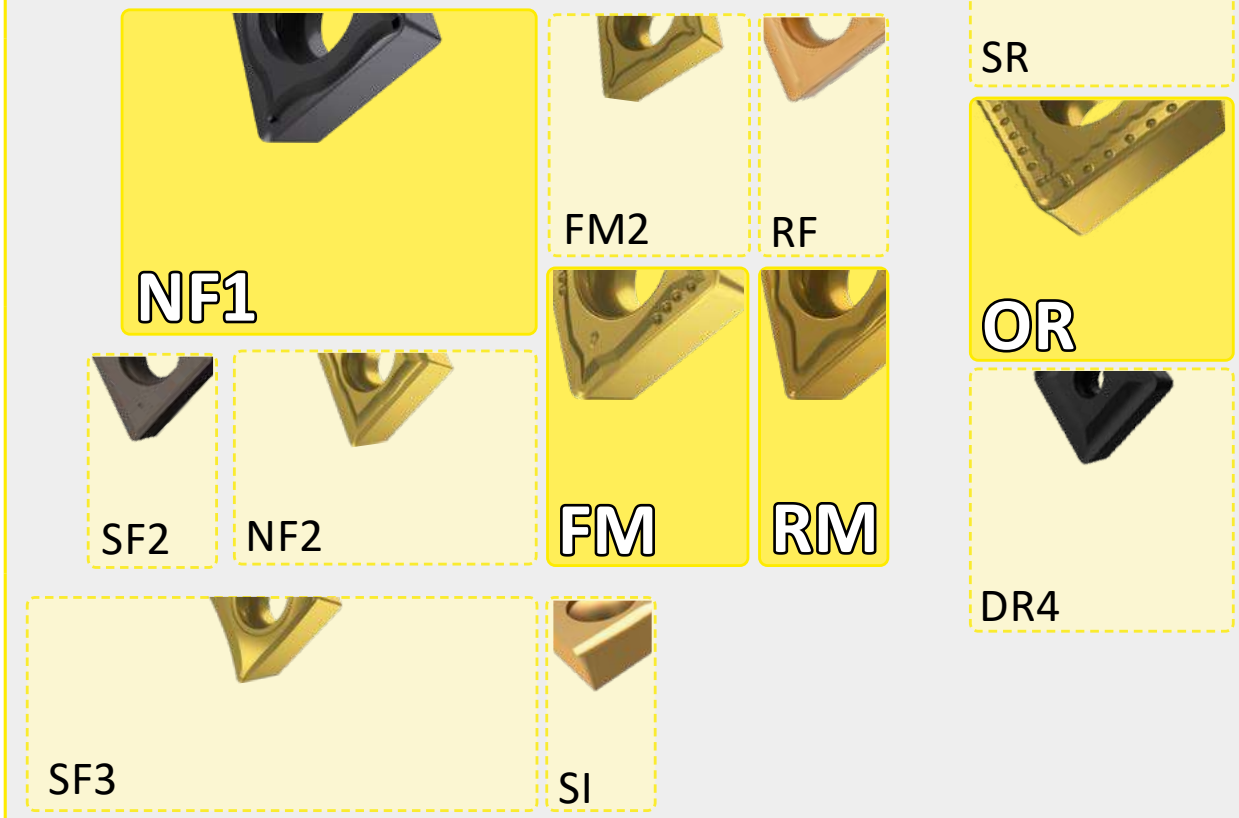
Utilização possível

Condições de trabalho muito instáveis

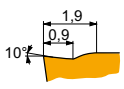
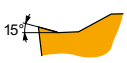
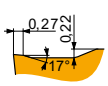
Condições de trabalho instáveis

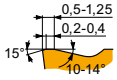
Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

NF1		Desenho positivo para operações de maquinação de acabamento fino a maquinação média, aços inoxidáveis e superligas, potencialmente aços, materiais não ferrosos e duros, cortes contínuos
FM		Adequado para operações de maquinação de acabamento a semi desbaste, aços e aços inoxidáveis, potencialmente ferros fundidos e não materiais não ferrosos, cortes contínuos e moderadamente interrompidos
RM		Adequado para operações de maquinação de semi desbaste, aços, aços inoxidáveis e ferros fundidos, potencialmente superligas e materiais endurecidos, cortes contínuos e interrompidos

OR		Adequado para operações de maquinação de desbaste e desbaste pesado, aços, aços inoxidáveis e ferros fundidos, potencialmente superligas, cortes contínuos e interrompidos

K

Primeira escolha

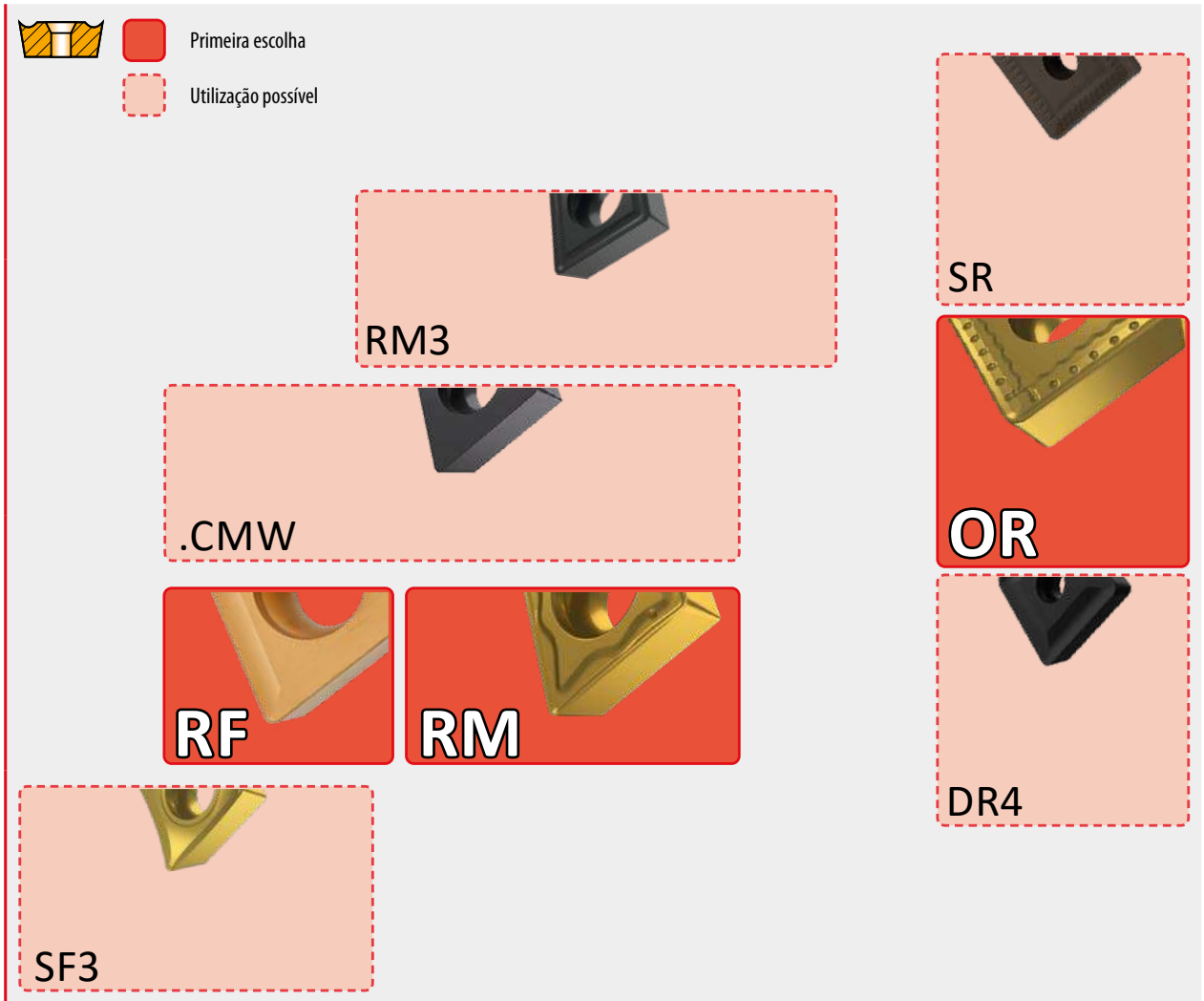
Utilização possível

Condições de trabalho muito instáveis

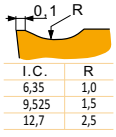
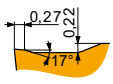
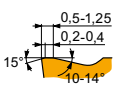
Condições de trabalho instáveis

Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

RF	 I.C. / R: 6,35 / 1,0; 9,525 / 1,5; 12,7 / 2,5	Adequado para operações de maquinação de desbaste, ferros fundidos, potencialmente aços, aços inoxidáveis e materiais duros, cortes contínuos e interrompidos
RM		Adequado para operações de maquinação de semi desbaste, aços, aços inoxidáveis e ferros fundidos, potencialmente superligas e materiais endurecidos, cortes contínuos e interrompidos
OR		Adequado para operações de maquinação de desbaste e desbaste pesado, aços, aços inoxidáveis e ferros fundidos, potencialmente superligas, cortes contínuos e interrompidos

N

Condições de trabalho muito instáveis

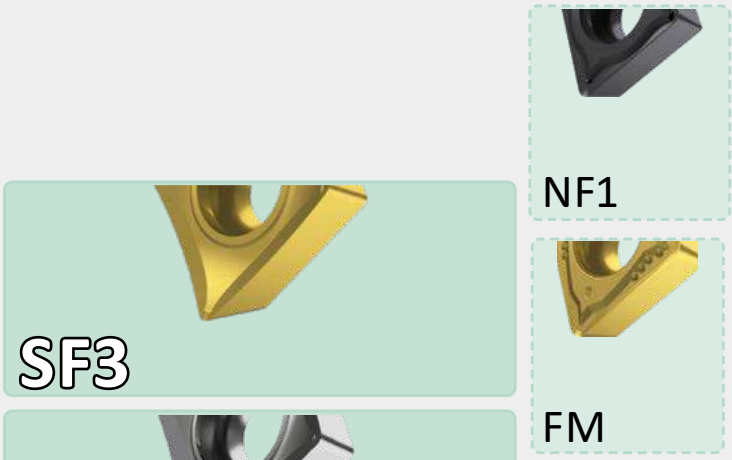
Condições de trabalho instáveis

Condições de trabalho estáveis

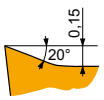
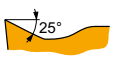
Peças finas e de paredes finas

Primeira escolha

Possible use



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF3		Desenho muito positivo para operações de maquinação fina e de acabamento, super ligas, aços inoxidáveis e materiais não ferrosos, potencialmente aço, ferros fundidos e materiais duros, cortes contínuos
AL		Desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, alumínio, ligas de alumínio e outros materiais não ferrosos, potencialmente superligas, cortes contínuos

S

Primeira escolha

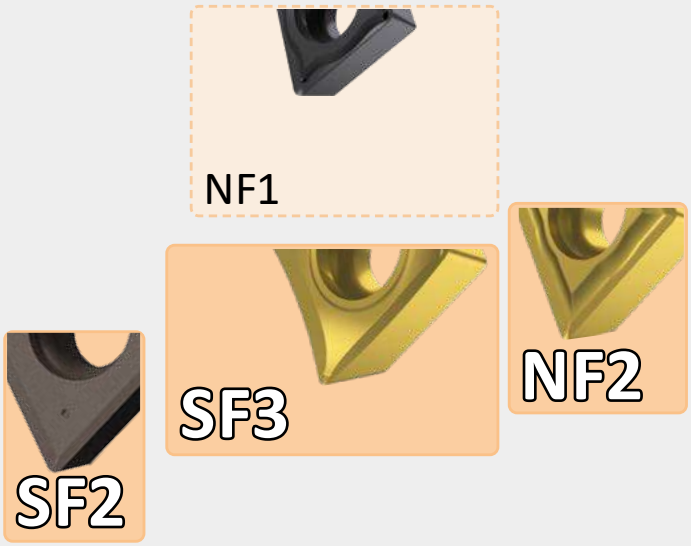
Utilização possível

Condições de trabalho muito instáveis

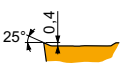
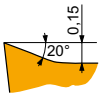
Condições de trabalho instáveis

Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF2		Desenho muito positivo para operações de maquinação fina e de acabamento, super ligas, potencialmente aços inoxidáveis, aços e materiais não ferrosos, cortes contínuos
SF3		Desenho muito positivo para operações de maquinação fina e de acabamento, super ligas, aços inoxidáveis e materiais não ferrosos, potencialmente aço, ferros fundidos e materiais duros, cortes contínuos
NF2		Desenho positivo para operações de maquinação de acabamento fino a semi desbaste, aços inoxidáveis e superligas, cortes contínuos

H



Primeira escolha

Utilização possível



Condições de trabalho muito instáveis



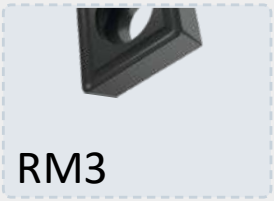
Condições de trabalho instáveis



Condições de trabalho estáveis



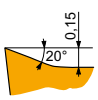
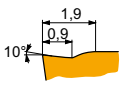
Peças finas e de paredes finas

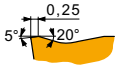






	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF3		Desenho muito positivo para operações de maquinação fina e de acabamento, super ligas, aços inoxidáveis e materiais não ferrosos, potencialmente aço, ferros fundidos e materiais duros, cortes contínuos
NF1		Desenho positivo para operações de maquinação de acabamento fino a maquinação média, aços inoxidáveis e superligas, potencialmente aços, materiais não ferrosos e duros, cortes contínuos
.CMW		Adequado para operações de maquinação de acabamento fino a semi desbaste, ferros fundidos, materiais potencialmente duros, cortes contínuos e ligeiramente interrompidos

RM3		Adequado para operações de maquinação de desbaste, ferros fundidos, potencialmente aços, aços inoxidáveis e materiais duros, cortes contínuos e interrompidos

P

Condições de trabalho muito instáveis

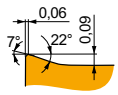
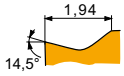
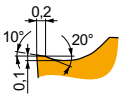
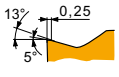
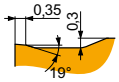
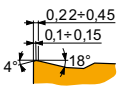
Condições de trabalho instáveis

Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

FF		Geometria altamente positiva projetada para operações de maquinação de acabamento fino, aço inoxidável e aço, potencialmente ferros fundidos, cortes contínuos
SF		Geometria positiva versátil projetada para operações de maquinação de acabamento fino, aços, aços inoxidáveis, ferros fundidos e super ligas e materiais duros, potencialmente materiais não ferrosos e para a maquinação de paredes finas, com cortes contínuos
FM		Geometria positiva projetada para operações de maquinação de acabamento a semi desbaste, aços e ferros fundidos, potencialmente superligas, cortes contínuos e moderadamente interrompidos
SM		Geometria positiva projetada para operações de maquinação média, aços inoxidáveis, superligas, aços e ferros fundidos, potencialmente materiais não ferrosos e duros e para maquinação de paredes finas, cortes contínuos e interrompidos
RM		Projetado para operações de maquinação de semi desbaste e desbaste, aços, aços inoxidáveis e ferros fundidos, potencialmente superligas, cortes contínuos e interrompidos
OR		Projetado para operações de maquinação de acabamento a desbaste pesado, aços e ferros fundidos, potencialmente aço inoxidável e superligas, cortes contínuos e interrompidos

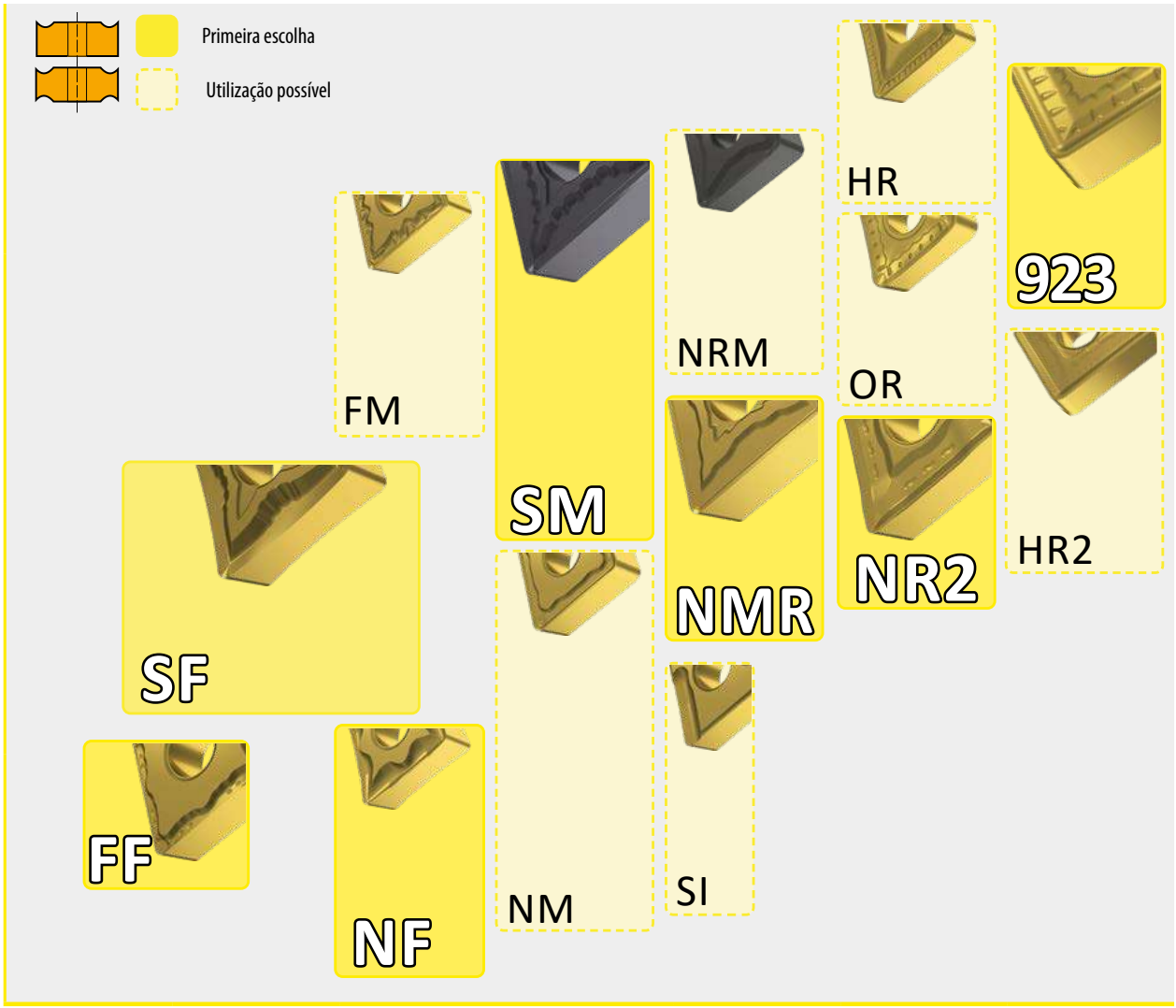
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Condições de trabalho muito instáveis

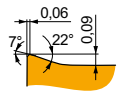
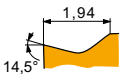
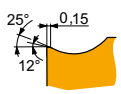
Condições de trabalho instáveis

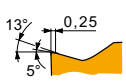
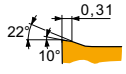
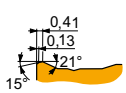
Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

FF		Geometria altamente positiva projetada para operações de maquinação de acabamento fino, aço inoxidável e aço, potencialmente ferros fundidos, cortes contínuos
SF		Geometria positiva versátil projetada para operações de maquinação de acabamento fino, aços, aços inoxidáveis, ferros fundidos e super ligas e materiais duros, potencialmente materiais não ferrosos e para a maquinação de paredes finas, com cortes contínuos
NF		Desenho altamente positivo para operações de maquinação de acabamento fino e maquinação média, aços inoxidáveis, aço, potencialmente ferros fundidos, materiais não ferrosos e superligas, cortes contínuos

SM		Geometria positiva projetada para operações de maquinação média, aços inoxidáveis, superligas, aços e ferros fundidos, potencialmente materiais não ferrosos e duros e para maquinação de paredes finas, cortes contínuos e interrompidos
NMR		Desenho positivo para operações de maquinação média a desbaste, aços inoxidáveis, bem como aços macios e superligas, cortes contínuos
NR2		Projetado para operações de maquinação de acabamento a desbaste, aços inoxidáveis e aços, potencialmente ferros fundidos e superligas, cortes contínuos e interrompidos

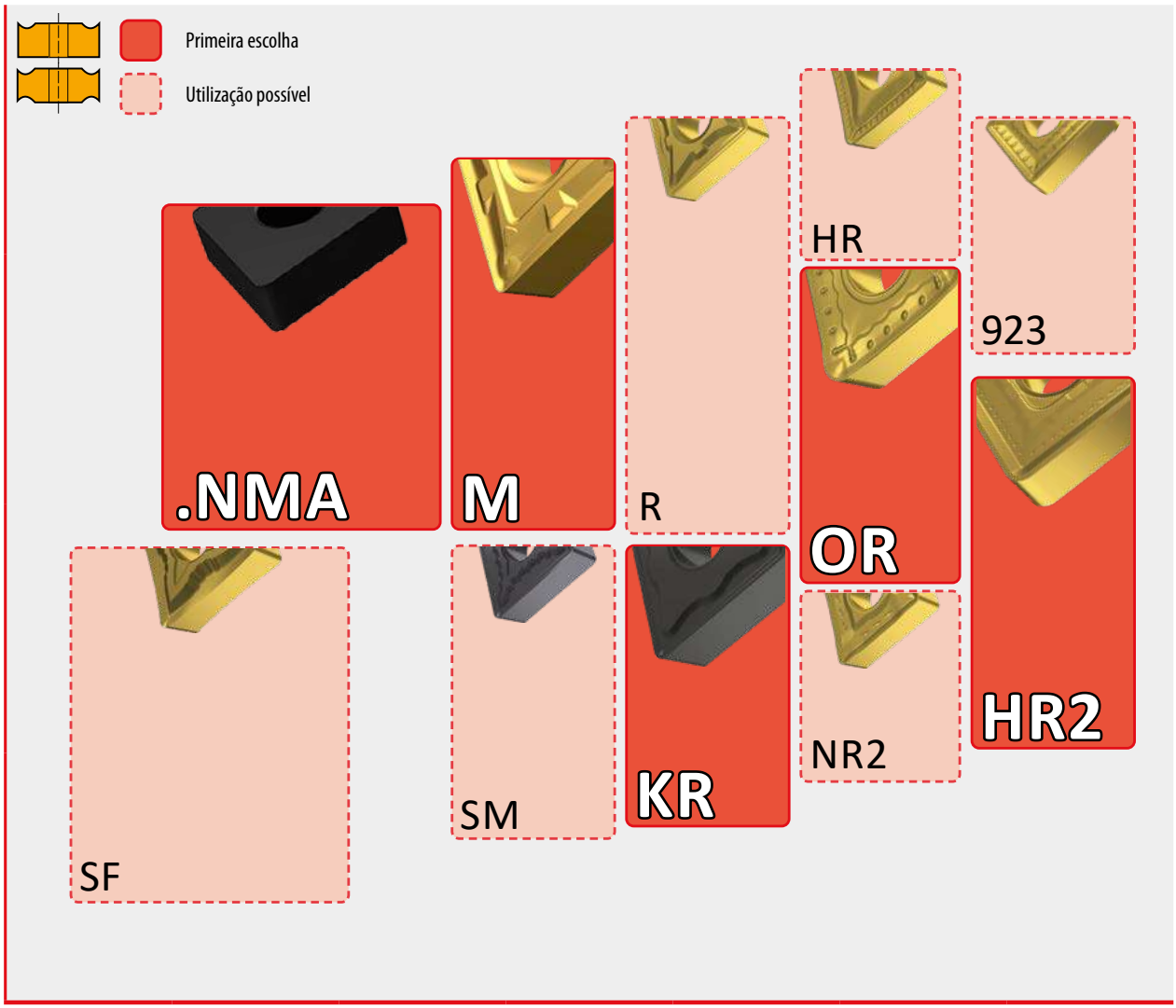
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Condições de trabalho muito instáveis

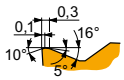
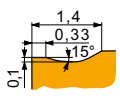
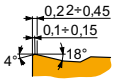
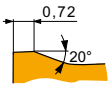
Condições de trabalho instáveis

Condições de trabalho estáveis

Peças finas e de paredes finas



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

.NMA		Projetado para operações de maquinação de acabamento fino a semi desbaste, ferros fundidos potencialmente materiais duros, cortes contínuos e ligeiramente interrompidos
M		Projetado para operações de maquinação de acabamento a semi desbaste, ferros fundidos, potencialmente aços e materiais duros, cortes contínuos e interrompidos
KR		Projetado para operações de maquinação de semi desbaste e desbaste, ferros fundidos, potencialmente aço e materiais duros, cortes contínuos e interrompidos
OR		Projetado para operações de maquinação de acabamento a desbaste pesado, aços e ferros fundidos, potencialmente aço inoxidável e superligas, cortes contínuos e interrompidos
HR2		Projetado para operações de maquinação de desbaste a desbaste pesado com altos avanços, aços e ferros fundidos, potencialmente aços inoxidáveis, cortes contínuos e interrompidos

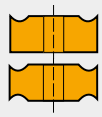
N

Condições de trabalho muito instáveis

Condições de trabalho instáveis

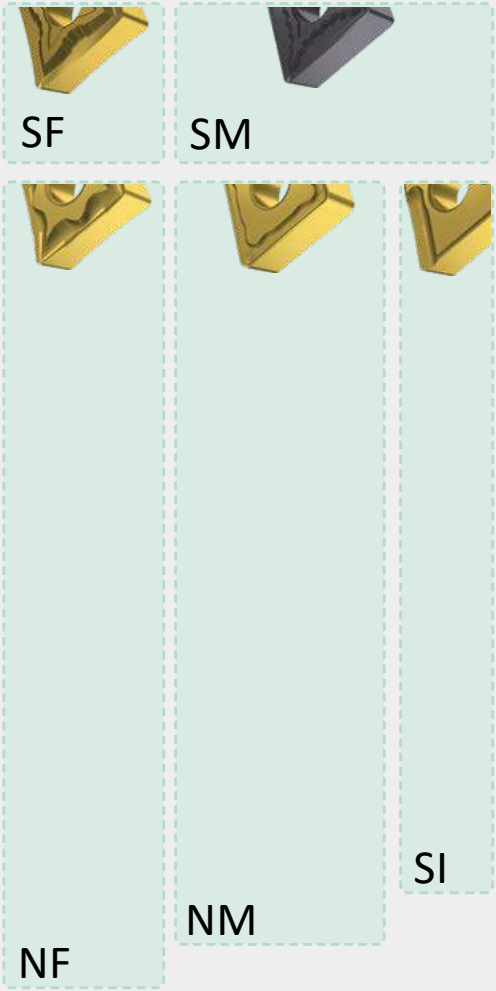
Condições de trabalho estáveis

Peças finas e de paredes finas

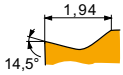
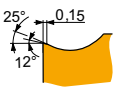
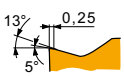


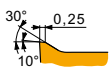
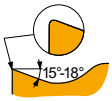
Primeira escolha

Utilização possível



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF		Geometria positiva versátil projetada para operações de maquinação de acabamento fino, aços, aços inoxidáveis, ferros fundidos e super ligas e materiais duros, potencialmente materiais não ferrosos e para maquinação de paredes finas, com cortes contínuos
NF		Desenho altamente positivo para operações de maquinação de acabamento fino e maquinação média, aços inoxidáveis, aço, potencialmente ferros fundidos, materiais não ferrosos e superligas, cortes contínuos
SM		Geometria positiva projetada para operações de maquinação média, aços inoxidáveis, superligas, aços e ferros fundidos, potencialmente materiais não ferrosos e duros e para a maquinação de paredes finas, cortes contínuos e interrompidos

NM		Desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, aços inoxidáveis, aços, potencialmente materiais não ferrosos e superligas, cortes contínuos
SI		Geometria positiva para operações de maquinação de acabamento fino a semi desbaste, aços, aços inoxidáveis e ferros fundidos e potencialmente materiais não ferrosos, cortes contínuos

S

Condições de trabalho muito instáveis

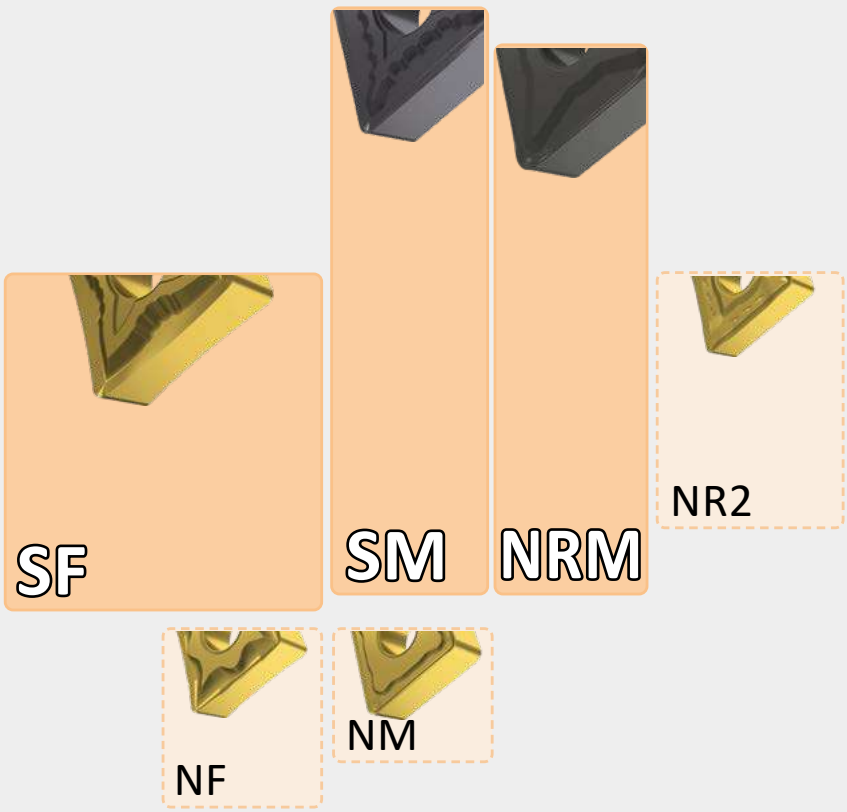
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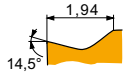
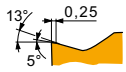
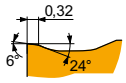
Peças finas e de paredes finas

Primeira escolha

Utilização possível



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF		Geometria positiva versátil projetada para operações de maquinação de acabamento fino, aços, aços inoxidáveis, ferros fundidos e super ligas e materiais duros, potencialmente materiais não ferrosos e para a maquinação de paredes finas, com cortes contínuos
SM		Geometria positiva projetada para operações de maquinação média, aços inoxidáveis, superligas, aços e ferros fundidos, potencialmente materiais não ferrosos e duros e para a maquinação de paredes finas, cortes contínuos e interrompidos
NRM		Desenho positivo para operações de maquinação de semi desbaste e desbaste, aço inoxidável, aços macios e superligas, cortes contínuos

H

Primeira escolha

Utilização possível

Condições de trabalho muito instáveis

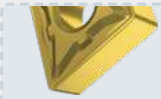
Condições de trabalho instáveis

Condições de trabalho estáveis

Peças finas e de paredes finas



.NMA



R

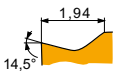
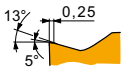


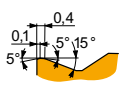
SM



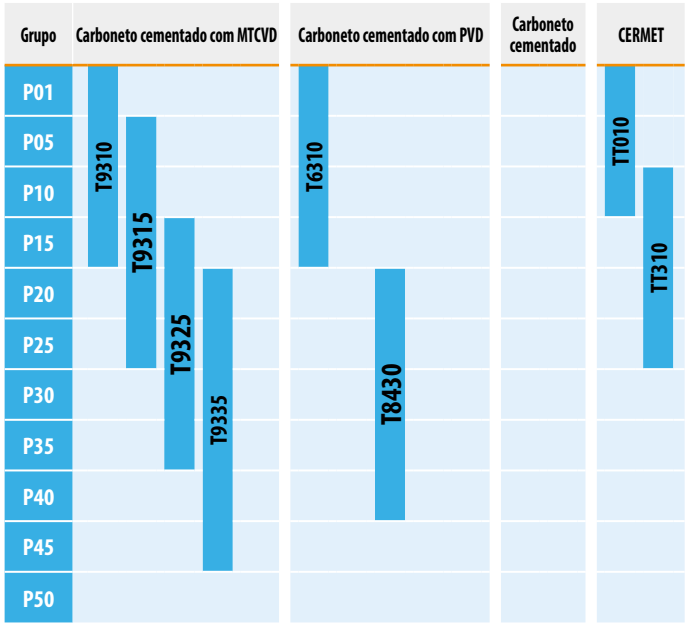
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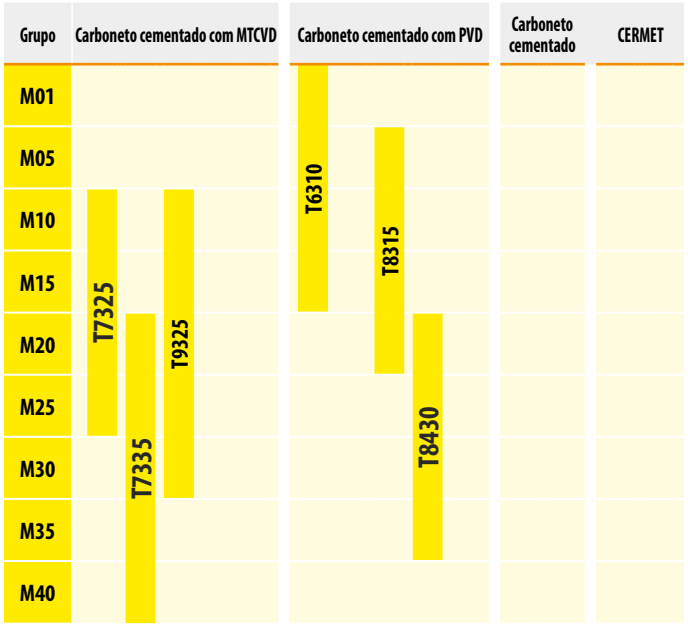
	FF	F	M	R	HR
f	0.05 – 0.2 mm/rot	0.05 – 0.2 mm/rot	0.2 – 0.4 mm/rot	0.4 – 1.0 mm/rot	> 1.0 mm/rot
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

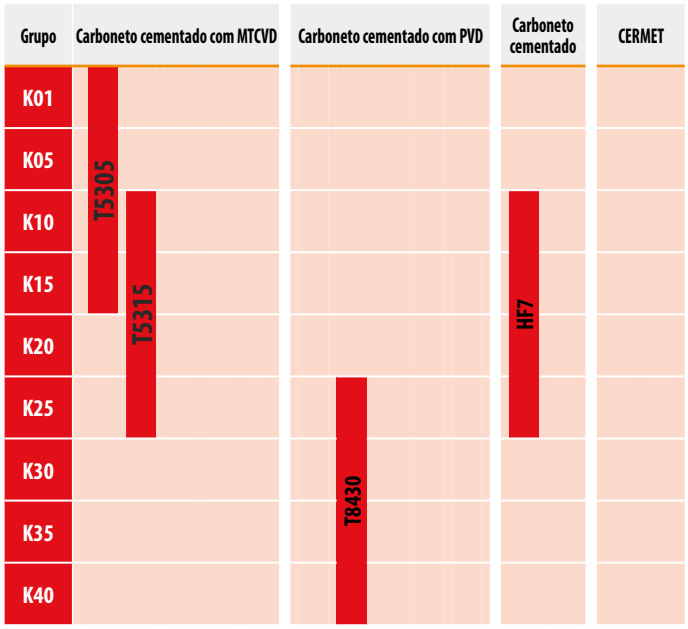
SF		Geometria positiva versátil projetada para operações de maquinação de acabamento fino, aços, aços inoxidáveis, ferros fundidos e superligas e materiais duros, potencialmente materiais não ferrosos e para a maquinação de paredes finas, com cortes contínuos
SM		Geometria positiva projetada para operações de maquinação média, aços inoxidáveis, superligas, aços e ferros fundidos, potencialmente materiais não ferrosos e duros e para a maquinação de paredes finas, cortes contínuos e interrompidos
.NMA		Projetado para operações de maquinação de acabamento fino a semi desbaste, ferros fundidos, potencialmente materiais duros, cortes contínuos e ligeiramente interrompidos

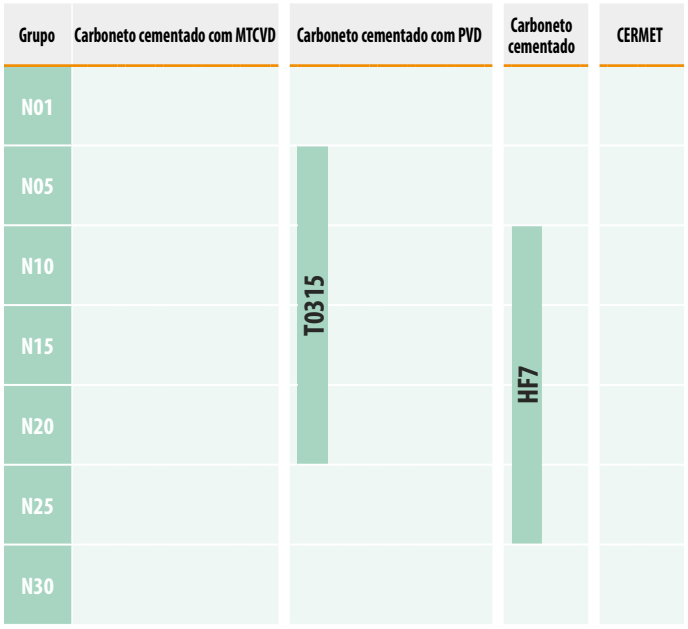
R		Projetado para operações de maquinação de semi desbaste e desbaste, ferros fundidos, potencialmente aço e materiais duros, cortes contínuos e interrompidos

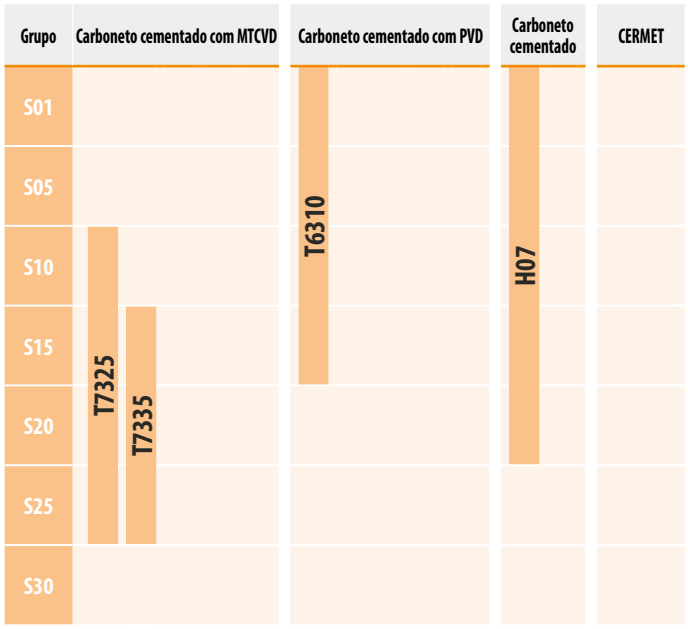
QUALIDADES DE TORNEAMENTO - NAVEGADOR

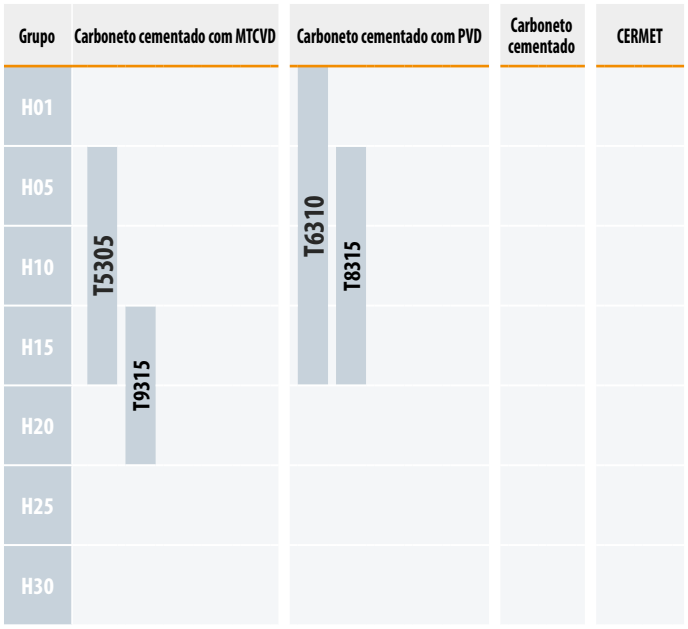












QUALIDADES DE TORNEAMENTO - NAVEGADOR

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de Corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do Refrigerante	Descrição da Qualidade
T9310	P01 - P15 K05 - K20 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	Qualidade com alta resistência à abrasão que pode ser utilizada para cortes levemente interrompidos. Será utilizada para operações de acabamento ou semi desbaste. Este material também pode ser usado para operações de desbaste, desde que a configuração da máquina-ferramenta / peça seja suficientemente rígida.
T9315	P05 - P25 K05 - K25 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	Uma qualidade versátil com excelentes propriedades de resistência ao desgaste, mesmo sob condições de corte intensas. Também pode ser usada para operações com cortes interrompidos. Com as suas propriedades bem equilibradas, esta qualidade pode ser a primeira escolha para uma ampla gama de operações de torneamento. Não adequada para velocidades de corte baixas.
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	Do ponto de vista tecnológico, esta é uma qualidade extremamente versátil, com alta resistência a danos mecânicos em condições de corte adversas, mantendo excelente resistência ao desgaste. A aplicação correta deste material requer velocidades de corte elevadas.
T9335	P20 - P45 M15 - M40 S15 - S25	■ ■ ◪				MT-CVD		FGM	+ + +	Uma das qualidades mais resistentes, especialmente adequada para condições de corte adversas com taxas de avanço de médias a altas e velocidades de corte médias. Comparada com seus predecessores, M15 - M40 não é apenas mais resistente, mas também mais resistente à abrasão o que será útil ao usar condições de corte intensivas.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Uma das classes de torneamento mais universais. Especialmente projetado para a maquinação de aço inoxidável. Equilíbrio ideal entre resistência ao desgaste e confiabilidade de desempenho. Adequado para uma ampla variedade de aplicações em operações de torneamento.
T7335	P20 - P40 M20 - M40 S15 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Qualidade com substrato funcionalmente graduado, apresentando altíssima confiabilidade operacional e ótima resistência ao desgaste. É mais adequado para usar na maquinação de materiais muito resistentes M20 - M40.
T5305	P05 - P15 K01 - K15 H05 - H15	◪ ■ ◪				MT-CVD		H	+	Qualidade com altíssima resistência ao desgaste químico; adequado para operações de acabamento com velocidades de corte elevadas. Com sua alta resistência à abrasão, também é adequado para a maquinação produtiva K01 - K15 , e de materiais endurecidos e tratados.
T5315	P10 - P25 K10 - K25 H15 - H25	◪ ■ ◪				MT-CVD		H	+	Qualidade destinada principalmente à maquinação produtiva, caracterizada por alta resistência à abrasão e boa confiabilidade operacional. Devido às suas propriedades, este material é particularmente adequado para operações de desbaste e acabamento, com condições de corte boas ou ligeiramente adversas.
6640	P20 - P40 M20 - M35 K25 - K40	■ ■ ■				MT-CVD		H	+ + +	Um dos materiais de torneamento mais resistentes que pode ser utilizado especialmente em operações de desbaste, ou onde a confiabilidade operacional sob condições de corte adversas é uma prioridade. Outra escolha ideal para máquinas que trabalham com velocidades de corte de baixas a médias e taxas de avanço médias a altas.

QUALIDADES DE TORNEAMENTO - NAVEGADOR

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de Corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do Refrigerante	Descrição da Qualidade
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■	◢◢◢◢	◢◢◢▯	◢◢◢◢	PVD		submicron H	+ +	Qualidade com excelente resistência à abrasão, mantendo a confiabilidade operacional acima da média, é adequada para maquinar com velocidades de corte de médias a altas em materiais mais duros de aparas curtas.
T8430 NEW	P20 - P40 M20 - M35 K25 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ◪ ◪ ◪ ◪	◢◢◢◢	◢◢▯▯	◢◢◢◢	PVD		submicron H	+ + +	Sem dúvida, o material de corte mais versátil, é útil para a maquinação de todos os tipos de materiais e é praticamente aplicável em quase todos os tipos de operações de torneamento. Os seus principais benefícios são sua elevada confiabilidade operacional e muito boas propriedades de fricção; é, portanto, adequado para aplicações com velocidades de corte médias e baixas.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪	◢◢◢◢	◢◢▯▯	◢◢◢◢	PVD		submicron H	+ + +	Material de corte versátil, é útil para a maquinação de todos os tipos de materiais e é praticamente aplicável em quase todos os tipos de operações de torneamento. Os seus principais benefícios são sua elevada confiabilidade operacional e excelentes propriedades de fricção; portanto, é adequado para aplicações com velocidades de corte médias e baixas.
T8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ◪ ◪ ◪	◢◢◢◢	◢◢▯▯	◢◢◢◢+	PVD		submicron H	+ + +	Esta é a classe de torneamento mais resistente, destinada principalmente para maquinar nas piores condições de corte e em aplicações com os mais altos requisitos de confiabilidade operacional. Devido a essas propriedades, este material é recomendado para velocidades de corte mais baixas.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■	◢◢◢▯	◢◢▯▯	◢◢▯▯	PVD		ultra submicron H	+ + +	Qualidade de torneamento de elevada resistência ao desgaste com revestimento de topo PVD . Adequada para operações de acabamento e aplicações, onde a aresta de corte afiada em conjunto com alta resistência ao desgaste de flanco é de grande importância
T0315	N05 - N20	■	◢◢▯▯	◢◢▯▯	◢◢◢▯	PVD		submicron H	+ +	Qualidade submicrónica para torneamento de metais não ferrosos e suas ligas com um equilíbrio de resistência ao desgaste e tenacidade. É fornecida com um revestimento exclusivo com excelentes propriedades de fricção.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■	◢◢◢◢	◢◢▯▯	◢◢◢▯	×		submicron H	+ +	Qualidade sem revestimento projetada principalmente para a maquinação de metais não ferrosos; mas também pode ser utilizada para outros materiais maquinados (exceto aço). Este material pode ser usado em torneamento, fresagem e até mandrilagem.
H07	M05 - M15 K10 - K25 N10 - N30 S01 - S20	◪ ■ ■ ■	◢◢◢◢	◢◢▯▯	◢◢◢▯	×		submicron H	+ +	Qualidade de torneamento sem revestimento adequada para aplicações de maquinação onde a resistência à oxidação não é o critério dominante de vida útil da ferramenta. Projetado para maquinar ligas à base de Ti. Esta qualidade exibe alta resistência da aresta de corte junto com boa resistência ao desgaste.
TT310	P10 - P25 M15 - M25	■ ◪	◢▯▯▯	◢▯▯▯	◢▯▯▯	PVD		cermet	+ / –	Revestimento Cermet usado para operações de torneamento fino e de acabamento em aços carbono e ligas de aço (incluindo inoxidável). As suas excelentes propriedades de fricção, são ainda melhoradas pelo revestimento aplicado usando a técnica PVD.

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de Corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do Refrigerante	Descrição da Qualidade
TT010	P01 - P10	■				×		cermet	+ / –	Cermet sem revestimento, que é adequado para operações de maquinação fina de todos os tipos de aço (incluindo aço inoxidável) com taxas de avanço muito baixas. A sua principal vantagem é o raio mínimo da aresta de corte e a sua alta resistência aos mecanismos de desgaste físico e químico.
	M01 - M10	◪								
TC100	K01 - K15	■				×		ceramics	– -	Qualidade de cerâmica para a maquinação de ferro fundido. Adequado para maquinação de alta velocidade de corte em condições estáveis.
TB310	K01 - K10	■				×		CBN	– -	Qualidade CBN para maquinação de materiais endurecidos. Adequado para maquinação com alta velocidade de corte e avanços baixos em condições estáveis.
	S05 - S10	◪								
	H01 - H10	◪								
PD1	N05 - N25	■				×		PCD	-	Qualidade PKD para torneamento de materiais não ferrosos. Opção ideal para trabalhar com alta velocidade de corte e avanços baixos em condições estáveis.
333TN	P45 - P50	■				PVD		HSS	+ + +	Qualidade especial composta de substrato HSS e revestimento PVD duro e fino. A qualidade de corte mais resistente do portfólio. As pastilhas com esta qualidade são usadas apenas para ranhura de chaveta.
	M35 - M40	◪								
	K35 - K40	◪								

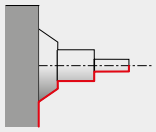
Substrato	
H	Substrato com base WC-Co
submicron H	Substrato com base WC-Co de grão fino (< 1 µm)
ultra submicron H	Substrato com base WC-Co de grão muito fino (< 0,5 µm)
FGM	Substrato de grau funcional
Cermet	Carboneto de tungsténio sem WC
ceramics	Cerâmica
PCD	Diamante policristalino
CBN	Nitreto de boro cúbico
HSS	Aço Rápido

Revestimento	
MT-CVD	Método de revestimento químico a temperatura média
PVD	Método de revestimento físico a baixa temperatura
×	Sem revestimento

Benefícios do fluido de corte	
+ + +	O uso de refrigerante é essencial
+ +	Altamente recomendado
+	Recomendado
+ / –	Opcional
– -	Não usar refrigerante
–	Refrigerante não recomendado

TORNEAMENTO ISO - EXTERIOR

PEÇAS GRANDES E INSTÁVEIS (pastilhas positivas)

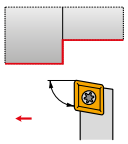


SCAC(RL) EXT

90°

CC..

06
09



08×08
16×16

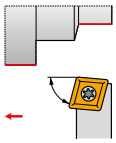
70 | 60 – 69

SCBC(RL) EXT

75°

CC..

09
12



12×12
25×25

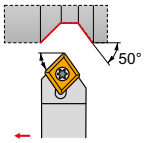
71 | 60 – 69

SCDCR EXT

45°

CC..

06



10×10

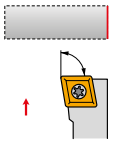
72 | 60 – 69

SCFC(RL) EXT

90°

CC..

06
09



08×08
16×16

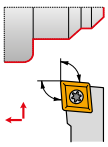
73 | 60 – 69

SCLC(RL) EXT

95°

CC..

06
08
09
12



08×08
25×25

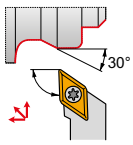
74 | 60 – 69

SDJC(RL) EXT

93°

DC..

07
11
15



08×08
25×25

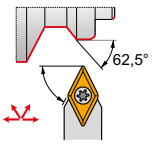
94 | 86 – 93

SDNCN EXT

62°30´

DC..

7
11



08×08
25×25

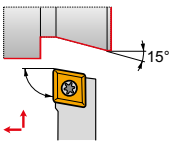
95 | 86 – 93

SEGC(RL) EXT

90°

EC..

08



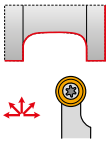
12×12
16×16

107 | 104 – 106

SRDC(RL) EXT

RC..

08



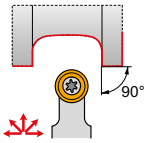
20×20
32×25

126 | 118 – 123

SRDCN EXT

RC..

06
08
10
12
16



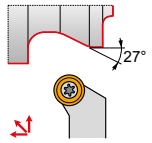
12×12
32×25

127 | 118 – 123

SRSC(RL) EXT

RC..

06
08
10
12
16



12×12
32×25

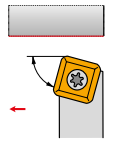
128 | 118 – 123

SSBC(RL) EXT

75°

SC..

09
12
25
38



12×12
60×60

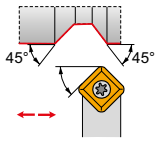
139 | 134 – 138

SSDCN EXT

45°

SC..

09
12



12×12
25×25

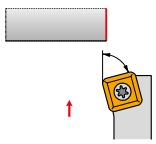
140 | 134 – 138

SSKC(RL) EXT

75°

SC..

09
12



12×12
25×25

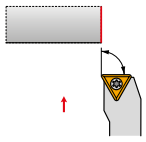
141 | 134 – 138

STFC(RL) EXT

90°

TC..

11
16



16×16
25×25

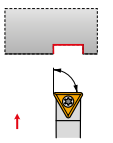
155 | 149 – 154

STFC(RL)-A EXT

90°

TC..

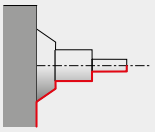
11



20×20

156 | 149 – 154

TORNEAMENTO ISO - EXTERIOR
PEÇAS GRANDES E INSTÁVEIS (pastilhas positivas)



STJC(RL) EXT

93°

TC..

11
16

16×16
25×25

157 | 149 – 154

SVAC(RL)-DC EXT

90°

VC..

13

10×10
25×25

193 | 186 – 192

SVGC(RL) EXT

90°

VC..

07

08×08
16×16

194 | 186 – 192

SVHB(C)(RL) EXT

107°30´

VB, VC..

11
16

16×16
25×25

172, 195 | 168 – 171, 186 – 192

SVJB(C)(RL) EXT

93°

VB, VC..

11
13
16

12×12
32×25

173, 196 | 168 – 171, 186 – 192

SVJC(RL)-DC EXT

93°

VC..

13

10×10
25×25

197 | 186 – 192

SVPB(C)(RL) EXT

117°30´

VB, VC..

11
16

16×16
32×25

174, 198 | 168 – 171, 186 – 192

SVVB(C)N EXT

72°30´

VB, VC..

11
13
16

12×12
32×25

175, 199 | 168 – 171, 186 – 192

SVXB(C)(RL) EXT

98°

VB, VC..

11
13
16

12×12
32×25

176, 200 | 168 – 171, 186 – 192

SWLC(RL) EXT

95°

WC..

06
08

16×16
25×25

215 | 212 – 214

CKJN(RL) EXT

93°

KN..

16

20×20
32×25

287 | 284 – 286

C.-SCLC(RL) EXT NEW

95°

CC..

09
12

20
32

75 | 60 – 69

C.-SDJC(RL) EXT NEW

93°

DC..

11

C3
C5

96 | 86 – 93

C.-SDNCN EXT NEW

62°30´

DC..

11

C4
C5

97 | 86 – 93

C.-SRDCN EXT NEW

RC..

10
12

C4
C5

130 | 118 – 123

C.-SVHB(RL) EXT NEW

107°30´

VB, VC..

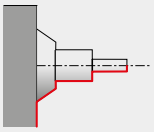
16

C4
C6

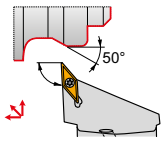
177, 201 | 168 – 171, 186 – 192

TORNEAMENTO ISO - EXTERIOR

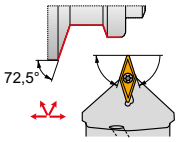
PEÇAS GRANDES E INSTÁVEIS (pastilhas positivas)



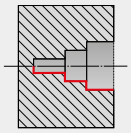
C.-SVJB(RL) EXT NEW

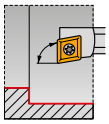
93°	VB, VC..
	11 16
C3 / C6	
178, 202	168 – 171 186 – 192

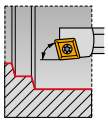
C.-SVVBN EXT NEW

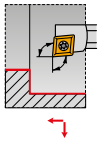
72°30´	VB, VC..
	16
C4 / C6	
179, 203	168 – 171 186 – 192

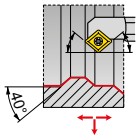
TORNEAMENTO ISO - INTERIOR
PEÇAS GRANDES E INSTÁVEIS (pastilhas positivas)



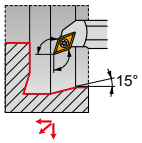
SCFC(RL) INT
90° | CC..
06

ØDmin 13/16
76 | 60 – 69

SCKC(RL) INT
75° | CC..
06 09 12

ØDmin 11/40
77 | 60 – 69

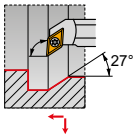
SCLC(RL) INT
95° | CC..
06 09 12

ØDmin 11/40
78 | 60 – 69

SCXC(RL) INT
40° | CC..
06


ØDmin 13/20
80 | 60 – 69

SDQC(RL) INT
107°30´ | DC..
07 11


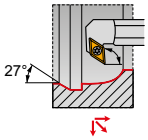
ØDmin 13/40
98 | 86 – 93

SDUC(RL) INT
93° | DC..
07 11


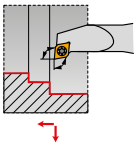
ØDmin 13/40
99 | 86 – 93

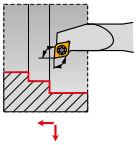
SDUC(RL)-E INT
93° | DC..
07 11

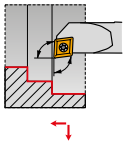

ØDmin 13/40
100 | 86 – 93

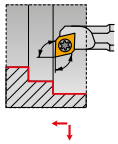
SDZC(RL) INT
93° | DC..
07 11


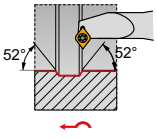
ØDmin 27/65
101 | 86 – 93

SELP(RL) INT
95° | EP..
05

ØDmin 8/16
111 | 110

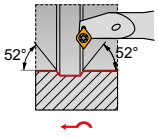
SELP(RL)-E INT
95° | EP..
05

ØDmin 8/16
112 | 110

SEUC(RL) INT
93° | EC..
06 08

ØDmin 11/32
108 | 104 – 106

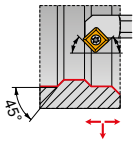
SEUP(RL) INT
93° | EP..
05

ØDmin 8.3
113 | 110

SEXP(RL) INT
52°30´ | EP..
05


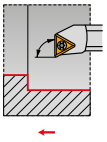
ØDmin 9.5/16
114 | 110

SEXP(RL)-E INT
52°30´ | EP..
05


ØDmin 9.5/16
115 | 110

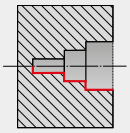
SSSC(RL) INT
45° | SC..
09


ØDmin 25/32
144 | 134 – 138

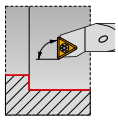
STFC(RL) INT
90° | TC..
06 09 11 16

ØDmin 8.5/40
158 | 149 – 154

TORNEAMENTO ISO - INTERIOR

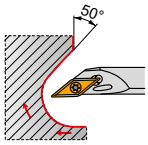
PEÇAS GRANDES E INSTÁVEIS (pastilhas positivas)



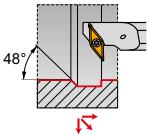
STFC(RL)-E INT

90°	TC..
	06 09 11
ØDmin 8.5 / 20	
160	149 – 154

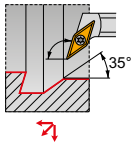
SVJB(RL) INT

93°	VB, VC..
	11
ØDmin 25 / 32	
180, 204	168 – 171 186 – 192

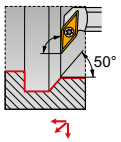
SVLC(RL) INT

95°	VC..
	13
ØDmin 27 / 43	
205	186 – 192

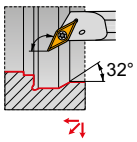
SVQB(C)(RL) INT

107°30´	VB, VC..
	11 13 16
ØDmin 20 / 50	
181, 206	168 – 171 186 – 192

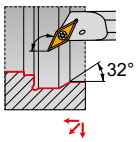
SVUB(C)(RL) INT

93°	VB, VC..
	11 13 16
ØDmin 20 / 50	
182, 207	168 – 171 186 – 192

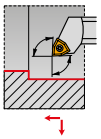
SVXC(RL) INT

113°	VC..
	07
ØDmin 12.5 / 17.5	
208	186 – 192

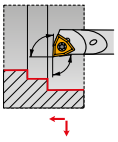
SVXC(RL)-E INT

113°	VC..
	07
ØDmin 12.5 / 17.5	
209	186 – 192

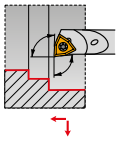
SWLC(RL) INT

95°	WC..
	06 08
ØDmin 25 / 40	
216	212 – 214

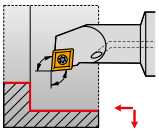
SWUC(RL) INT

93°	WC..
	02
ØDmin 5.8 / 7.8	
217	212 – 214

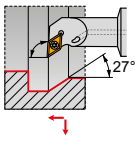
SWUC(RL)-E INT

93°	WC..
	02
ØDmin 5.8 / 7.8	
218	212 – 214

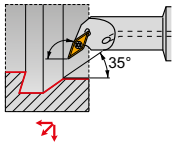
C.-SCLC(RL) INT NEW

95°	CC..
	09
ØDmin C3 / C5	
81	60 – 69

C.-SDUC(RL) INT NEW

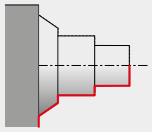
93°	DC..
	07 11
ØDmin 20 / 32	
102	86 – 93

C.-SVQB(C)(RL) INT NEW

108°	VB, VC..
	16
ØDmin 33	
183, 210	168 – 171 186 – 192

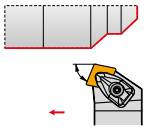
TORNEAMENTO ISO - EXTERIOR

PEÇAS CURTAS E ESTÁVEIS (pastilhas negativas)



DCBN(RL) EXT

75°



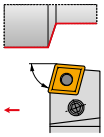
CN..
12
16
19

20×20
40×40

240 | 222 – 239

PCBN(RL) EXT

75°



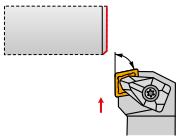
CN..
12
16
19
25

20×20
50×50

245 | 222 – 239

DCKN(RL) EXT

75°



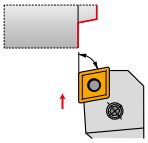
CN..
12
16

20×20
32X32

242 | 222 – 239

PCKN(RL) EXT

75°



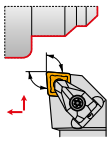
CN..
12
16
19

20×20
40×40

246 | 222 – 239

DCLN(RL) EXT

95°



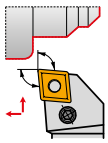
CN..
09
12
16
19

16×16
40×40

243 | 222 – 239

PCLN(RL) EXT

95°



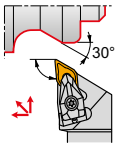
CN..
12
16
19
25

20×20
50×50

247 | 222 – 239

DDJN(RL) EXT

93°



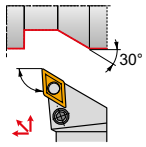
DN..
11
15

20×20
32×32

273 | 260 – 272

PDJN(RL) EXT

93°



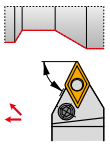
DN..
11
15

20×20
32×32

274 | 260 – 272

PDNN(RL) EXT

62°30´



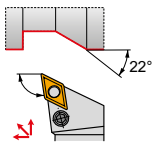
DN..
11
15

20×20
32×25

275 | 260 – 272

PDXN(RL) EXT

98°

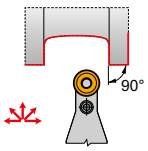


DN..
15

20×20
32×25

276 | 260 – 272

PRDCN EXT

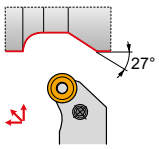


RC..
16
20
25
32

32×25
50×50

124 | 118 – 123

PRSC(RL) EXT

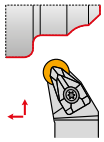


RC..
16
20
25

32×25
40×40

125 | 118 – 123

DRSN(RL) EXT

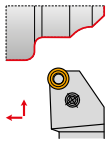


RN..
12

25×25

295 | 294

PRSN(RL) EXT



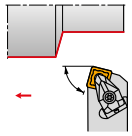
RN..
12
15
19

25×25
40×40

296 | 294

DSBN(RL) EXT

75°



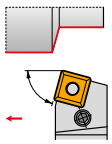
SN..
12
15
19

20×20
40×40

313 | 300 – 312

PSBN(RL) EXT

75°



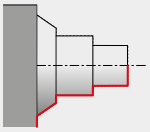
SN..
12
15
19
25

20×20
50×50

318 | 300 – 312

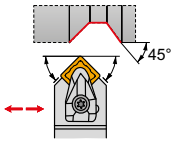
TORNEAMENTO ISO - EXTERIOR

PEÇAS CURTAS E ESTÁVEIS (pastilhas negativas)



DSDNN EXT

45°



SN..

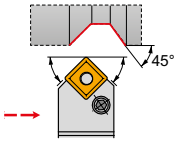
12
15
19
25

20×20
40×40

315 | 300 – 312

PSDNN EXT

45°



SN..

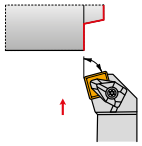
12
15
19
25

20×20
50×50

320 | 300 – 312

DSKN(RL) EXT

75°



SN..

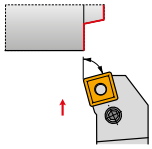
12
19

25×25
32×32

316 | 300 – 312

PSKN(RL) EXT

75°



SN..

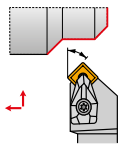
12
15
19
25

20×20
50×50

321 | 300 – 312

DSSN(RL) EXT

45°



SN..

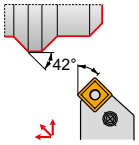
12
15
19

20×20
40×40

317 | 300 – 312

PSSN(RL) EXT

45°



SN..

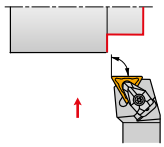
12
15
19
25

20×20
50×50

323 | 300 – 312

DTFN(RL) EXT

90°



TN..

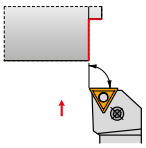
16
22

20×20
25×25

345 | 334 – 344

PTFN(RL) EXT

90°



TN..

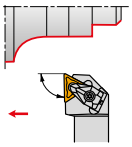
16
22
27

16×16
40×40

348 | 334 – 344

DTGN(RL) EXT

90°



TN..

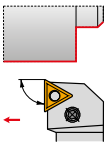
16
22

20×20
32×25

346 | 334 – 344

PTGN(RL) EXT

90°



TN..

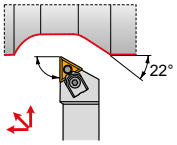
16
22
27

16×16
40×40

349 | 334 – 344

MTJN(RL) EXT

93°



TN..

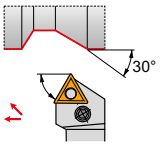
16
22

16×16
32×32

347 | 334 – 344

PTTN(RL) EXT

60°



TN..

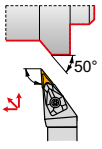
16
22

20×20
32×25

350 | 334 – 344

DVJN(RL) EXT

93°



VN..

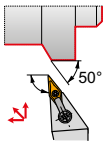
16

20×20
32×25

360 | 356 – 376

MVJN(RL) EXT

93°



VN..

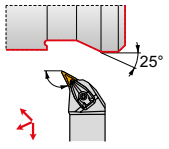
16

20×20
32×25

362 | 356 – 376

DVPN(RL) EXT

62°30´



VN..

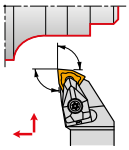
16

20×20
32×25

361 | 356 – 376

DWLN(RL) EXT

95°



WN..

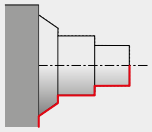
06
08
10
13

16×16
40×40

377 | 366 – 376

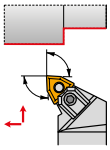
TORNEAMENTO ISO - EXTERIOR

PEÇAS CURTAS E ESTÁVEIS (pastilhas negativas)



MWLN(RL) EXT

95° | WN..



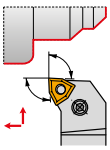
08

25×25
40×40

379 | 366 – 376

PWLN(RL) EXT

95° | WN..



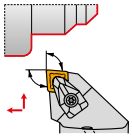
06
08

16×16
32×25

380 | 366 – 376

C.-DCLN(RL) EXT NEW

95° | CN..



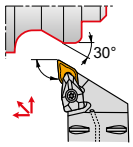
12
16
19

C3
C8

249 | 222 – 239

C.-DDJN(RL) EXT NEW

93° | DN..



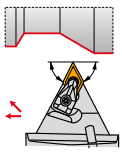
11
15

C4
C6

277 | 260 – 272

C.-DDNNN EXT NEW

62.5° | DN..



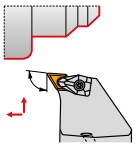
15

C5
C6

278 | 260 – 272

C.-DDUN(RL) EXT NEW

93° | DN..



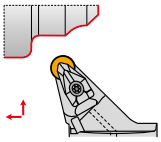
15

C5
C6

279 | 260 – 272

C.-DRSN(RL) EXT NEW

RN..



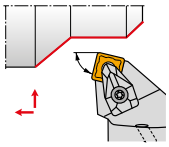
12

C6

297 | 294

C.-DSRN(RL) EXT NEW

75° | SN..



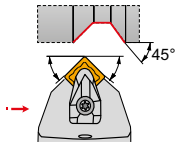
12
19

C4
C6

326 | 300 – 312

C.-DSDNN EXT NEW

45° | SN..



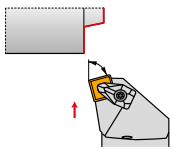
12
19

C4
C6

324 | 300 – 312

C.-DSKN(RL) EXT NEW

75° | SN..



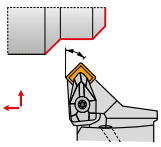
12

C4

325 | 300 – 312

C.-DSSN(RL) EXT NEW

45° | SN..



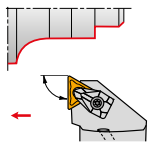
12

C4
C5

327 | 300 – 312

C.-DTJN(RL) EXT NEW

93° | TN..



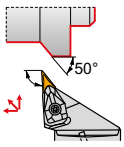
16

C4
C5

351 | 334 – 344

C.-DVJN(RL) EXT NEW

93° | VN..



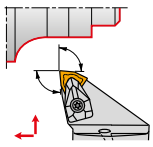
16

C4
C6

363 | 356 – 376

C.-DWLN(RL) EXT NEW

95° | WN..



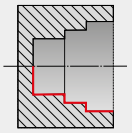
06
08

C4
C6

381 | 366 – 376

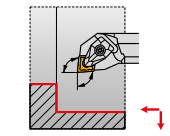
TORNEAMENTO ISO - INTERIOR

PEÇAS CURTAS E ESTÁVEIS (pastilhas negativas)



DCLN(RL) INT

95°



CN..

09
12

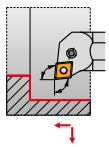
ØDmin: 32 / 50

254

222 – 239

PCLN(RL) INT

95°



CN..

09
12
16
19

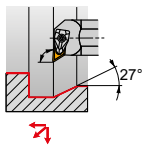
ØDmin: 20 / 80

255

222 – 239

DDUN(RL) INT

93°



DN..

11
15

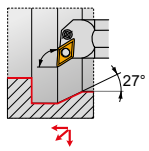
ØDmin: 25 / 50

280

260 – 272

PDUN(RL) INT

93°



DN..

11
15

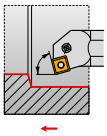
ØDmin: 25 / 60

281

260 – 272

PSKN(RL) INT

93°



SN..

11
15

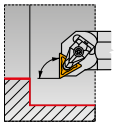
ØDmin: 32 / 80

331

300 – 312

DTFN(RL) INT

90°



TN..

16
22

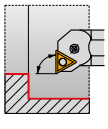
ØDmin: 32 / 50

352

334 – 344

PTFN(RL) INT

90°



TN..

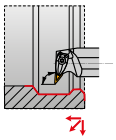
16
22

ØDmin: 32 / 50

353

334 – 344

DVUN(RL) INT



VN..

16

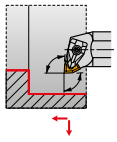
ØDmin: 50

364

356 – 376

DWLN(RL) INT

95°



WN..

06
08

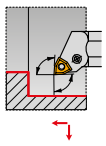
ØDmin: 32 / 63

382

366 – 376

PWLN(RL) INT

95°



WN..

06
08

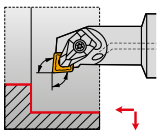
ØDmin: 20 / 80

383

366 – 376

C.-DCLN(RL) INT NEW

95°



CN..

09
12
16

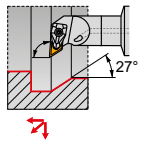
ØDmin: 25 / 50

257

222 – 239

C.-DDUN(RL) INT NEW

93°



DN..

11

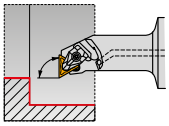
ØDmin: 12

282

260 – 272

C.-DTFN(RL) INT NEW

91°



TN..

16

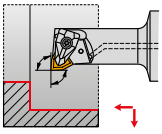
ØDmin: 32

354

334 – 344

C.-DWLN(RL) INT NEW

95°



WN..

06
08

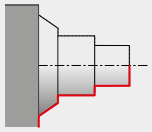
ØDmin: 27 / 33

385

366 – 376

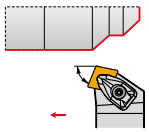
TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

PORTA FERRAMENTAS FIXOS



DCBN(RL) EXT

75° | CN..



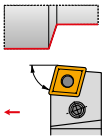
19

40×40

240 | 222 – 239

PCBN(RL) EXT

75° | CN..



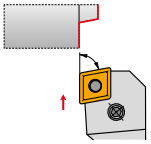
19
25

40×40
50×50

245 | 222 – 239

PCKN(RL) EXT

75° | CN..



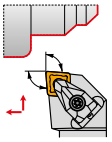
19

40×40

246 | 222 – 239

DCLN(RL) EXT

95° | CN..



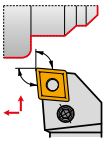
19

40×40

243 | 222 – 239

PCLN(RL) EXT

95° | CN..



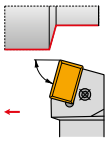
19
25

40×40
50×50

247 | 222 – 239

PLBN(RL) EXT

75° | LN..



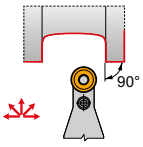
40
50

60×60

290 | 289

PRDCN EXT

RC..



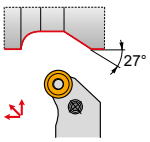
20
25
32

40×40
50×50

124 | 118 – 123

PRSC(RL) EXT

RC..



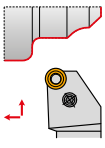
16
25

40×40

125 | 118 – 123

PRSN(RL) EXT

RN..



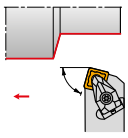
19

40×40

296 | 294

DSBN(RL) EXT

75° | SN..



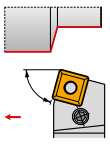
19

40×40

313 | 300 – 312

PSBN(RL) EXT

75° | SN..



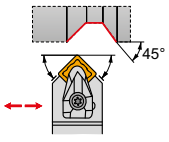
19
25

40×40
50×50

318 | 300 – 312

DSDNN EXT

45° | SN..



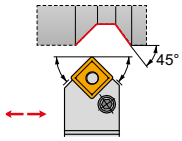
19
25

40×40

315 | 300 – 312

PSDNN EXT

45° | SN..



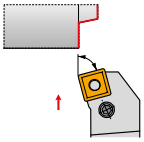
19
25

40×40
50×50

320 | 300 – 312

PSKN(RL) EXT

75° | SN..



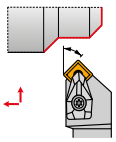
19
25

40×40
50×50

321 | 300 – 312

DSSN(RL) EXT

45° | SN..



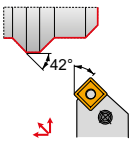
19

40×40

317 | 300 – 312

PSSN(RL) EXT

45° | SN..



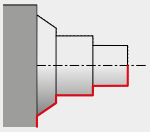
19
25

40×40
50×50

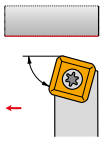
323 | 300 – 312

TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

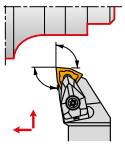
PORTA FERRAMENTAS FIXOS



SSBC(RL) EXT

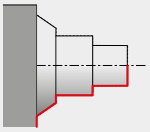
75°	SC..
	25 38
 40×40 60×60	
139	134 – 138

DWLN(RL) EXT

95°	WN..
	13
 40×40	
377	366 – 376

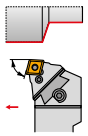
TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

CABEÇAS (KH)



KHP-CBNR + DKH(RL)

75°





40×50
60×80

CN..



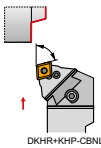
25

251, 253

222 – 239

KHP-CBNL + DKH(RL)

75°





40×50
60×80

CN..



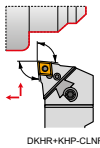
25

251, 253

222 – 239

KHP-CLNR/L + DKH(RL)

95°





40×50
60×80

CN..



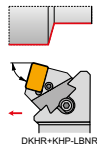
19
25

252, 253

222 – 239

KHP-LBNR + DKH(RL)

75°





40×50
60×80

LN..



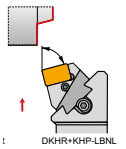
40

291, 292

289

KHP-LBNL + DKH(RL)

75°





40×50
60×80

LN..

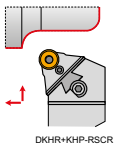


40

291, 292

289

KHP-RSCR/L + DKH(RL)





40×50
60×80

RC..



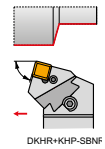
20
25
32

131, 132

118 – 123

KHP-SBNR + DKH(RL)

75°





40×50
60×80

SN..



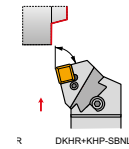
25

328, 330

300 – 312

KHP-SBNL + DKH(RL)

75°





40×50
60×80

SN..



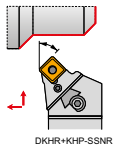
25

328, 330

300 – 312

KHP-SSNR/L + DKH(RL)

45°





40×50
60×80

SN..



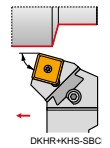
19
25

329, 330

300 – 312

KHS-SBCR + DKH(RL)

75°





40×50
60×80

SC..



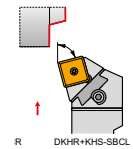
25
38

142, 143

134 – 138

KHS-SBCL + DKH(RL)

75°





40×50
60×80

SC..



25
38

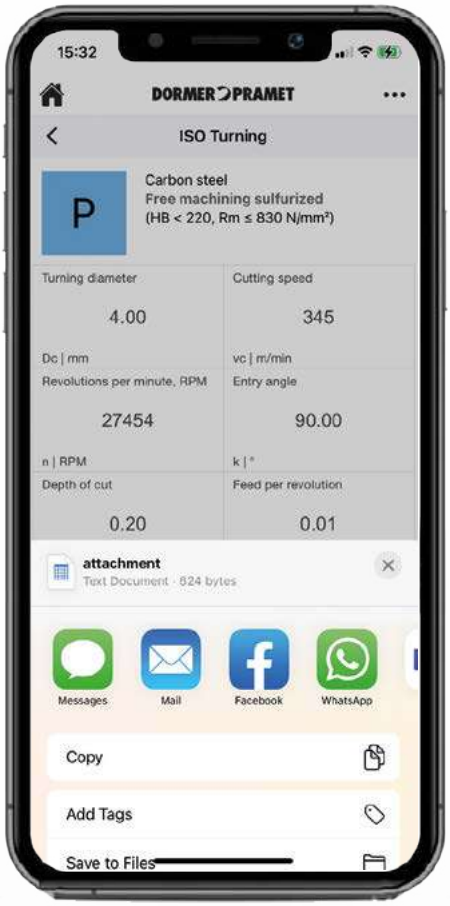
142, 143

134 – 138

DORMER PRAMET

SEMPRE LIGADOS

Sem wi-fi ou sem ligação à internet? A calculadora de maquinação funciona perfeitamente mesmo quando está off-line, garantindo que ela esteja sempre disponível quando precisar. **Simplesmente confiável.**



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DORMER PRAMET

SIGA-NOS



PARTILHAR

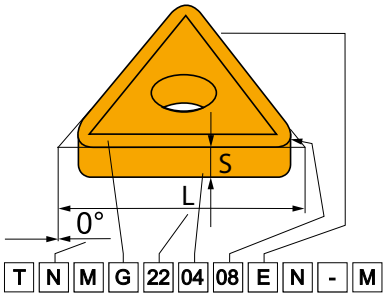
GOSTAR

COMENTAR

ETIQUETA

RE-TWEET

PASTILHAS – DESIGNAÇÃO DE CÓDIGO ISO



	1	2	3	4
ISO	T	N	U	N
	T	N	M	G
ANSI	T	N	U	
	T	N	M	G

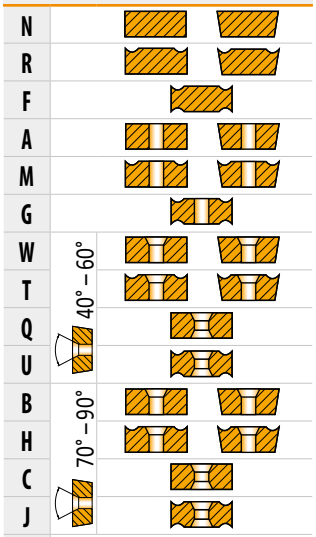
1 Forma de pastilha

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

2 Ângulo de incidência

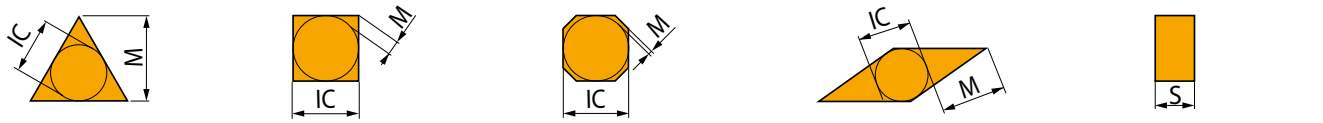
A 3°		B 5°	
C 7°		D 15°	
E 20°		F 25°	
G 30°		N 0°	
P 11°		O Especial	

4 Tipo de pastilha



3 Tolerâncias

	(mm)			(")		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002"	.001"	.0010"
F	0.005	0.025	0.013	.0002"	.001"	.0005"
C	0.013	0.025	0.025	.0005"	.001"	.0010"
H	0.013	0.025	0.013	.0005"	.001"	.0005"
E	0.025	0.025	0.025	.0010"	.001"	.0010"
G	0.025	0.130	0.025	.0010"	.005"	.0010"
J	0.005	0.025	0.05 – 0.13	.0002"	.001"	.002 – 0.005"
K	0.013	0.025	0.05 – 0.13	.0005"	.001"	.002 – 0.005"
L	0.025	0.025	0.05 – 0.13	.0010"	.001"	.002 – 0.005"
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007"	.005"	.002 – 0.005"
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007"	.001"	.002 – 0.005"
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015"	.005"	.003 – 0.010"



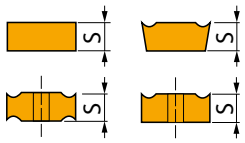
PASTILHAS – DESIGNAÇÃO DE CÓDIGO ISO

5	6	7	8	9		10
22	04	08				
22	04	08	E	N	-	M
5	6	7	8	9		10
4	3	2				
4	3	2	E	N	-	M

5 – Comprimento do fio de corte (tamanho da pastilha)

d=IC (mm)	(in)	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

6 – Espessura



	S (mm)	S (")
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7 – Raio de ponta

	RE (mm)	RE (")
00	0	0"
02	0.2	1/128"
04	0.4	1/64"
08	0.8	1/32"
12	1.2	3/64"
16	1.6	1/16"
24	2.4	3/32"
32	3.2	1/8"



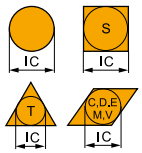
Pastilhas redondas

d=I.C.	
(")	00
(mm)	M0



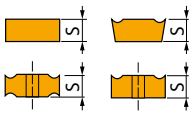
ANSI

5 – Circulo inscrito



Symbol	d=I.C. (mm)	d=I.C. (")
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6 – Espessura



Symbol	S (mm)	S (")
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7 – Raio de ponta



Symbol	RE (mm)	RE (")
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

8 – Designação do fio de corte da pastilha

F – Fios vivos	E – Fios arredondados
T – Fios com faceta	S – Fios arredondados com faceta
K – Fios com faceta dupla	P – Fios arredondados com faceta dupla

9 – Direção de avanço

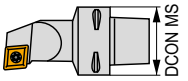
R	Avanço ←
L	→ Avanço
N	← Avanço Avanço →

10 – Designação do quebra aparas

FERRAMENTAS DE TORNEAMENTO EXTERIOR - DESIGNAÇÃO DO CÓDIGO ISO

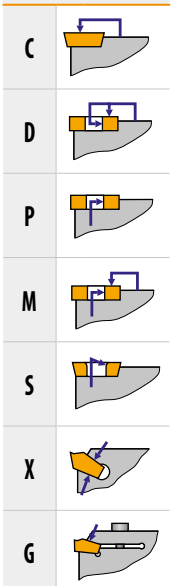
Ferramenta com haste	ISO		2	3	4	5	6		7	8	11	12		13
			P	C	L	N	R	–	32	25	L	12	–	M
PSC	ISO	1	2	3	4	5	6		9	10		12		
		C4	– D	C	L	N	R	–	27	050		– 12		
Ferramenta com haste	ANSI		2	3	4	5	6		7 & 8		12		11	
			D	C	L	N	R	–	16		4		D	

1 Tamanho do acoplamento

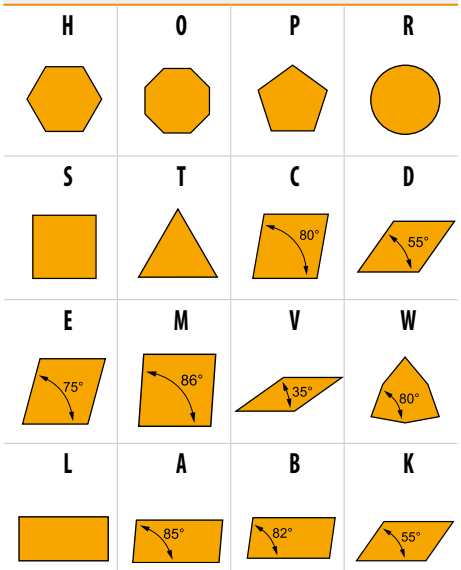


C	DCON MS
C3	32
C4	40
C5	50
C6	63
C8	80

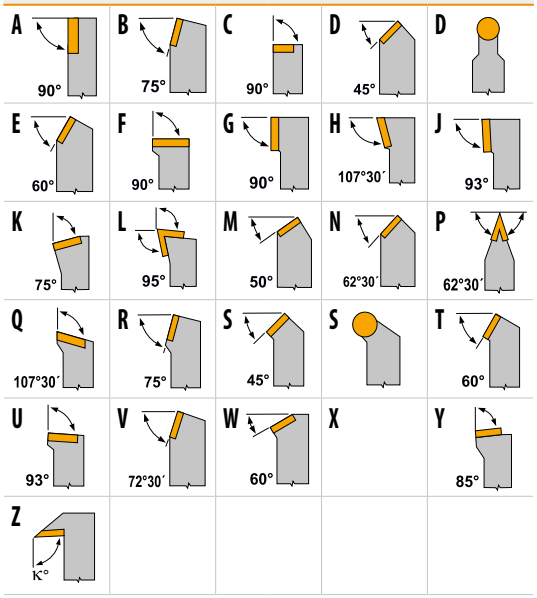
2 Tipo de fixação



3 Forma da pastilha



4 Tipo de ferramenta - ângulo de posição

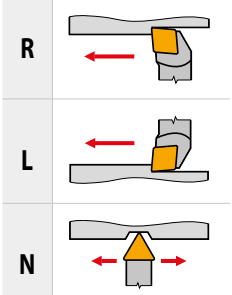


5 Ângulo de incidência da pastilha



N	B	C	P
0°	5°	7°	11°

6 Direção do corte



7 Altura do encabadouro (mm)



08	10	12	16	20	25
32	38	40	45	50	60

8 Largura do encabadouro (mm)



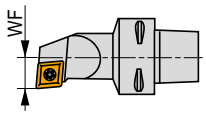
08	10	12	16	20	25
32	38	40	45	50	60

7 & 8 Largura e altura do encabadouro (")

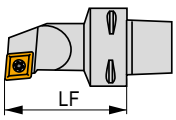
Symbol	B (")	H (")
05	5/16"	5/16"
06	3/8"	3/8"
08	1/2"	1/2"
10	5/8"	5/8"
12	3/4"	3/4"
16	1"	1"
85	1"	1 1/4"
86	1"	1 1/2"
20	1 1/4"	1 1/4"
24	1 1/2"	1 1/2"
32	2"	2"

Para encabadouros quadrados, este é o número de 1/16 da polegada de largura e altura. Para encabadouros retangulares, o primeiro digito é o numero de 1/8 da polegada de largura, e o segundo digito é o numero de 1/4 da polegada de altura

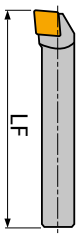
9 Largura funcional(mm)



10 Comprimento funcional (mm)



11 Comprimento total



	LF (")
A	4.000"
B	4.500"
C	5.000"
D	6.000"
E	7.000"
F	8.000"
M	4.000"
N	4.500"
R	6.000"
S	7.000"
T	8.000"

D	60
E	70
F	80
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	
Y	500

FERRAMENTAS DE TORNEAMENTO INTERIOR - DESIGNAÇÃO DO CÓDIGO ISO

	15	16	17		2	3	4	5	6	12		14
ISO	A	25	T	–	P	C	L	N	L	12	–	X
ANSI	A	16	T	–	D	C	L	N	L	4		

12 / 12 — Comprimento do fio de corte (tamanho da pastilha)

d = I.C. (mm)	(")	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

13 — Designação do fabricante

M	Sistema de fixação "S" com placa de base

14 — Designação do fabricante

X	Tipo de encabadouro especial
. .	
93	Ângulo de ferramenta tipo - Z
. .	

15 / 15 — Encabadouro

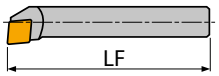
S	Encabadouro de aço
A	Encabadouro de aço com refrigeração interna
E	Encabadouro de Metal duro com refrigeração interna

16 / 16 — EncabadouroØ (mm)



DCON MS (mm)		DCON MS (")	
08	8	03	.1875"
10	10	04	.250"
12	12	05	.3125"
16	16	06	.375"
20	20	08	.500"
25	25	10	.625"
32	32	12	.750"
40	40	16	1.000"
50	50	20	1.250"
60	60	24	1.500"
		32	2.000"

17 / 17 — Comprimento total



	LF (")
F	3.250"
H	4.000"
K	5.000"
M	6.000"
P	6.250"
Q	7.250"
R	8.000"
S	10.000"
T	12.000"
U	14.000"
V	15.750"
W	17.750"
Y	20.000"
X	Spec.

	LF (mm)
D	60
E	70
F	80
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500

CARTUCHO

1	2		3	4	5	6	7
KH	P	–	C	L	N	R	25

SUPORTE

8		6	9	10	11
DKH		R	50	60	W

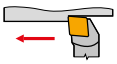
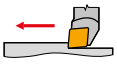
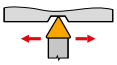
1 Cartucho

5 Ângulo de incidência

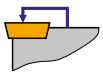
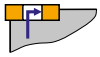
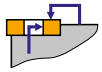
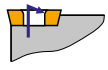
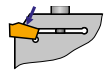


N	C	P
0°	7°	11°

6 Direção do corte

R	
L	
N	

2 Tipo de fixação

C	
D	
P	
M	
S	
X	
G	

3 Forma de pastilha

S		C	
T		D	
R		K	
W		V	
L		X	Special

4 Tipo de ferramenta - ângulo de posição

A 90°	B 75°	C 90°	D 45°	D
E 60°	F 90°	G 90°	H 107°30´	J 93°
K 75°	L 95°	M 50°	N 62°30´	P 62°30´
Q 107°30´	R 75°	S 45°	S	T 60°
U 93°	V 72°30´	W 60°	X Special	Y 85°
Z K°				

7 Comprimento do fio de corte (tamanho de pastilha)

d=I.C. (mm)	(")	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

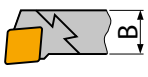
8 Suporte do cartucho

9 Altura do encabadouro (mm)



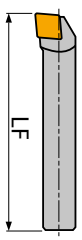
08	10	12	16	20	25
32	40	50	60	70	80

10 Largura do encabadouro (mm)

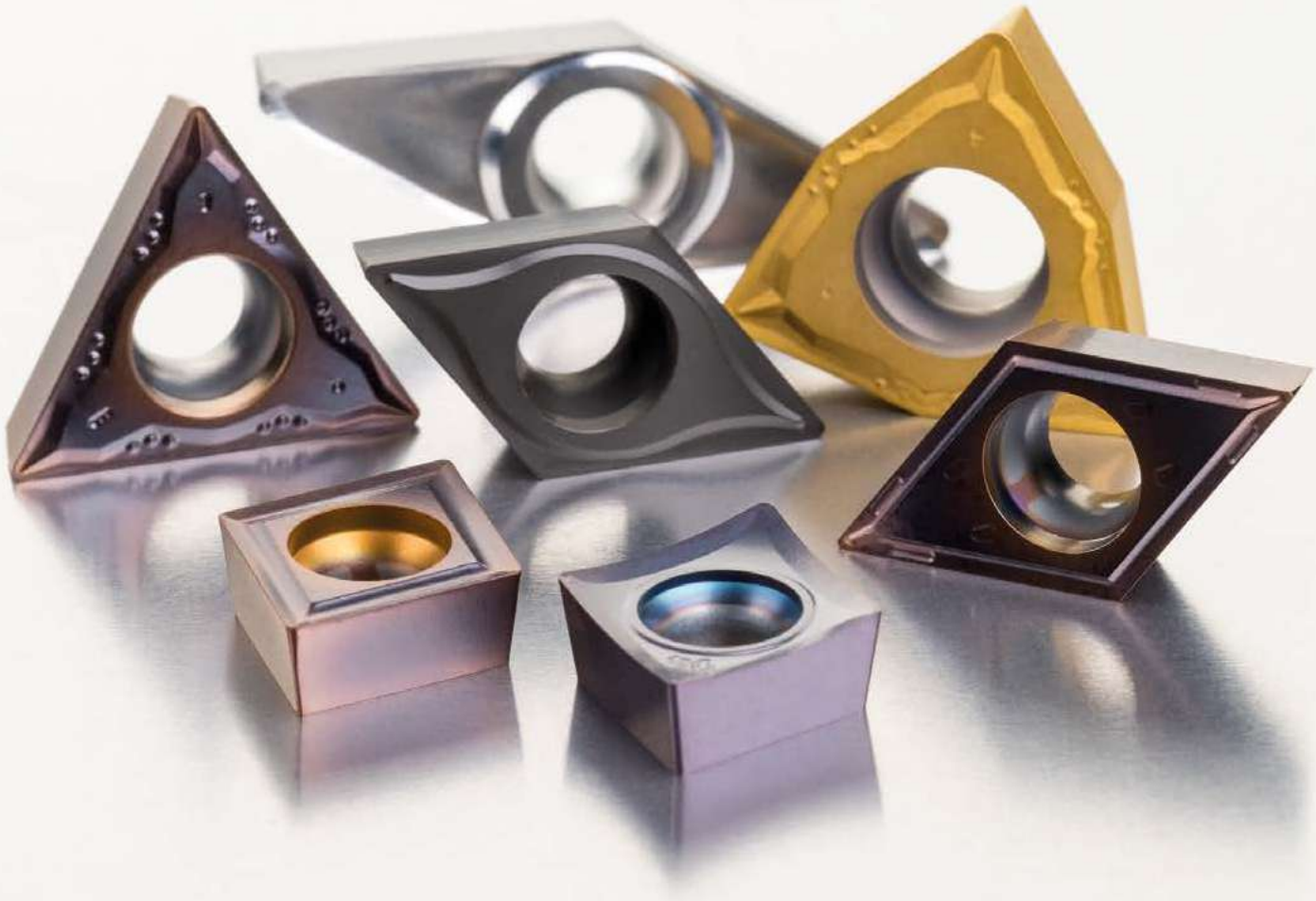


08	10	12	16	20	25
32	40	50	60	70	80

11 Comprimento do suporte



	LF (mm)
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
X	Spec.
Y	500



PASTILHAS POSITIVAS

CC

06 / 08 / 09 / 12

PASTILHAS DE METAL DURO

CCGT



60

CCMT



62

CCMW



68

PASTILHAS CBN

CCGW CBN



69

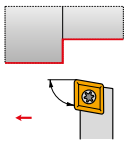
CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
CCMT 120404E-UR	S32U-SCKCR 12-A

TORNEAMENTO ISO - EXTERIOR

SCAC(RL) EXT

90° | CC..



06
09

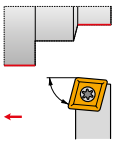


08×08 – 16×16

70 | 60 – 69

SCBC(RL) EXT

75° | CC..



09
12

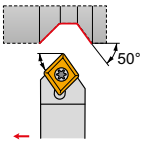


12×12 – 25×25

71 | 60 – 69

SCDCR EXT

45° | CC..



06

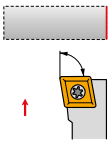


10×10

72 | 60 – 69

SCFC(RL) EXT

90° | CC..



06
09

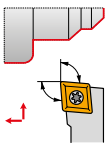


08×08 – 16×16

73 | 60 – 69

SCLC(RL) EXT

95° | CC..



06
08
09
12

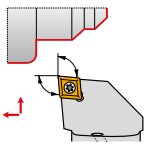


08×08 – 25×25

74 | 60 – 69

C.-SCLC(RL) EXT NEW

95° | CC..



09
12



C3 – C5

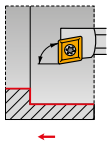
75 | 60 – 69

CC

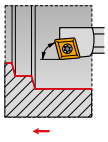
06 / 08 / 09 / 12

TORNEAMENTO ISO - INTERIOR

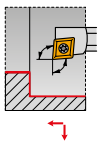
SCFC(RL) INT

90°	CC..
	06
ØDmin 13 / 16	
76	60 – 69

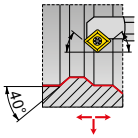
SCKC(RL) INT

75°	CC..
	06 09 12
ØDmin 11 / 40	
77	60 – 69

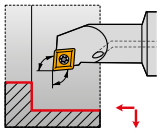
SCLC(RL) INT

95°	CC..
	06 09 12
ØDmin 11 / 40	
78	60 – 69

SCXC(RL) INT

40°	CC..
	06
ØDmin 13 / 20	
80	60 – 69

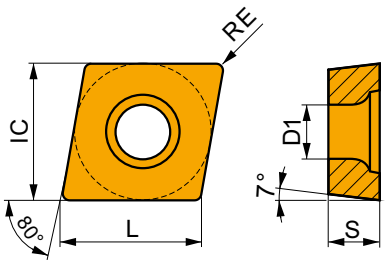
C.-SCLC(RL) INT NEW

95°	CC..
	09
ØDmin 20 / 32	
81	60 – 69

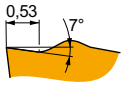
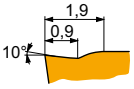
CCGT

PRAMET

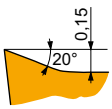
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.40	2.38
0602-SF3	6.350	2.80	6.40	2.58
0803-AL	7.940	3.40	8.10	3.43
0803-SF3	7.940	3.40	8.10	3.43
09T3	9.525	4.40	9.70	3.97
09T3-SF3	9.525	4.40	9.70	4.22
1204	12.700	5.50	12.90	4.76
1204-SF3	12.700	5.50	12.90	5.01



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a levemente interrompidos.																				
CCGT 060202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	450	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	645	0.12	1.0	–	–	–	–	–	–
CCGT 060204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	360	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	525	0.24	1.0	–	–	–	–	–	–
CCGT 080302F-AL	**T0315**	0.2	–	–	–	–	–	–	–	–	–	645	0.12	1.0	–	–	–	–	–	–
CCGT 080304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	360	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	525	0.24	1.0	–	–	–	–	–	–
CCGT 09T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	450	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	645	0.12	1.0	–	–	–	–	–	–
CCGT 09T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	345	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	495	0.24	1.5	–	–	–	–	–	–
CCGT 09T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	315	0.48	1.5	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	450	0.48	1.5	–	–	–	–	–	–
CCGT 120404F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	330	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	480	0.24	2.4	–	–	–	–	–	–
CCGT 120408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	300	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	435	0.48	2.4	–	–	–	–	–	–
																				
Geometria FF2 com desenho positivo para operações de acabamento fino a normal, e cortes contínuos a ligeiramente interrompidos.																				
CCGT 09T302E-FF2	**T7325**	0.2	235	0.05	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.2	345	0.05	1.0	–	–	–	325	0.05	1.0	–	–	–	–	–	–	–	–	–
																				
Geometria NF1 com desenho positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																				
CCGT 060204E-NF1	**H07**	0.4	–	–	–	95	0.09	0.8	–	–	–	485	0.12	0.8	45	0.07	0.6	–	–	–
	T6310	0.4	180	0.10	0.8	125	0.09	0.8	–	–	–	540	0.12	0.8	50	0.07	0.6	35	0.15	1.0
	T7325	0.4	210	0.10	0.8	160	0.09	0.8	–	–	–	–	–	–	65	0.07	0.6	–	–	–
CCGT 060208E-NF1	**T6310**	0.8	205	0.12	0.8	145	0.11	0.8	–	–	–	615	0.14	0.8	60	0.11	0.6	40	0.15	1.0
	T7325	0.8	235	0.12	0.8	180	0.11	0.8	–	–	–	–	–	–	75	0.11	0.6	–	–	–
CCGT 09T304E-NF1	**H07**	0.4	–	–	–	90	0.09	1.2	–	–	–	470	0.12	1.2	45	0.07	1.0	–	–	–
	T6310	0.4	175	0.10	1.2	125	0.09	1.2	–	–	–	525	0.12	1.2	50	0.07	1.0	35	0.15	1.0
	T7325	0.4	200	0.10	1.2	155	0.09	1.2	–	–	–	–	–	–	65	0.07	1.0	–	–	–
CCGT 09T308E-NF1	**T6310**	0.8	190	0.14	1.2	135	0.13	1.2	–	–	–	570	0.17	1.2	55	0.13	1.0	35	0.15	1.0
	T7325	0.8	215	0.14	1.2	165	0.13	1.2	–	–	–	–	–	–	65	0.13	1.0	–	–	–

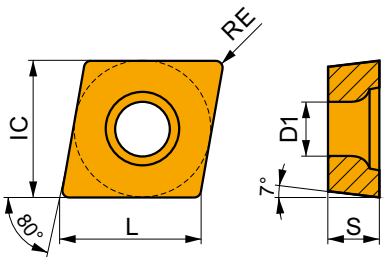
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			 Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																	
CCGT 060201E-SF3	**T6310**	0.1	200	0.05	0.5	140	0.05	0.5	160	0.05	0.5	600	0.06	0.5	60	0.04	0.4	40	0.15	1.0
CCGT 060202E-SF3	**H07**	0.2	–	–	–	120	0.05	0.8	190	0.05	0.8	605	0.06	0.8	60	0.04	0.6	–	–	–
	T6310	0.2	205	0.05	0.8	145	0.05	0.8	165	0.05	0.8	615	0.06	0.8	60	0.04	0.6	40	0.15	1.0
	T8315	0.2	215	0.05	0.8	125	0.05	0.8	200	0.05	0.8	645	0.06	0.8	50	0.04	0.6	40	0.15	1.0
CCGT 060204E-SF3	**H07**	0.4	–	–	–	95	0.09	0.8	150	0.10	0.8	485	0.12	0.8	45	0.07	0.6	–	–	–
	T6310	0.4	180	0.10	0.8	125	0.09	0.8	145	0.10	0.8	540	0.12	0.8	50	0.07	0.6	35	0.15	1.0
	T8315	0.4	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	570	0.12	0.8	45	0.07	0.6	35	0.15	1.0
CCGT 080302E-SF3	**T6310**	0.2	205	0.05	0.8	145	0.05	0.8	165	0.05	0.8	615	0.06	0.8	60	0.04	0.6	40	0.15	1.0
	T8315	0.2	215	0.05	0.8	125	0.05	0.8	200	0.05	0.8	645	0.06	0.8	50	0.04	0.6	40	0.15	1.0
CCGT 080304E-SF3	**H07**	0.4	–	–	–	95	0.09	1.0	150	0.10	1.0	485	0.12	1.0	45	0.07	0.8	–	–	–
	T6310	0.4	180	0.10	1.0	125	0.09	1.0	145	0.10	1.0	540	0.12	1.0	50	0.07	0.8	35	0.15	1.0
	T8315	0.4	190	0.10	1.0	110	0.09	1.0	180	0.10	1.0	570	0.12	1.0	45	0.07	0.8	35	0.15	1.0
CCGT 09T301E-SF3	**T6310**	0.1	200	0.05	0.5	140	0.05	0.5	160	0.05	0.5	600	0.06	0.5	60	0.04	0.4	40	0.15	1.0
CCGT 09T302E-SF3	**H07**	0.2	–	–	–	120	0.05	0.8	190	0.05	0.8	605	0.06	0.8	60	0.04	0.6	–	–	–
	T6310	0.2	205	0.05	0.8	145	0.05	0.8	165	0.05	0.8	615	0.06	0.8	60	0.04	0.6	40	0.15	1.0
	T8315	0.2	215	0.05	0.8	125	0.05	0.8	200	0.05	0.8	645	0.06	0.8	50	0.04	0.6	40	0.15	1.0
CCGT 09T304E-SF3	**H07**	0.4	–	–	–	95	0.09	1.0	150	0.10	1.0	485	0.12	1.0	45	0.07	0.8	–	–	–
	T6310	0.4	180	0.10	1.0	125	0.09	1.0	145	0.10	1.0	540	0.12	1.0	50	0.07	0.8	35	0.15	1.0
	T8315	0.4	190	0.10	1.0	110	0.09	1.0	180	0.10	1.0	570	0.12	1.0	45	0.07	0.8	35	0.15	1.0
CCGT 09T308E-SF3	**H07**	0.8	–	–	–	110	0.09	1.0	175	0.10	1.0	565	0.12	1.0	55	0.08	0.8	–	–	–
	T6310	0.8	210	0.10	1.0	150	0.09	1.0	165	0.10	1.0	630	0.12	1.0	60	0.08	0.8	40	0.15	1.0
	T8315	0.8	225	0.10	1.0	135	0.09	1.0	210	0.10	1.0	675	0.12	1.0	55	0.08	0.8	45	0.15	1.0
CCGT 120404E-SF3	**T6310**	0.4	180	0.10	1.0	125	0.09	1.0	145	0.10	1.0	540	0.12	1.0	50	0.07	0.8	35	0.15	1.0
CCGT 120408E-SF3	**H07**	0.8	–	–	–	105	0.12	1.0	165	0.12	1.0	525	0.14	1.0	50	0.11	0.8	–	–	–
	T6310	0.8	200	0.12	1.0	140	0.12	1.0	160	0.12	1.0	600	0.14	1.0	60	0.11	0.8	40	0.15	1.0
	T8315	0.8	210	0.12	1.0	125	0.12	1.0	195	0.12	1.0	630	0.14	1.0	50	0.11	0.8	40	0.15	1.0
			 Geometria ER-SI com desenho positivo à direita para operações de maquinação de acabamento fino, e cortes contínuos.																	
CCGT 060202ER-SI	**T8330**	0.2	215	0.10	0.8	125	0.09	0.8	200	0.10	0.8	–	–	–	50	0.08	0.6	–	–	–
	T8430	0.2	260	0.10	0.8	140	0.09	0.8	215	0.10	0.8	–	–	–	55	0.08	0.6	–	–	–
CCGT 060204ER-SI	**T8315**	0.4	225	0.12	0.8	135	0.11	0.8	210	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
	T8330	0.4	215	0.12	0.8	125	0.11	0.8	200	0.12	0.8	–	–	–	50	0.10	0.6	–	–	–
	T8430	0.4	260	0.12	0.8	140	0.11	0.8	215	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
CCGT 09T304ER-SI	**T8315**	0.4	205	0.17	0.8	120	0.15	0.8	190	0.17	0.8	–	–	–	50	0.15	0.6	–	–	–
	T8330	0.4	195	0.17	0.8	115	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
	T8430	0.4	230	0.17	0.8	125	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
CCGT 120408ER-SI	**T8330**	0.8	205	0.23	1.0	120	0.21	1.0	190	0.23	1.0	–	–	–	50	0.21	0.8	–	–	–
	T8430	0.8	230	0.24	1.0	125	0.22	1.0	185	0.24	1.0	–	–	–	45	0.22	0.8	–	–	–
			 Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino e cortes contínuos.																	
CCGT 060202EL-SI	**T8330**	0.2	215	0.10	0.8	125	0.09	0.8	200	0.10	0.8	–	–	–	50	0.08	0.6	–	–	–
	T8430	0.2	260	0.10	0.8	140	0.09	0.8	215	0.10	0.8	–	–	–	55	0.08	0.6	–	–	–
CCGT 060204EL-SI	**T8315**	0.4	225	0.12	0.8	135	0.11	0.8	210	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
	T8330	0.4	215	0.12	0.8	125	0.11	0.8	200	0.12	0.8	–	–	–	50	0.10	0.6	–	–	–
	T8430	0.4	260	0.12	0.8	140	0.11	0.8	215	0.12	0.8	–	–	–	55	0.10	0.6	–	–	–
CCGT 09T304EL-SI	**T8315**	0.4	205	0.17	0.8	120	0.15	0.8	190	0.17	0.8	–	–	–	50	0.15	0.6	–	–	–
	T8330	0.4	195	0.17	0.8	115	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
	T8430	0.4	230	0.17	0.8	125	0.15	0.8	185	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
CCGT 120408EL-SI	**T8330**	0.8	205	0.23	1.0	120	0.21	1.0	190	0.23	1.0	–	–	–	50	0.21	0.8	–	–	–
	T8430	0.8	230	0.24	1.0	125	0.22	1.0	185	0.24	1.0	–	–	–	45	0.22	0.8	–	–	–

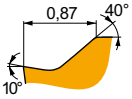
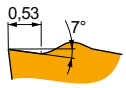
CCMT

PRAMET

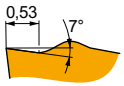
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.40	2.38
0803	7.940	3.40	8.10	3.18
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76



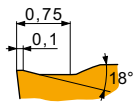
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria FF com desenho positivo para operações de maquinação de acabamento fino a normal, e cortes contínuos a ligeiramente interrompidos.																				
CCMT 060202E-FF	**T8315**	0.2	195	0.10	1.0	115	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	185	0.10	1.0	110	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.2	230	0.10	1.0	125	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.2	315	0.10	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-FF	**T8315**	0.4	195	0.12	1.0	115	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	185	0.12	1.0	110	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	225	0.12	1.0	120	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	310	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FF	**T8315**	0.4	190	0.12	1.2	110	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	185	0.12	1.2	110	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	225	0.12	1.2	120	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	300	0.12	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria FF2 com desenho positivo para operações de acabamento fino a normal, e cortes contínuos a ligeiramente interrompidos.																				
CCMT 060202E-FF2	**T7325**	0.2	240	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	205	0.05	0.8	–	–	–	190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	280	0.05	0.8	–	–	–	230	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	390	0.05	0.8	–	–	–	370	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	350	0.05	0.8	–	–	–	330	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	345	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-FF2	**T7325**	0.4	190	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	1.0	–	–	–	155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	–	–	–	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	–	–	–	240	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	215	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	280	0.12	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080302E-FF2	**T7325**	0.2	240	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	205	0.05	0.8	–	–	–	190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	280	0.05	0.8	–	–	–	230	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	350	0.05	0.8	–	–	–	330	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	345	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080304E-FF2	**T7325**	0.4	190	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	1.0	–	–	–	155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	–	–	–	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	–	–	–	240	0.12	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.4	350	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

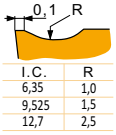
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FF2 com desenho positivo para operações de acabamento fino a normal, e cortes contínuos a ligeiramente interrompidos.																	
CCMT 080308E-FF2	**T7325**	0.8	205	0.17	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	180	0.17	1.0	–	–	–	170	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	–	–	–	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	–	–	–	245	0.17	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FF2	**T7325**	0.4	190	0.12	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	1.2	–	–	–	155	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	200	0.12	1.2	–	–	–	165	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	275	0.12	1.2	–	–	–	260	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.12	1.2	–	–	–	235	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	215	0.12	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	350	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-FF2	**T7325**	0.8	205	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	175	0.17	1.2	–	–	–	165	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	205	0.17	1.2	–	–	–	170	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	285	0.17	1.2	–	–	–	270	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	255	0.17	1.2	–	–	–	240	0.17	1.2	–	–	–	–	–	–	–	–	–
	TT010	0.8	350	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
CCMT 060202E-FM	**T7325**	0.2	210	0.10	1.0	160	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	210	0.10	1.0	160	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	195	0.10	1.0	115	0.09	1.0	185	0.10	1.0	585	0.12	1.0	–	–	–	–	–	–
	T8330	0.2	185	0.10	1.0	110	0.09	1.0	175	0.10	1.0	555	0.12	1.0	–	–	–	–	–	–
	T8430	0.2	230	0.10	1.0	125	0.09	1.0	185	0.10	1.0	630	0.12	1.0	–	–	–	–	–	–
	T9315	0.2	315	0.10	1.0	–	–	–	295	0.10	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.2	285	0.10	1.0	170	0.09	1.0	270	0.10	1.0	–	–	–	–	–	–	–	–	–
CCMT 060204E-FM	**T7325**	0.4	200	0.15	1.0	155	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	195	0.15	1.0	150	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	185	0.15	1.0	110	0.14	1.0	175	0.15	1.0	555	0.18	1.0	–	–	–	–	–	–
	T8330	0.4	170	0.15	1.0	100	0.14	1.0	160	0.15	1.0	510	0.18	1.0	–	–	–	–	–	–
	T8430	0.4	205	0.15	1.0	110	0.14	1.0	170	0.15	1.0	570	0.18	1.0	–	–	–	–	–	–
	T9315	0.4	285	0.15	1.0	–	–	–	270	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.15	1.0	150	0.15	1.0	235	0.15	1.0	–	–	–	–	–	–	–	–	–
CCMT 060208E-FM	**T7325**	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	190	0.20	1.0	110	0.18	1.0	180	0.20	1.0	570	0.24	1.0	–	–	–	–	–	–
	T8430	0.8	220	0.20	1.0	120	0.18	1.0	180	0.20	1.0	600	0.24	1.0	–	–	–	–	–	–
	T9315	0.8	300	0.20	1.0	–	–	–	285	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	265	0.20	1.0	155	0.18	1.0	250	0.20	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T302E-FM	**T7325**	0.2	205	0.10	1.2	155	0.09	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	205	0.10	1.2	155	0.09	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	190	0.10	1.2	110	0.09	1.2	180	0.10	1.2	570	0.12	1.2	–	–	–	–	–	–
	T8330	0.2	180	0.10	1.2	105	0.09	1.2	170	0.10	1.2	540	0.12	1.2	–	–	–	–	–	–
	T8430	0.2	225	0.10	1.2	120	0.09	1.2	185	0.10	1.2	615	0.12	1.2	–	–	–	–	–	–
	T9315	0.2	310	0.10	1.2	–	–	–	290	0.10	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.2	275	0.10	1.2	165	0.09	1.2	260	0.10	1.2	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FM	**T7325**	0.4	195	0.15	1.2	150	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	190	0.15	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	180	0.15	1.2	105	0.14	1.2	170	0.15	1.2	540	0.18	1.2	–	–	–	–	–	–
	T8330	0.4	170	0.15	1.2	100	0.14	1.2	160	0.15	1.2	510	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	200	0.15	1.2	110	0.14	1.2	165	0.15	1.2	555	0.18	1.2	–	–	–	–	–	–
	T9315	0.4	275	0.15	1.2	–	–	–	260	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	245	0.15	1.2	145	0.15	1.2	230	0.15	1.2	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
CCMT 09T308E-FM	**T7325**	0.8	215	0.20	1.2	165	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	205	0.20	1.2	155	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	195	0.20	1.2	115	0.18	1.2	185	0.20	1.2	585	0.24	1.2	–	–	–	–	–	–
	T8330	0.8	185	0.20	1.2	110	0.18	1.2	175	0.20	1.2	555	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	210	0.20	1.2	115	0.18	1.2	175	0.20	1.2	585	0.24	1.2	–	–	–	–	–	–
	T9315	0.8	290	0.20	1.2	–	–	–	275	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.20	1.2	155	0.18	1.2	245	0.20	1.2	–	–	–	–	–	–	–	–	–
CCMT 120404E-FM	**T7325**	0.4	190	0.15	1.7	145	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	185	0.15	1.7	140	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	170	0.15	1.7	100	0.14	1.7	160	0.15	1.7	510	0.18	1.7	–	–	–	–	–	–
	T8330	0.4	165	0.15	1.7	95	0.14	1.7	155	0.15	1.7	495	0.18	1.7	–	–	–	–	–	–
	T8430	0.4	195	0.15	1.7	105	0.14	1.7	160	0.15	1.7	540	0.18	1.7	–	–	–	–	–	–
	T9315	0.4	265	0.15	1.7	–	–	–	250	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.15	1.7	140	0.15	1.7	225	0.15	1.7	–	–	–	–	–	–	–	–	–
CCMT 120408E-FM	**T7325**	0.8	205	0.20	1.7	155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	200	0.20	1.7	155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	190	0.20	1.7	110	0.18	1.7	180	0.20	1.7	570	0.24	1.7	–	–	–	–	–	–
	T8330	0.8	180	0.20	1.7	105	0.18	1.7	170	0.20	1.7	540	0.24	1.7	–	–	–	–	–	–
	T8430	0.8	205	0.20	1.7	110	0.18	1.7	170	0.20	1.7	570	0.24	1.7	–	–	–	–	–	–
	T9315	0.8	280	0.20	1.7	–	–	–	265	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	250	0.20	1.7	150	0.18	1.7	235	0.20	1.7	–	–	–	–	–	–	–	–	–
CCMT 120412E-FM	**T8330**	1.2	175	0.27	1.7	105	0.24	1.7	165	0.27	1.7	525	0.32	1.7	–	–	–	–	–	–
	T8430	1.2	190	0.27	1.7	105	0.24	1.7	155	0.27	1.7	525	0.32	1.7	–	–	–	–	–	–
	T9325	1.2	235	0.27	1.7	140	0.24	1.7	220	0.27	1.7	–	–	–	–	–	–	–	–	–
																				
			Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																	
CCMT 080304E-FM2	**T8330**	0.4	165	0.12	1.0	95	0.11	1.0	155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	110	0.11	1.0	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	215	0.12	1.0	125	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 080308E-FM2	**T8330**	0.8	180	0.17	1.0	105	0.15	1.0	170	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	115	0.15	1.0	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	225	0.17	1.0	135	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-FM2	**T6310**	0.4	165	0.12	1.0	115	0.11	1.0	130	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	1.0	95	0.11	1.0	155	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	1.0	110	0.11	1.0	170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T308E-FM2	**T6310**	0.8	180	0.17	1.0	125	0.15	1.0	145	0.17	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	180	0.17	1.0	105	0.15	1.0	170	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	210	0.17	1.0	115	0.15	1.0	175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	290	0.17	1.0	–	–	–	275	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	225	0.17	1.0	135	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 120408E-FM2	**T7325**	0.8	190	0.20	1.5	145	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.20	1.5	95	0.18	1.5	155	0.20	1.5	–	–	–	–	–	–	–	–	–
	T8430	0.8	190	0.20	1.5	105	0.18	1.5	155	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.20	1.5	140	0.18	1.5	220	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	200	0.20	1.5	120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

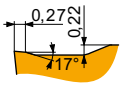
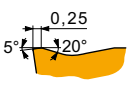
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
CCMT 060202E-NF2	**T6310**	0.2	170	0.10	0.8	120	0.09	0.8	135	0.10	0.8	510	0.12	0.8	50	0.08	0.6	–	–	–
	T7325	0.2	195	0.10	0.8	150	0.09	0.8	–	–	–	–	–	–	60	0.08	0.6	–	–	–
	T8330	0.2	170	0.10	0.8	100	0.09	0.8	160	0.10	0.8	510	0.12	0.8	40	0.08	0.6	–	–	–
	T8430	0.2	210	0.10	0.8	115	0.09	0.8	175	0.10	0.8	585	0.12	0.8	45	0.08	0.6	–	–	–
	T9325	0.2	260	0.10	0.8	155	0.09	0.8	245	0.10	0.8	–	–	–	55	0.08	0.6	–	–	–
CCMT 060204E-NF2	**H07**	0.4	–	–	–	85	0.11	0.8	140	0.12	0.8	445	0.14	0.8	45	0.11	0.6	–	–	–
	T6310	0.4	170	0.12	0.8	120	0.11	0.8	135	0.12	0.8	510	0.14	0.8	50	0.11	0.6	–	–	–
	T7325	0.4	200	0.12	0.8	155	0.11	0.8	–	–	–	–	–	–	65	0.11	0.6	–	–	–
	T8330	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	510	0.14	0.8	40	0.11	0.6	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	570	0.14	0.8	45	0.11	0.6	–	–	–
	T9315	0.4	290	0.12	0.8	–	–	–	275	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	0.8	150	0.11	0.8	240	0.12	0.8	–	–	–	55	0.11	0.6	–	–	–
	T9335	0.4	220	0.12	0.8	130	0.11	0.8	–	–	–	–	–	–	45	0.11	0.6	–	–	–
CCMT 080304E-NF2	**T5315**	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	190	0.12	1.0	145	0.11	1.0	–	–	–	–	–	–	60	0.11	0.8	–	–	–
	T7335	0.4	190	0.12	1.0	145	0.11	1.0	–	–	–	–	–	–	60	0.11	0.8	–	–	–
	T9315	0.4	280	0.12	1.0	–	–	–	265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	255	0.12	1.0	150	0.11	1.0	240	0.12	1.0	–	–	–	55	0.11	0.8	–	–	–
	T9335	0.4	215	0.12	1.2	125	0.11	1.2	–	–	–	–	–	–	45	0.11	1.0	–	–	–
CCMT 080308E-NF2	**H07**	0.8	–	–	–	95	0.13	1.2	150	0.14	1.2	485	0.17	1.2	45	0.13	1.0	–	–	–
	T5315	0.8	295	0.17	1.0	–	–	–	280	0.17	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.14	0.8	–	–	–
	T7335	0.8	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.14	0.8	–	–	–
	T9325	0.8	260	0.17	1.0	155	0.15	1.0	245	0.17	1.0	–	–	–	55	0.14	0.8	–	–	–
CCMT 09T304E-NF2	**H07**	0.4	–	–	–	85	0.11	1.2	135	0.12	1.2	430	0.14	1.2	40	0.11	1.0	–	–	–
	T6310	0.4	165	0.12	1.2	115	0.11	1.2	130	0.12	1.2	495	0.14	1.2	45	0.11	1.0	–	–	–
	T7325	0.4	190	0.12	1.2	145	0.11	1.2	–	–	–	–	–	–	60	0.11	1.0	–	–	–
	T8330	0.4	165	0.12	1.2	95	0.11	1.2	155	0.12	1.2	495	0.14	1.2	40	0.11	1.0	–	–	–
	T8430	0.4	200	0.12	1.2	110	0.11	1.2	165	0.12	1.2	555	0.14	1.2	40	0.11	1.0	–	–	–
	T9315	0.4	275	0.12	1.2	–	–	–	260	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.12	1.2	150	0.11	1.2	235	0.12	1.2	–	–	–	55	0.11	1.0	–	–	–
	T9335	0.4	215	0.12	1.2	125	0.11	1.2	–	–	–	–	–	–	45	0.11	1.0	–	–	–
CCMT 09T308E-NF2	**H07**	0.8	–	–	–	95	0.13	1.2	150	0.14	1.2	485	0.17	1.2	45	0.13	1.0	–	–	–
	T6310	0.8	190	0.14	1.2	135	0.13	1.2	150	0.14	1.2	570	0.17	1.2	55	0.13	1.0	–	–	–
	T7325	0.8	215	0.14	1.2	165	0.13	1.2	–	–	–	–	–	–	65	0.13	1.0	–	–	–
	T8330	0.8	190	0.14	1.2	110	0.13	1.2	180	0.14	1.2	570	0.17	1.2	45	0.13	1.0	–	–	–
	T8430	0.8	225	0.14	1.2	120	0.13	1.2	185	0.14	1.2	615	0.17	1.2	45	0.13	1.0	–	–	–
	T9315	0.8	310	0.14	1.2	–	–	–	290	0.14	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	275	0.14	1.2	165	0.13	1.2	260	0.14	1.2	–	–	–	60	0.13	1.0	–	–	–
	T9335	0.8	235	0.14	1.2	140	0.13	1.2	–	–	–	–	–	–	50	0.13	1.0	–	–	–
																				
																				
CCMT 060202E-RF	**T7335**	0.2	150	0.15	1.0	115	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060204E-RF	**T5315**	0.4	235	0.15	1.0	–	–	–	220	0.15	1.0	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.4	160	0.15	1.0	120	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.15	1.0	120	0.15	1.0	190	0.15	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T304E-RF	**T7335**	0.4	135	0.20	1.5	105	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	175	0.20	1.5	105	0.18	1.5	165	0.20	1.5	–	–	–	–	–	–	–	–	–
CCMT 09T308E-RF	**T5315**	0.8	245	0.20	1.5	–	–	–	230	0.20	1.5	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	165	0.20	1.5	125	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	210	0.20	1.5	125	0.18	1.5	195	0.20	1.5	–	–	–	–	–	–	–	–	–
CCMT 120408E-RF	**T5315**	0.8	230	0.22	2.2	–	–	–	215	0.22	2.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	150	0.22	2.2	115	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	195	0.22	2.2	115	0.22	2.2	185	0.22	2.2	–	–	–	–	–	–	–	–	–

Geometria NF2 com desenho positivo para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.

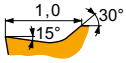
Geometria RF para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CCMT 09T304E-RM	**T5305**	0.4	260	0.27	2.2	–	–	–	245	0.27	2.2	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	230	0.27	2.2	–	–	–	215	0.27	2.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.4	155	0.27	2.2	120	0.24	2.2	–	–	–	–	–	–	50	0.19	1.8	–	–	–
	T8330	0.4	140	0.27	2.2	80	0.24	2.2	130	0.27	2.2	–	–	–	35	0.19	1.8	25	0.15	1.0
	T8430	0.4	150	0.27	2.2	80	0.24	2.2	125	0.27	2.2	–	–	–	30	0.19	1.8	25	0.15	1.0
	T9315	0.4	215	0.27	2.2	–	–	–	200	0.27	2.2	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.4	190	0.27	2.2	110	0.24	2.2	180	0.27	2.2	–	–	–	40	0.19	1.8	–	–	–
CCMT 09T308E-RM	**T5305**	0.8	290	0.30	2.2	–	–	–	275	0.30	2.2	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	265	0.30	2.2	–	–	–	250	0.30	2.2	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	175	0.30	2.2	135	0.27	2.2	–	–	–	–	–	–	55	0.24	1.8	–	–	–
	T8330	0.8	165	0.30	2.2	95	0.27	2.2	155	0.30	2.2	–	–	–	40	0.24	1.8	30	0.15	1.0
	T8430	0.8	180	0.30	2.2	95	0.27	2.2	145	0.30	2.2	–	–	–	35	0.24	1.8	30	0.15	1.0
	T9315	0.8	240	0.30	2.2	–	–	–	225	0.30	2.2	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	215	0.30	2.2	125	0.27	2.2	200	0.30	2.2	–	–	–	45	0.24	1.8	–	–	–
CCMT 120408E-RM	**T5305**	0.8	290	0.30	2.7	–	–	–	275	0.30	2.7	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	260	0.30	2.7	–	–	–	245	0.30	2.7	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	175	0.30	2.7	135	0.27	2.7	–	–	–	–	–	–	55	0.24	2.2	–	–	–
	T8330	0.8	160	0.30	2.7	95	0.27	2.7	150	0.30	2.7	–	–	–	40	0.24	2.2	30	0.15	1.0
	T8430	0.8	175	0.30	2.7	95	0.27	2.7	140	0.30	2.7	–	–	–	35	0.24	2.2	30	0.15	1.0
	T9315	0.8	235	0.30	2.7	–	–	–	220	0.30	2.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	210	0.30	2.7	125	0.27	2.7	195	0.30	2.7	–	–	–	45	0.24	2.2	–	–	–
CCMT 120412E-RM	**T8330**	1.2	165	0.33	2.7	95	0.30	2.7	155	0.33	2.7	–	–	–	40	0.23	2.2	30	0.15	1.0
	T8430	1.2	180	0.33	2.7	95	0.30	2.7	145	0.33	2.7	–	–	–	35	0.23	2.2	30	0.15	1.0
	T9315	1.2	235	0.33	2.7	–	–	–	220	0.33	2.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	1.2	215	0.33	2.7	125	0.30	2.7	200	0.33	2.7	–	–	–	45	0.23	2.2	–	–	–
																				
			Geometria RM3 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CCMT 120404E-RM3	**T7325**	0.4	140	0.25	2.5	105	0.25	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	190	0.25	2.5	–	–	–	180	0.25	2.5	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.4	165	0.25	2.5	95	0.25	2.5	155	0.25	2.5	–	–	–	–	–	–	–	–	–
CCMT 120408E-RM3	**T6310**	0.8	145	0.27	2.5	100	0.27	2.5	115	0.27	2.5	–	–	–	–	–	–	25	0.15	1.0
	T7325	0.8	165	0.27	2.5	125	0.27	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	215	0.27	2.5	–	–	–	200	0.27	2.5	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	195	0.27	2.5	115	0.27	2.5	185	0.27	2.5	–	–	–	–	–	–	–	–	–
CCMT 120412E-RM3	**T7325**	1.2	170	0.30	2.5	130	0.27	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	220	0.30	2.5	–	–	–	205	0.30	2.5	–	–	–	–	–	–	40	0.15	1.0
																				
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
CCMT 060202E-UR	**T7325**	0.2	185	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	185	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	170	0.10	0.8	100	0.09	0.8	160	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	160	0.10	0.8	95	0.09	0.8	150	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	200	0.10	0.8	110	0.09	0.8	165	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	275	0.10	0.8	–	–	–	260	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	250	0.10	0.8	150	0.09	0.8	235	0.10	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.2	275	0.10	0.5	165	0.09	0.5	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

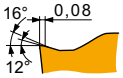
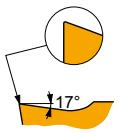




Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
CCMT 060204E-UR	**T5315**	0.4	245	0.15	1.0	–	–	–	230	0.15	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	170	0.15	1.0	130	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	170	0.15	1.0	130	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	160	0.15	1.0	95	0.14	1.0	150	0.15	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	150	0.15	1.0	90	0.14	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.15	1.0	95	0.14	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	245	0.15	1.0	–	–	–	230	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	215	0.15	1.0	125	0.15	1.0	200	0.15	1.0	–	–	–	–	–	–	–	–	–
	TT310	0.4	255	0.15	0.5	150	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 060208E-UR	**T5315**	0.8	270	0.20	1.0	–	–	–	255	0.20	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	190	0.20	1.0	145	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	165	0.20	1.0	95	0.18	1.0	155	0.20	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.20	1.0	100	0.18	1.0	150	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	255	0.20	1.0	–	–	–	240	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	230	0.20	1.0	135	0.18	1.0	215	0.20	1.0	–	–	–	–	–	–	–	–	–
CCMT 09T302E-UR	**T6310**	0.2	160	0.10	1.0	115	0.09	1.0	125	0.10	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.2	195	0.10	1.0	105	0.09	1.0	160	0.10	1.0	–	–	–	–	–	–	–	–	–
	TT310	0.2	255	0.10	1.0	150	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T304E-UR	**T5315**	0.4	245	0.15	1.2	–	–	–	230	0.15	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	170	0.15	1.2	130	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	165	0.15	1.2	125	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	155	0.15	1.2	90	0.14	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–
	T8330	0.4	150	0.15	1.2	90	0.14	1.2	140	0.15	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.15	1.2	95	0.14	1.2	140	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.4	265	0.15	1.2	–	–	–	250	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	235	0.15	1.2	–	–	–	220	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	215	0.15	1.2	125	0.15	1.2	200	0.15	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.4	235	0.15	1.2	140	0.14	1.2	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308E-UR	**T5315**	0.8	265	0.20	1.2	–	–	–	250	0.20	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	185	0.20	1.2	140	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	175	0.20	1.2	135	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	170	0.20	1.2	100	0.18	1.2	160	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8330	0.8	160	0.20	1.2	95	0.18	1.2	150	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.20	1.2	100	0.18	1.2	150	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.8	280	0.20	1.2	–	–	–	265	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	250	0.20	1.2	–	–	–	235	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.20	1.2	135	0.18	1.2	210	0.20	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	255	0.20	1.2	150	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
CCMT 120404E-UR	**T5315**	0.4	235	0.15	1.7	–	–	–	220	0.15	1.7	–	–	–	–	–	–	–	–	–
	T7325	0.4	160	0.15	1.7	120	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	140	0.15	1.7	80	0.14	1.7	130	0.15	1.7	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.15	1.7	90	0.14	1.7	135	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.15	1.7	–	–	–	215	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.15	1.7	120	0.15	1.7	190	0.15	1.7	–	–	–	–	–	–	–	–	–
CCMT 120408E-UR	**T5315**	0.8	255	0.20	1.7	–	–	–	240	0.20	1.7	–	–	–	–	–	–	–	–	–
	T7325	0.8	175	0.20	1.7	135	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	170	0.20	1.7	130	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	155	0.20	1.7	90	0.18	1.7	145	0.20	1.7	–	–	–	–	–	–	–	–	–
	T8430	0.8	180	0.20	1.7	95	0.18	1.7	145	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.8	240	0.20	1.7	–	–	–	225	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.20	1.7	125	0.18	1.7	200	0.20	1.7	–	–	–	–	–	–	–	–	–
CCMT 120412E-UR	**T5315**	1.2	240	0.27	1.7	–	–	–	225	0.27	1.7	–	–	–	–	–	–	–	–	–
	T7325	1.2	170	0.27	1.7	130	0.24	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	1.2	165	0.27	1.7	90	0.24	1.7	135	0.27	1.7	–	–	–	–	–	–	–	–	–
	T9315	1.2	225	0.27	1.7	–	–	–	210	0.27	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	205	0.27	1.7	120	0.24	1.7	190	0.27	1.7	–	–	–	–	–	–	–	–	–

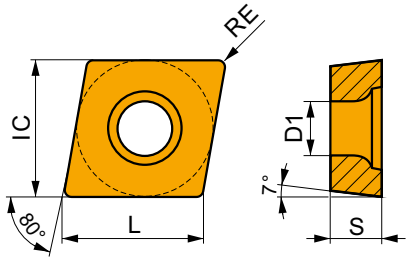
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria W-FM Wiper para operações de maquinação de acabamento a acabamento fino com taxas de avanço aumentadas e acabamento superficial aprimorado.																	
CCMT 060204W-FM	**T7325**	0.4	◪ 165	0.30	0.8	■ 125	0.27	0.8		–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 165	0.30	0.8	■ 90	0.27	0.8	◪ 135	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 215	0.30	0.8	–	–	–	◪ 200	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 190	0.30	0.8	■ 110	0.27	0.8	◪ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
CCMT 09T304W-FM	**T7325**	0.4	◪ 165	0.30	0.8	■ 125	0.27	0.8		–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 145	0.30	0.8	■ 85	0.27	0.8	■ 135	0.30	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 165	0.30	0.8	■ 90	0.27	0.8	◪ 135	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 215	0.30	0.8	–	–	–	◪ 200	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 190	0.30	0.8	■ 110	0.27	0.8	◪ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
CCMT 09T308W-FM	**T8330**	0.8	■ 155	0.40	1.0	■ 90	0.36	1.0	■ 145	0.40	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 170	0.40	1.0	■ 90	0.36	1.0	◪ 135	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 220	0.40	1.0	–	–	–	◪ 205	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 200	0.40	1.0	■ 120	0.36	1.0	◪ 190	0.40	1.0	–	–	–	–	–	–	–	–	–
																				
			Geometria W-UR Wiper para operações de maquinação de acabamento a acabamento fino com taxas de avanço aumentadas e acabamento superficial aprimorado.																	
CCMT 060204W-UR	**TT310**	0.4	■ 255	0.15	0.5	◪ 150	0.14	0.5		–	–	–	–	–	–	–	–	–	–	–	–
CCMT 09T308W-UR	**TT310**	0.8	■ 255	0.20	1.2	◪ 150	0.18	1.2		–	–	–	–	–	–	–	–	–	–	–	–

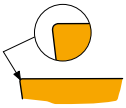
CCMW

PRAMET

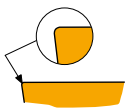
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.40	2.38
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a levemente interrompidos.																	
CCMW 060202	**T5305**	0.2	–	–	–	–	–	–	■ 230	0.08	2.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T6310	0.2	–	–	–	–	–	–	■ 100	0.08	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
CCMW 060204	**T5305**	0.4	–	–	–	–	–	–	■ 230	0.10	2.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	■ 195	0.10	2.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	■ 95	0.10	2.0	–	–	–	–	–	–	◪ 20	0.15	1.0
CCMW 09T304	**T5305**	0.4	–	–	–	–	–	–	■ 215	0.10	3.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	■ 190	0.10	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	■ 95	0.10	3.0	–	–	–	–	–	–	◪ 20	0.15	1.0
CCMW 09T308	**T5305**	0.8	–	–	–	–	–	–	■ 200	0.20	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	■ 180	0.20	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	■ 90	0.20	3.0	–	–	–	–	–	–	◪ 20	0.15	1.0

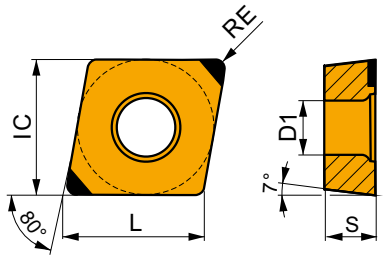
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a levemente interrompidos.																				
CCMW 120404	**T5305**	0.4	–	–	–	–	–	–	■ 210	0.10	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	■ 185	0.10	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	■ 90	0.10	4.0	–	–	–	–	–	–	◪ 20	0.15	1.0
CCMW 120408	**T5305**	0.8	–	–	–	–	–	–	■ 195	0.20	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	■ 175	0.20	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	■ 90	0.20	4.0	–	–	–	–	–	–	◪ 20	0.15	1.0

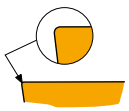
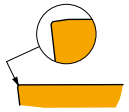
CCGW CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.50	2.38
09T3	9.525	4.50	9.70	3.97



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Para operações de maquinação de acabamento.																				
CCGW 060204E-B	**TB310**	0.4	–	–	–	–	–	–	◪ 460	0.10	0.4	–	–	–	◪ 120	0.07	0.3	■ 95	0.15	1.0
CCGW 09T304E-B	**TB310**	0.4	–	–	–	–	–	–	◪ 460	0.10	0.4	–	–	–	◪ 120	0.07	0.3	■ 95	0.15	1.0
																				
Para operações de maquinação de acabamento.																				
CCGW 060204S01020B	**TB310**	0.4	–	–	–	–	–	–	◪ 460	0.10	0.4	–	–	–	◪ 120	0.07	0.3	■ 95	0.15	1.0
CCGW 09T304S01020B	**TB310**	0.4	–	–	–	–	–	–	◪ 460	0.10	0.4	–	–	–	◪ 120	0.07	0.3	■ 95	0.15	1.0

SCAC(RL) EXT

P M K N S H

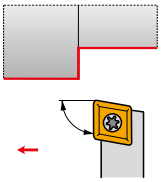
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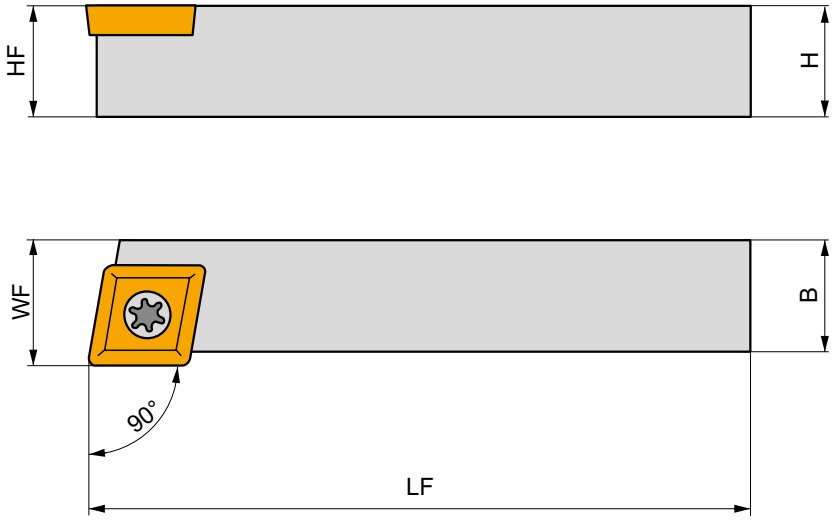
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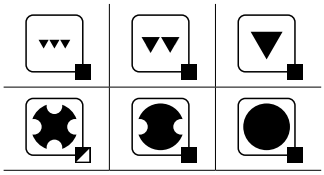


Porta-Ferramentas de Exterior, Fixação por de Parafuso, Ângulo de 90 °, para Pastilhas CC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 90 ° para pastilhas CC .. 06 ou 09. Adequado para torneamento longitudinal, cónico e chanfrar. Disponível com hastes de 08x08 até 16x16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	SCACR 0808 D 06	8	8	8	8.5	60	0	0	0.04	GI045	S07
	SCACR 1010 E 06	10	10	10	10.5	70	0	0	0.09	GI045	S07
	SCACR 1212 F 09	12	12	12	12.5	80	0	0	0.12	GI041	S04
	SCACR 1616 H 09	16	16	16	16.5	100	0	0	0.22	GI041	S04
L	SCACL 0808 D 06	8	8	8	8.5	60	0	0	0.07	GI045	S07
	SCACL 1010 E 06	10	10	10	10.5	70	0	0	0.06	GI045	S07
	SCACL 1212 F 09	12	12	12	12.5	80	0	0	0.12	GI041	S04
	SCACL 1616 H 09	16	16	16	16.5	100	0	0	0.22	GI041	S04

GI041	CC.. 09T3..
GI045	CC.. 0602..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

SCBC(RL) EXT

P M K N S H

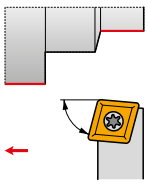
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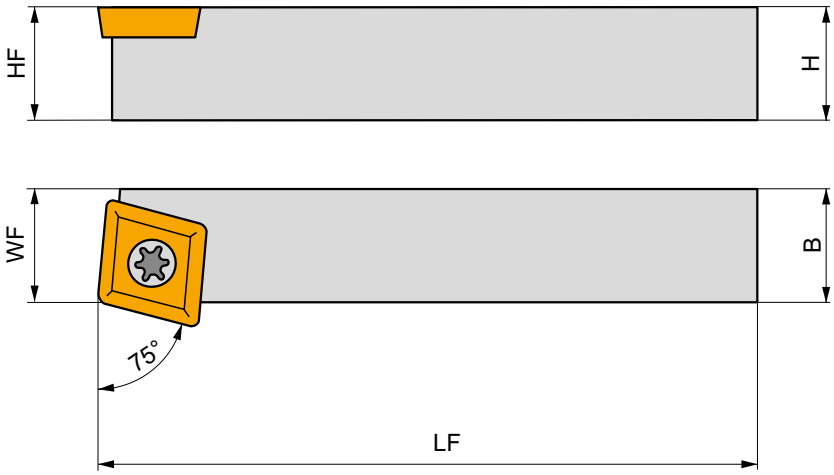
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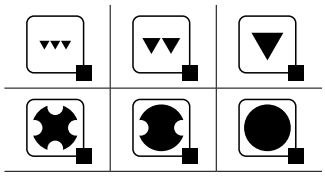


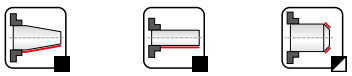
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 75 °, para Pastilhas CC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 75 °, para pastilhas CC .. 09 ou 12. Adequado para torneamento longitudinal sem esquadria e chanfrar. Disponível com hastes de 12x12 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	SCBCR 1212 F 09	12	12	12	11	80	0	0	0.10	GI041	S08
	SCBCR 1616 H 09	16	16	16	13	100	0	0	0.20	GI041	S08
	SCBCR 2020 K 12-M-A	20	20	20	17	125	0	0	0.45	GI011	SC20
	SCBCR 2525 M 12-M-A	25	25	25	22	150	0	0	0.61	GI011	SC20
L	SCBCL 1212 F 09	12	12	12	11	80	0	0	0.10	GI041	S08
	SCBCL 1616 H 09	16	16	16	13	100	0	0	0.22	GI041	S08
	SCBCL 2020 K 12-M-A	20	20	20	17	125	0	0	0.43	GI011	SC20
	SCBCL 2525 M 12-M-A	25	25	25	22	150	0	0	0.75	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SCDCR EXT

P M K N S H

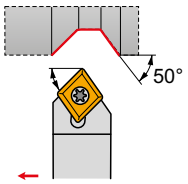
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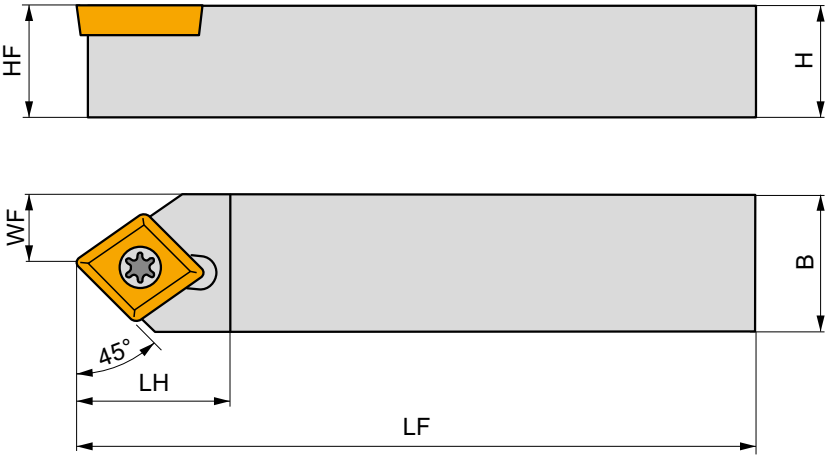
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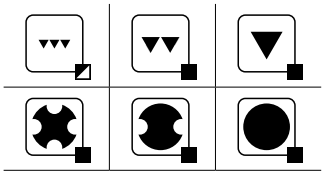


Porta-Ferramenta de Exterior, Fixação por Parafuso, Ângulo de 45 °, para Pastilhas CC ..

Porta-ferramentas de exterior direito com ângulo de corte de 45 ° para pastilhas positivas CC .. 06. Adequado para torneamento longitudinal exterior sem esquadria, cónico, de cópia multidirecional e torneamento de chanfro. Disponível apenas com haste de 10x10 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SCDCR 1010 E 06	10	10	10	5.11	70	11	0	0	0.06	GI045	SC21

GI045	CC.. 0602..

SC21	5513 020-03	0.8	M 2.5	6.5	PT-8001

SCFC(RL) EXT

P M K N S H

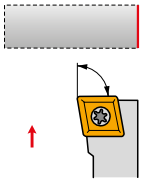
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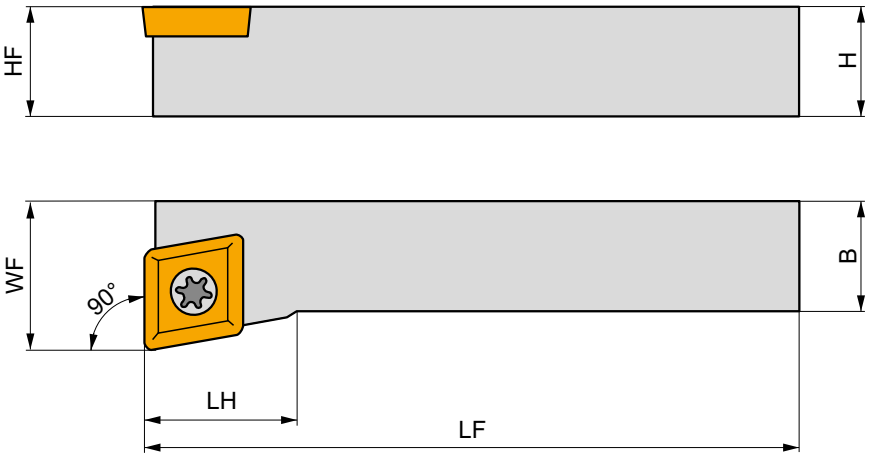
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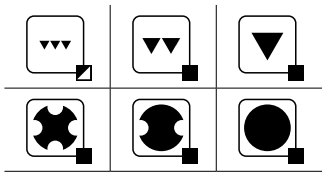


Porta-Ferramentas Exterior, Fixação por Parafuso, Ângulo de Corte de 90 ° para Pastilhas CC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e de corte de 90 ° para pastilhas positivas CC .. 06 ou 09. Adequado para torneamento frontal e longitudinal com esquadria, torneamento cónico e chanfrar. Disponível com hastes de 08x08 até 16x16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SCFCR 0808 D 06	8	8	8	10	60	8	0	0	0.04	GI045	S07
	SCFCR 1010 E 06	10	10	10	12	70	8	0	0	0.07	GI045	S07
	SCFCR 1212 F 09	12	12	12	16	80	16	0	0	0.12	GI041	S04
	SCFCR 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S04
L	SCFCL 0808 D 06	8	8	8	10	60	8	0	0	0.04	GI045	S07
	SCFCL 1010 E 06	10	10	10	12	70	8	0	0	0.06	GI045	S07
	SCFCL 1212 F 09	12	12	12	16	80	16	0	0	0.10	GI041	S04
	SCFCL 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S04

GI041	CC.. 09T3..
GI045	CC.. 0602..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

SCLC(RL) EXT

P M K N S H

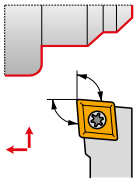
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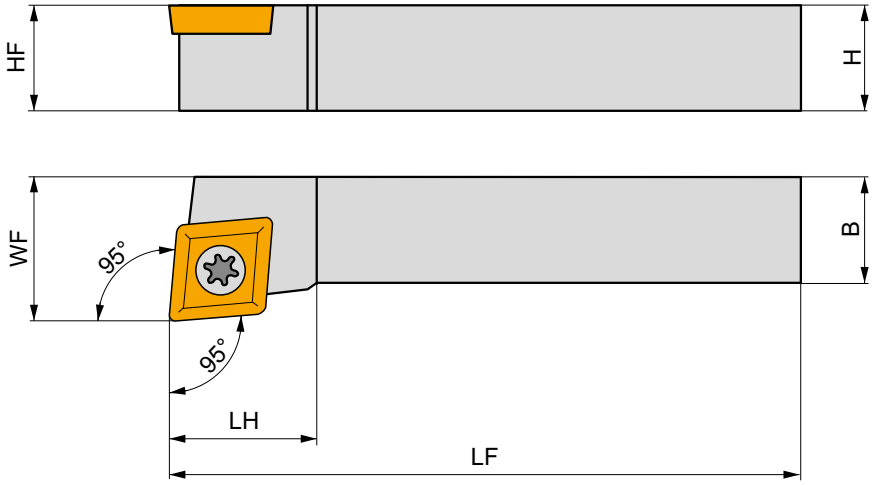
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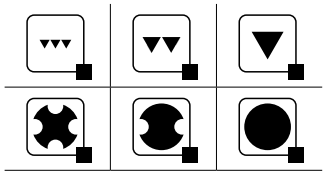


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 95 °, para Pastilhas CC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 95 ° para pastilhas positivas CC .. 06, 08, 09 ou 12. Adequado para torneamento longitudinal com esquadria, cónico e chanfrar. Disponível com hastes de 08x08 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SCLCR 0808 D 06	8	8	8	10	60	8	0	0	0.06	GI045	S01
	SCLCR 1010 E 06	10	10	10	12	70	8	0	0	0.09	GI045	S01
	SCLCR 1010 E 08	10	10	10	12	70	13.2	0	0	0.03	GI232	SC22
	SCLCR 1212 F 08	12	12	12	16	80	13.4	0	0	0.02	GI232	SC22
	SCLCR 1616 H 08	16	16	16	20	100	15.2	0	0	0.22	GI232	SC22
	SCLCR 1212 F 09	12	12	12	16	80	16	0	0	0.12	GI041	S08
	SCLCR 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S08
	SCLCR 2020 K 12-M-A	20	20	20	25	125	20	0	0	0.44	GI011	SC20
	SCLCR 2525 M 12-M-A	20	25	20	32	150	20	0	0	0.68	GI011	SC20
L	SCLCL 0808 D 06	8	8	8	10	60	8	0	0	0.06	GI045	S01
	SCLCL 1010 E 06	10	10	10	12	70	8	0	0	0.06	GI045	S01
	SCLCL 1212 F 08	12	12	12	16	80	13.4	0	0	0.03	GI232	SC22
	SCLCL 1616 H 08	16	16	16	20	100	15.2	0	0	0.23	GI232	SC22
	SCLCL 1212 F 09	12	12	12	16	80	16	0	0	0.10	GI041	S08
	SCLCL 1616 H 09	16	16	16	20	100	16	0	0	0.22	GI041	S08
	SCLCL 2020 K 12-M-A	20	20	20	25	125	20	0	0	0.40	GI011	SC20
	SCLCL 2525 M 12-M-A	25	25	25	32	150	20	0	0	0.78	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..
GI045	CC.. 0602..
GI232	CC.. 0803..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
SC22	5513 020-04	1.5	M 3	7.2	–	–	PT-8003	–
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

NEW

C.-SCLC(RL) EXT

P M K N S H

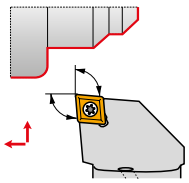
PRAMET

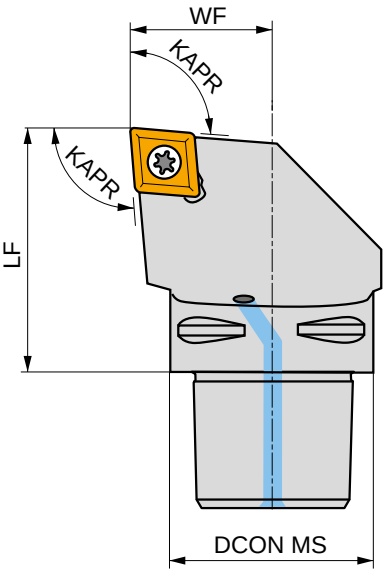
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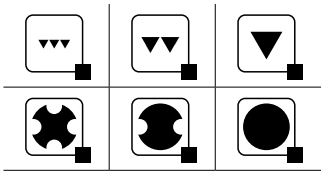


Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 95 °, p/ Pastilhas CC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, com refrigeração interna e ângulo de corte de 95 ° para pastilhas positivas CC .. 09 e 12. Adequado para torneamento longitudinal com esquadria, cónico e chanfrar. Haste poligonal PSC (Polygon Shank Coupling) tamanho C3 até C5. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C3-SCLCR-22040-09	32	22	40	95	0	0	✓	0.21	GI041	C-SC09S
	C4-SCLCR-27050-09	40	27	50	95	0	0	✓	0.39	GI041	C-SC09S
	C4-SCLCR-27050-12	40	27	50	95	0	0	✓	0.40	GI011	C-SC12-1
	C5-SCLCR-35060-12	50	35	60	95	0	0	✓	0.72	GI011	C-SC12-2
L	C3-SCLCL-22040-09	32	22	40	95	0	0	✓	0.21	GI041	C-SC09S
	C4-SCLCL-27050-09	40	27	50	95	0	0	✓	0.39	GI041	C-SC09S
	C5-SCLCL-35060-12	50	35	60	95	0	0	✓	0.72	GI011	C-SC12-2

GI011	CC.. 1204..
GI041	CC.. 09T3..

		Nm						
C-SC09S	US 2001-T15P	3.0	M 3.5	12.1	SCS 232-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SC12-1	US 2018-T15P	3.0	M 4	14	SCS 232-02	MS 9003	FLAG T15P/4	CN 034-01
C-SC12-2	US 2018-T15P	3.0	M 4	14	SCS 232-02	MS 9003	FLAG T15P/4	CN 034-02

SCFC(RL) INT

P M K N S H

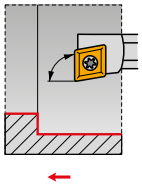
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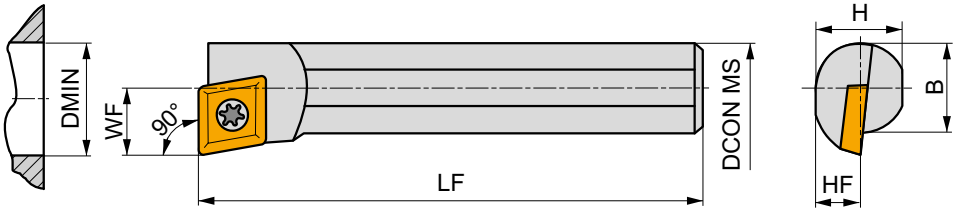
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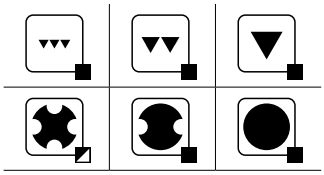


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 90 ° para Pastilhas CC ..

Porta-ferramentas de interior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 90° para pastilhas CC .. 06. Diâmetro mínimo de torneamento Ø13 mm. Adequado para torneamento frontal e longitudinal com esquadria, cónico e chanfrar. Disponível com hastes de Ø10 e Ø12 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	S10H-SCFCR 06	10	13	7	9	9.5	100	-10	0	0.08	GI045	S06
	S12K-SCFCR 06	12	16	9	11	11.5	125	-7	0	0.11	GI045	S06
L	S10H-SCFCL 06	10	13	7	9	9.5	100	-10	0	0.10	GI045	S06
	S12K-SCFCL 06	12	16	9	11	11.5	125	-7	0	0.14	GI045	S06

GI045	CC.. 0602..

S06	US 2505-T07P	0.9	M 2.5	5.2	FLAG T07P

SCKC(RL) INT

P M K N S H

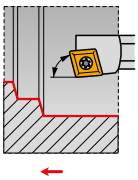
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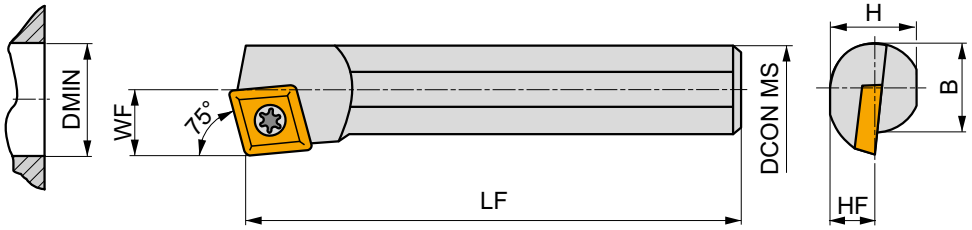
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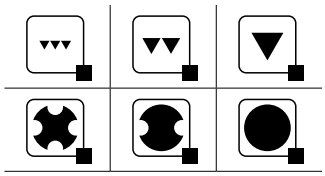


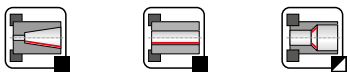
Porta-ferramentas de Interiorcom Fixação por Parafuso, Ângulo de 75 ° para Pastilhas CC ..

Porta-ferramentas de interior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 75° para pastilhas CC .. 06, 09 ou 12. Diâmetro mínimo de torneamento Ø11 mm. Adequado para torneamento longitudinal sem esquadria, cónico e chanfrar. Disponível com hastes de Ø8 até Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	S08F-SCKCR 06	8	11	6	7.2	7.6	80	-12	0	0.03	GI045	S02
	S12K-SCKCR 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S02
	S16M-SCKCR 09-A	16	20	11	14.5	15	150	-8	0	0.25	GI041	S05
	S20S-SCKCR 09	20	25	13	18.5	18.5	250	-5	0	0.60	GI041	S08
	S25T-SCKCR 09	25	32	17	23	23	300	-3	0	1.15	GI041	S08
	S32U-SCKCR 12-A	32	40	22	30	30	350	-10	0	2.10	GI011	SC20
L	S08F-SCKCL 06	8	11	6	7.2	7.6	80	-12	0	0.03	GI045	S02
	S12K-SCKCL 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S02
	S16M-SCKCL 09-A	16	20	11	14.5	15	150	-8	0	0.24	GI041	S05
	S20S-SCKCL 09	20	25	13	18.5	18.5	250	-5	0	0.60	GI041	S08
	S25T-SCKCL 09	25	32	17	23	23	300	-3	0	1.15	GI041	S08
	S32U-SCKCL 12-A	32	40	22	30	30	350	-10	0	2.10	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..
GI045	CC.. 0602..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S05	US 4008-T15P	3.5	M 4	8	–	–	FLAG T15P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SCLC(RL) INT

P M K N S H

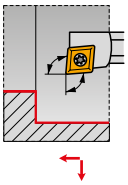
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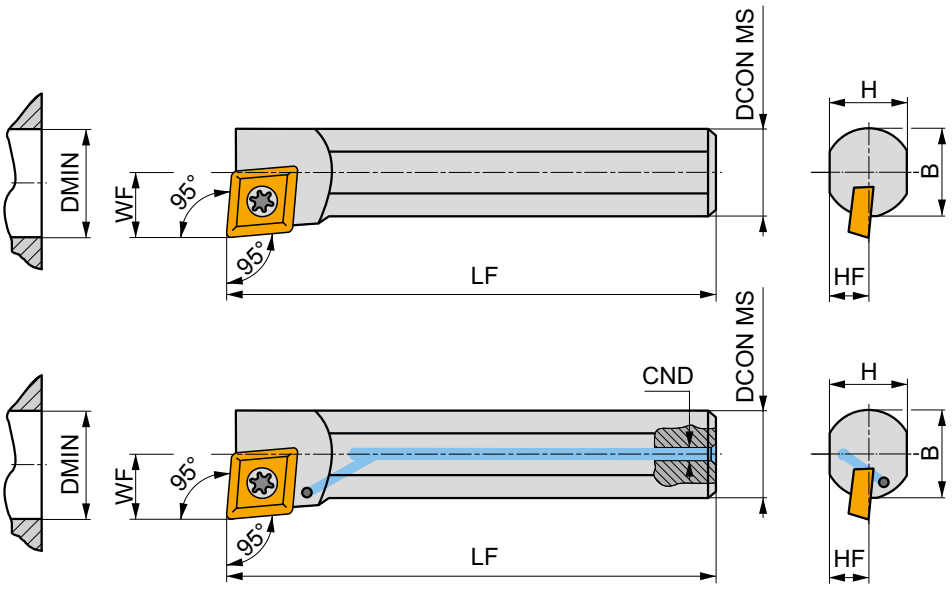
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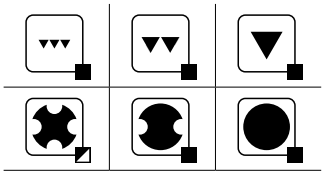


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 95 ° para Pastilhas CC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 95° para pastilhas CC .. 06, 08, 09 ou 12. Diâmetro mínimo de torneamento Ø11 mm. Para torneamento longitudinal interno com esquadria, cónico e chanfrar. Disponível com hastes de Ø8 a Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	CND (mm)	LAMS (°)	GAMO (°)		kg		
R	A08H-SCLCR 06	8	11	6	7.2	7.6	100	3.5	-13	0	✓	0.06	GI045	S02
	S08F-SCLCR 06	8	11	6	7.2	7.6	80	–	-13	0	–	0.06	GI045	S02
	A10H-SCLCR 06	10	13	7	9	–	100	4	-10	0	✓	0.07	GI045	S02
	S10H-SCLCR 06	10	13	7	9	9.5	100	–	-10	0	–	0.08	GI045	S02
	A12K-SCLCR 06	12	16	9	11	–	125	5	-8	0	✓	0.11	GI045	S01
	S12K-SCLCR 06	12	16	9	11	11.5	125	–	-8	0	–	0.13	GI045	S01
	S16M-SCLCR 06	16	20	11	14.5	15	150	–	-8	0	–	0.25	GI045	S01
	A10K-SCLCR 08	10	12	6	9	9.5	125	4	-14	0	✓	0.09	GI232	SC22
	A12M-SCLCR 08	12	16	9	11	11.5	150	5	-5	0	✓	0.14	GI232	SC22
	A16R-SCLCR 08	16	20	11	14	15	200	6	-8	0	✓	0.28	GI232	SC22
	A16M-SCLCR 09-A	16	20	11	14.5	–	150	6	-8	0	✓	0.22	GI041	S05
	S16M-SCLCR 09-A	16	20	11	14.5	15	150	–	-8	0	–	0.25	GI041	S05
	A20Q-SCLCR 09	20	25	13	18	–	180	8	-5	0	✓	0.38	GI041	S08
	S20S-SCLCR 09	20	25	13	18	18.5	250	–	-5	0	–	0.62	GI041	S08
	A25R-SCLCR 09	25	32	17	23	23	200	8	-3	0	✓	0.60	GI041	S08
	S25T-SCLCR 09	25	32	17	23	23	300	–	-3	0	–	1.10	GI041	S08
	A32S-SCLCR 12-A	32	40	22	30	30	250	8	-10	0	✓	1.35	GI011	SC20
	S32U-SCLCR 12-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI011	SC20
L	A08H-SCLCL 06	8	11	6	7.2	7.6	100	–	-13	0	✓	0.06	GI045	S02
	S08F-SCLCL 06	8	11	6	7.2	7.6	80	–	-13	0	–	0.05	GI045	S02
	A10H-SCLCL 06	10	13	7	9	–	100	4	-10	0	✓	0.06	GI045	S02
	S10H-SCLCL 06	10	13	7	9	9.5	100	–	-10	0	–	0.06	GI045	S02
	A12K-SCLCL 06	12	16	9	11	–	125	5	-8	0	✓	0.10	GI045	S01
	S12K-SCLCL 06	12	16	9	11	11.5	125	–	-8	0	–	0.11	GI045	S01
	S16M-SCLCL 06	16	20	11	14.5	15	150	–	-8	0	–	0.26	GI045	S01
	A10K-SCLCL 08	10	12	6	9	9.5	125	4	-14	0	✓	0.02	GI232	SC22
	A12M-SCLCL 08	12	16	9	11	11.5	150	5	-5	0	✓	0.14	GI232	SC22

	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	CND (mm)	LAMS (°)	GAMO (°)		kg		
L	**A16R-SCLCL 08**	16	20	11	14	15	200	6	-8	0	✓	0.30	GI232	SC22
	A16M-SCLCL 09-A	16	20	11	14.5	–	150	6	-8	0	✓	0.22	GI041	S05
	S16M-SCLCL 09-A	16	20	11	14.5	15	150	–	-8	0	–	0.24	GI041	S05
	A20Q-SCLCL 09	20	25	13	18	–	180	8	-5	0	✓	0.40	GI041	S08
	S20S-SCLCL 09	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI041	S08
	A25R-SCLCL 09	25	32	17	23	23	200	8	-3	0	✓	0.67	GI041	S08
	S25T-SCLCL 09	25	32	17	23	23	300	–	-3	0	–	1.15	GI041	S08
	A32S-SCLCL 12-A	32	40	22	30	30	250	8	-10	0	✓	1.35	GI011	SC20
	S32U-SCLCL 12-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI011	SC20

GI011	CC.. 1204..
GI041	CC.. 09T3..
GI045	CC.. 0602..
GI232	CC.. 0803..

		Nm						
SC20	US 5012-T15P	5.0	M 5	12.2	SCN 120304	MS 5008	FLAG T15P	HXK 5
SC22	5513 020-04	1.5	M 3	7.2	–	–	PT-8003	–
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S05	US 4008-T15P	3.5	M 4	8	–	–	FLAG T15P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SCXC(RL) INT

P M K N S H

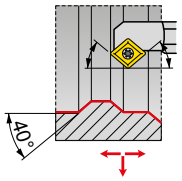
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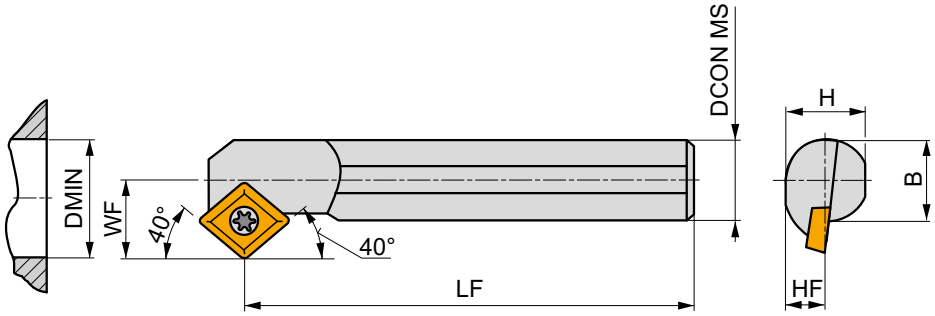
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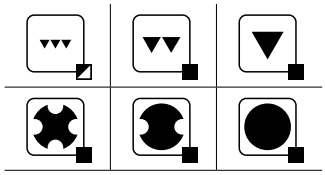


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 40 ° para Pastilhas CC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e ângulo de corte de 40°, para pastilhas CC .. 06. Diâmetro mínimo de torneamento Ø13 mm. Adequado para chanfro interno frontal e posterior, torneamento longitudinal sem esquadria e torneamento cónico. Disponível com hastes de Ø10 até Ø16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	S10H-SCXCR 06	10	13	7	9	9.5	100	-10	0	0.06	GI045	S06
	S12K-SCXCR 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S06
	S16Q-SCXCR 06	16	20	11	14.5	15	180	-7	0	0.31	GI045	S07
L	S10H-SCXCL 06	10	13	7	9	9.5	100	-10	0	0.06	GI045	S06
	S12K-SCXCL 06	12	16	9	11	11.5	125	-8	0	0.11	GI045	S06
	S16Q-SCXCL 06	16	20	11	14.5	15	180	-7	0	0.30	GI045	S07

GI045	CC.. 0602..

		Nm			
S06	US 2505-T07P	0.9	M 2.5	5.2	FLAG T07P
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

NEW

C.-SCLC(RL) INT

P M K N S H

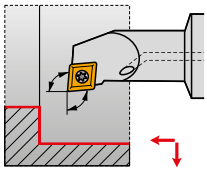
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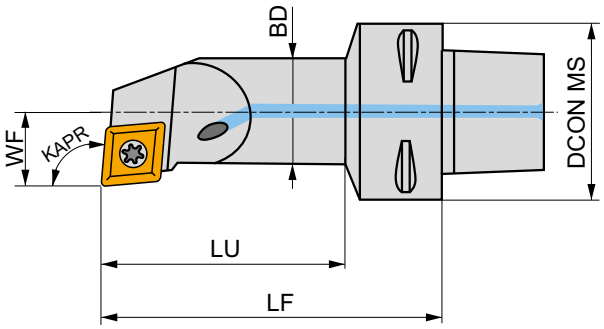
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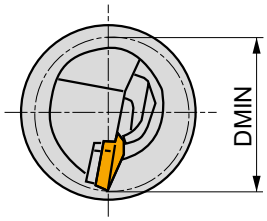


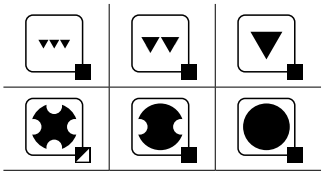
Ferramenta de Interior de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 95 °, p/ Pastilhas CC ..

Porta-ferramentas de interior à direita ou à esquerda, c/ fixação por parafuso e refrigeração interna, e ângulo de corte de 95° para pastilhas CC .. 09. Diâmetro mínimo de torneamento Ø20 mm. Adequado para uma ampla gama de aplicações de torneamento interno. Haste poligonal PSC (Polygon Shank Coupling) tamanhos C3 a C5 com opção de comprimentos. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C3-SCLCR-11065-09	32	20	11	65	48	16	95	-8.4	0	✓	0.21	GI041	SC09M
	C3-SCLCR-13075-09	32	25	13	75	58	20	95	-5.8	0	✓	0.26	GI041	SC09M
	C4-SCLCR-11070-09	40	20	11	70	47	16	95	-8.4	0	✓	0.36	GI041	SC09M
	C4-SCLCR-13080-09	40	25	13	80	57	20	95	-5.8	0	✓	0.41	GI041	SC09M
	C4-SCLCR-17090-09	40	32	17	90	68	25	95	-3.4	0	✓	0.50	GI041	SC09M
	C5-SCLCR-11070-09	50	20	11	70	46	16	95	-8.4	0	✓	0.55	GI041	SC09M
	C5-SCLCR-13080-09	50	25	13	80	56	20	95	-5.8	0	✓	0.60	GI041	SC09M
L	C4-SCLCL-11070-09	40	20	11	70	47	16	95	-8.4	0	✓	0.36	GI041	SC09M
	C4-SCLCL-13080-09	40	25	13	80	57	20	95	-5.8	0	✓	0.62	GI041	SC09M
	C5-SCLCL-11070-09	50	20	11	70	46	16	95	-8.4	0	✓	0.55	GI041	SC09M
	C5-SCLCL-13080-09	50	25	13	80	56	20	95	-5.8	0	✓	0.60	GI041	SC09M

GI041	CC.. 09T3..

		Nm			
SC09M	US 2009-T15P	3.0	M 3.5	8.1	FLAG T15P/3,5

CP 05

PASTILHAS DE METAL DURO

CPGX

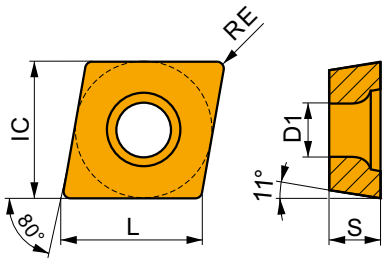


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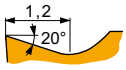
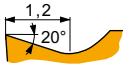
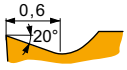
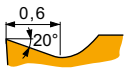
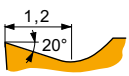
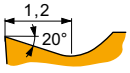
CPGX

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.40	2.38
0803	7.940	3.40	8.10	3.18
09T3	9.525	4.40	9.70	3.97



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria positiva FR-JQ com desenho à direita para operações de maquinação de acabamento fino, e cortes contínuos.																				
CPGX 080304FR-JQ	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria positiva FL-JQ com desenho à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																				
CPGX 080304FL-JQ	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CPGX 09T304FL-JQ	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria positiva FR-JR com desenho à direita para operações de maquinação de acabamento fino, e cortes contínuos.																				
CPGX 060204FR-JR	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CPGX 080304FR-JR	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria positiva FL-JR com desenho à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																				
CPGX 060204FL-JR	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
CPGX 080304FL-JR	**TT010**	0.4	350	0.06	0.5	210	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria positiva FR-JZ com desenho à direita para operações de maquinação de acabamento fino, e cortes contínuos.																				
CPGX 060202FR-JZ	**TT010**	0.2	330	0.06	0.5	195	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria positiva FL-JZ com desenho à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																				
CPGX 060202FL-JZ	**TT010**	0.2	330	0.06	0.5	195	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

DC

07 / 11 / 15

PASTILHAS DE METAL DURO

DCGT



86

DCMT



87

DCMW



92

PASTILHAS CBN E PCD

DCGW CBN



92

DCMW PCD



93

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
DCMT 070204E-UR	SDJCR 0808 D 07

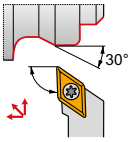
TORNEAMENTO ISO - EXTERIOR

SDJC(RL) EXT

93°

DC..

07
11
15



08×08
25×25

94

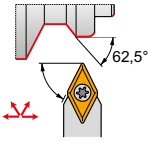
86 – 93

SDNCN EXT

62°30´

DC..

7
11



08×08
25×25

95

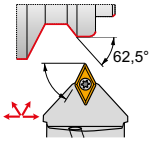
86 – 93

C.-SDNCN EXT NEW

62°30´

DC..

11



C4
C5

97

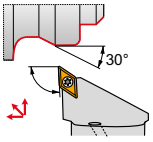
86 – 93

C.-SDJC(RL) EXT NEW

93°

DC..

11



C3
C5

96

86 – 93

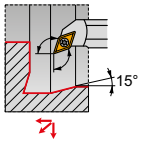
DC

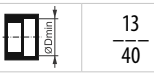
07 / 11 / 15

TORNEAMENTO ISO - INTERIOR

SDQC(RL) INT

107°30´





DC..



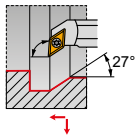
07
11

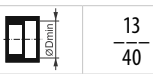
98

86 – 93

SDUC(RL) INT

93°





DC..



07
11

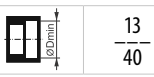
99

86 – 93

SDUC(RL)-E INT

93°





DC..



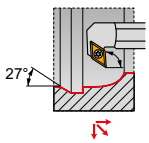
07
11

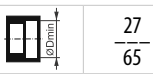
100

86 – 93

SDZC(RL) INT

93°





DC..



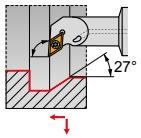
07
11

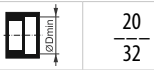
101

86 – 93

C.-SDUC(RL) INT NEW

93°





DC..



07
11

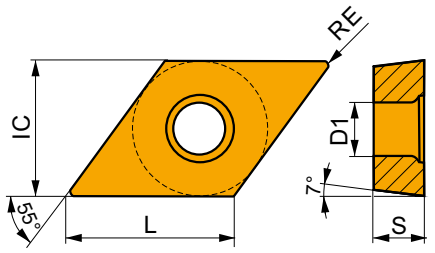
102

86 – 93

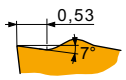
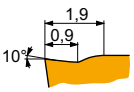
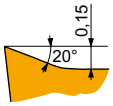
DCGT

PRAMET

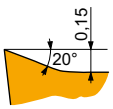
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0702	6.350	2.80	7.80	2.38
0702-SF3	6.350	2.80	7.80	2.58
11T3	9.525	4.40	11.60	3.97
11T3-SF3	9.525	4.40	11.60	4.22



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a levemente interrompidos.																				
DCGT 070202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 360	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	■ 510	0.12	1.0	–	–	–	–	–	–
DCGT 070204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 285	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 420	0.24	1.0	–	–	–	–	–	–
DCGT 11T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 345	0.12	1.5	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	■ 495	0.12	1.5	–	–	–	–	–	–
DCGT 11T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 270	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 390	0.24	1.5	–	–	–	–	–	–
DCGT 11T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 255	0.48	1.5	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	■ 360	0.48	1.5	–	–	–	–	–	–
																				
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
DCGT 11T302E-FF2	**T7325**	0.2	◪ 190	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 165	0.05	0.8	–	–	–	■ 155	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 225	0.05	0.8	–	–	–	◪ 185	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■ 280	0.05	0.8	–	–	–	◪ 265	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 275	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria NF1 com desenho positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																				
DCGT 11T304E-NF1	**T6310**	0.4	■ 145	0.10	0.8	■ 100	0.09	0.8	–	–	–	◪ 435	0.12	0.8	■ 40	0.07	0.6	◪ 25	0.15	1.0
	T7325	0.4	◪ 165	0.10	0.8	■ 125	0.09	0.8	–	–	–	–	–	–	■ 50	0.07	0.6	–	–	–
DCGT 11T308E-NF1	**T6310**	0.8	■ 155	0.14	0.8	■ 110	0.13	0.8	–	–	–	◪ 465	0.17	0.8	■ 45	0.13	0.6	◪ 30	0.15	1.0
	T7325	0.8	◪ 180	0.14	0.8	■ 140	0.13	0.8	–	–	–	–	–	–	■ 55	0.13	0.6	–	–	–
																				
Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																				
DCGT 070201E-SF3	**T6310**	0.1	◪ 160	0.05	0.5	■ 115	0.05	0.5	◪ 125	0.05	0.5	■ 480	0.06	0.5	■ 45	0.04	0.4	◪ 30	0.15	1.0
DCGT 070202E-SF3	**H07**	0.2	–	–	–	◪ 95	0.05	0.8	◪ 150	0.05	0.8	■ 485	0.06	0.8	■ 45	0.04	0.6	–	–	–
	T6310	0.2	◪ 165	0.05	0.8	■ 115	0.05	0.8	◪ 130	0.05	0.8	■ 495	0.06	0.8	■ 45	0.04	0.6	◪ 30	0.15	1.0
	T8315	0.2	◪ 175	0.05	0.8	■ 105	0.05	0.8	◪ 165	0.05	0.8	■ 525	0.06	0.8	◪ 40	0.04	0.6	◪ 35	0.15	1.0
DCGT 070204E-SF3	**H07**	0.4	–	–	–	◪ 75	0.09	0.8	◪ 120	0.10	0.8	■ 390	0.12	0.8	■ 35	0.07	0.6	–	–	–
	T6310	0.4	◪ 145	0.10	0.8	■ 100	0.09	0.8	◪ 115	0.10	0.8	■ 435	0.12	0.8	■ 40	0.07	0.6	◪ 25	0.15	1.0
	T8315	0.4	◪ 155	0.10	0.8	■ 90	0.09	0.8	◪ 145	0.10	0.8	■ 465	0.12	0.8	◪ 35	0.07	0.6	◪ 30	0.15	1.0
DCGT 11T301E-SF3	**T6310**	0.1	◪ 160	0.05	0.5	■ 115	0.05	0.5	◪ 125	0.05	0.5	■ 480	0.06	0.5	■ 45	0.04	0.4	◪ 30	0.15	1.0

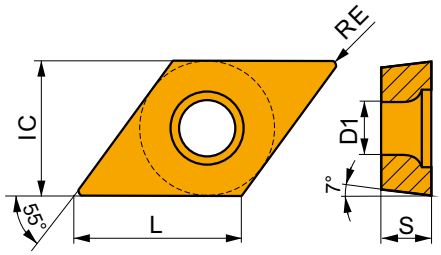
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			 Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																	
DCGT 11T302E-SF3	**H07**	0.2	–	–	–	95	0.05	0.8	150	0.05	0.8	485	0.06	0.8	45	0.04	0.6	–	–	–
	T6310	0.2	165	0.05	0.8	115	0.05	0.8	130	0.05	0.8	495	0.06	0.8	45	0.04	0.6	30	0.15	1.0
DCGT 11T304E-SF3	**H07**	0.4	–	–	–	75	0.09	0.8	120	0.10	0.8	390	0.12	0.8	35	0.07	0.6	–	–	–
	T6310	0.4	145	0.10	0.8	100	0.09	0.8	115	0.10	0.8	435	0.12	0.8	40	0.07	0.6	25	0.15	1.0
	T8315	0.4	155	0.10	0.8	90	0.09	0.8	145	0.10	0.8	465	0.12	0.8	35	0.07	0.6	30	0.15	1.0
DCGT 11T308E-SF3	**H07**	0.8	–	–	–	90	0.09	0.8	145	0.10	0.8	455	0.12	0.8	45	0.08	0.6	–	–	–
	T6310	0.8	170	0.10	0.8	120	0.09	0.8	135	0.10	0.8	510	0.12	0.8	50	0.08	0.6	30	0.15	1.0
	T8315	0.8	180	0.10	0.8	105	0.09	0.8	170	0.10	0.8	540	0.12	0.8	45	0.08	0.6	35	0.15	1.0
			 Geometria ER-SI com desenho positivo à direita para operações de maquinação de acabamento fino, e cortes contínuos.																	
DCGT 11T304ER-SI	**T8330**	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	–	–	–	40	0.10	0.6	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
DCGT 11T308ER-SI	**T8330**	0.8	170	0.22	1.0	100	0.20	1.0	160	0.22	1.0	–	–	–	40	0.18	0.8	–	–	–
	T8430	0.8	190	0.22	1.0	105	0.20	1.0	155	0.22	1.0	–	–	–	40	0.18	0.8	–	–	–
			 Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino e cortes contínuos.																	
DCGT 11T304EL-SI	**T8330**	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	–	–	–	40	0.10	0.6	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	45	0.10	0.6	–	–	–
DCGT 11T308EL-SI	**T8430**	0.8	190	0.22	1.0	105	0.20	1.0	155	0.22	1.0	–	–	–	40	0.18	0.8	–	–	–

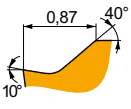
DCMT

PRAMET

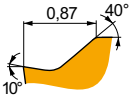
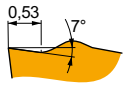
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0702	6.350	2.80	7.80	2.38
11T3	9.525	4.40	11.60	3.97
1504	12.700	5.50	15.50	4.76



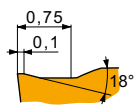
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			 Geometria FF com desenho positivo para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
DCMT 11T302E-FF	**T8315**	0.2	160	0.10	0.8	95	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	150	0.10	0.8	90	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.2	185	0.10	0.8	100	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.2	255	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

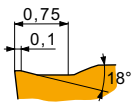
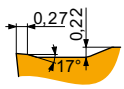
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FF com desenho positivo para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
DCMT 11T304E-FF	**T8315**	0.4	◪ 160	0.12	0.8	◪ 95	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 150	0.12	0.8	◪ 90	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 185	0.12	0.8	◪ 100	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 255	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T308E-FF	**T8315**	0.8	◪ 180	0.15	0.8	◪ 105	0.14	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 170	0.15	0.8	◪ 100	0.14	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 200	0.15	0.8	◪ 110	0.14	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 270	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
DCMT 070202E-FF2	**T7325**	0.2	◪ 190	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 165	0.05	0.8	–	–	–	■ 155	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 225	0.05	0.8	–	–	–	◪ 185	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■ 280	0.05	0.8	–	–	–	◪ 265	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 275	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 070204E-FF2	**T7325**	0.4	◪ 160	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 135	0.12	0.8	–	–	–	■ 125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 170	0.12	0.8	–	–	–	◪ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 230	0.12	0.8	–	–	–	◪ 215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 205	0.12	0.8	–	–	–	◪ 190	0.12	0.8	–	–	–	–	–	–	–	–	–
DCMT 070208E-FF2	**T7325**	0.8	◪ 170	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 150	0.17	0.8	–	–	–	■ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 175	0.17	0.8	–	–	–	◪ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 235	0.17	0.8	–	–	–	◪ 220	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 215	0.17	0.8	–	–	–	◪ 200	0.17	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T304E-FF2	**T7325**	0.4	◪ 160	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 135	0.12	0.8	–	–	–	■ 125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 170	0.12	0.8	–	–	–	◪ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 230	0.12	0.8	–	–	–	◪ 215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 205	0.12	0.8	–	–	–	◪ 190	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 175	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 280	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T308E-FF2	**T7325**	0.8	◪ 170	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 150	0.17	0.8	–	–	–	■ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 175	0.17	0.8	–	–	–	◪ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 235	0.17	0.8	–	–	–	◪ 220	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 215	0.17	0.8	–	–	–	◪ 200	0.17	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.8	■ 280	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
DCMT 070202E-FM	**T7325**	0.2	◪ 175	0.10	0.8	■ 135	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	◪ 160	0.10	0.8	■ 95	0.09	0.8	◪ 150	0.10	0.8	◪ 480	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	■ 150	0.10	0.8	■ 90	0.09	0.8	◪ 140	0.10	0.8	◪ 450	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	■ 185	0.10	0.8	■ 100	0.09	0.8	◪ 150	0.10	0.8	◪ 510	0.12	0.8	–	–	–	–	–	–
	T9315	0.2	■ 255	0.10	0.8	–	–	–	◪ 240	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	■ 230	0.10	0.8	■ 135	0.09	0.8	◪ 215	0.10	0.8	–	–	–	–	–	–	–	–	–

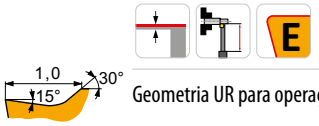
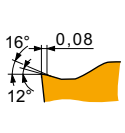
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
DCMT 070204E-FM	**T7325**	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	160	0.12	0.8	95	0.11	0.8	150	0.12	0.8	480	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	150	0.12	0.8	90	0.11	0.8	140	0.12	0.8	450	0.14	0.8	–	–	–	–	–	–
	T8430	0.4	185	0.12	0.8	100	0.11	0.8	150	0.12	0.8	510	0.14	0.8	–	–	–	–	–	–
	T9315	0.4	255	0.12	0.8	–	–	–	240	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.18	0.8	110	0.16	0.8	180	0.18	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T302E-FM	**T7325**	0.2	175	0.10	0.8	135	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	160	0.10	0.8	95	0.09	0.8	150	0.10	0.8	480	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	150	0.10	0.8	90	0.09	0.8	140	0.10	0.8	450	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	185	0.10	0.8	100	0.09	0.8	150	0.10	0.8	510	0.12	0.8	–	–	–	–	–	–
	T9315	0.2	255	0.10	0.8	–	–	–	240	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	230	0.10	0.8	135	0.09	0.8	215	0.10	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T304E-FM	**T7325**	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	160	0.12	0.8	95	0.11	0.8	150	0.12	0.8	480	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	135	0.17	0.8	80	0.15	0.8	125	0.17	0.8	405	0.20	0.8	–	–	–	–	–	–
	T8430	0.4	155	0.17	0.8	85	0.15	0.8	130	0.17	0.8	435	0.20	0.8	–	–	–	–	–	–
	T9310	0.4	285	0.12	0.8	–	–	–	270	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	255	0.12	0.8	–	–	–	240	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.18	0.8	110	0.16	0.8	180	0.18	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T308E-FM	**T7325**	0.8	185	0.17	0.8	140	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	180	0.17	0.8	140	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	170	0.17	0.8	100	0.15	0.8	160	0.17	0.8	510	0.20	0.8	–	–	–	–	–	–
	T8330	0.8	165	0.17	0.8	95	0.15	0.8	155	0.17	0.8	495	0.20	0.8	–	–	–	–	–	–
	T8430	0.8	190	0.17	0.8	105	0.15	0.8	155	0.17	0.8	525	0.20	0.8	–	–	–	–	–	–
	T9310	0.8	285	0.17	0.8	–	–	–	270	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	260	0.17	0.8	–	–	–	245	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.17	0.8	140	0.15	0.8	220	0.17	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T312E-FM	**T8330**	1.2	150	0.22	1.2	90	0.22	1.2	140	0.22	1.2	450	0.26	1.2	–	–	–	–	–	–
	T8430	1.2	175	0.22	1.2	95	0.22	1.2	140	0.22	1.2	480	0.26	1.2	–	–	–	–	–	–
	T9315	1.2	235	0.22	1.2	–	–	–	220	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	210	0.22	1.2	125	0.22	1.2	195	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
			Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																	
DCMT 070204E-FM2	**T6310**	0.4	135	0.12	0.8	95	0.11	0.8	105	0.12	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.4	160	0.12	0.8	120	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.12	0.8	–	–	–	215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.12	0.8	120	0.11	0.8	190	0.12	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T304E-FM2	**T6310**	0.4	135	0.12	0.8	95	0.11	0.8	105	0.12	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.4	160	0.12	0.8	120	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	230	0.12	0.8	–	–	–	215	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.12	0.8	120	0.11	0.8	190	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	175	0.12	0.8	105	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																				
DCMT 11T308E-FM2	**T6310**	0.8	■ 150	0.17	0.8	◪ 105	0.15	0.8	■ 120	0.17	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 170	0.17	0.8	◪ 130	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 150	0.17	0.8	◪ 90	0.15	0.8	■ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 175	0.17	0.8	◪ 95	0.15	0.8	◪ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 235	0.17	0.8	–	–	–	◪ 220	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 215	0.17	0.8	◪ 125	0.15	0.8	◪ 200	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 180	0.17	0.8	◪ 105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T312E-FM2	**T8430**	1.2	■ 155	0.22	1.2	◪ 85	0.20	1.2	◪ 130	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 190	0.22	1.2	◪ 110	0.20	1.2	◪ 180	0.22	1.2	–	–	–	–	–	–	–	–	–
DCMT 150408E-FM2	**T9315**	0.8	■ 205	0.20	1.5	–	–	–	◪ 190	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 185	0.20	1.5	◪ 110	0.18	1.5	◪ 175	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 160	0.20	1.5	◪ 95	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria RF para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DCMT 11T304E-RF	**T5315**	0.4	◪ 175	0.20	0.8	–	–	–	■ 165	0.20	0.8	–	–	–	–	–	–	◪ 35	0.15	1.0
	T7335	0.4	◪ 115	0.20	0.8	◪ 85	0.18	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 150	0.20	0.8	◪ 90	0.18	0.8	◪ 140	0.20	0.8	–	–	–	–	–	–	–	–	–
DCMT 11T308E-RF	**T5315**	0.8	◪ 205	0.20	0.8	–	–	–	■ 190	0.20	0.8	–	–	–	–	–	–	◪ 40	0.15	1.0
	T7335	0.8	◪ 140	0.20	0.8	◪ 105	0.18	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 175	0.20	0.8	◪ 105	0.18	0.8	◪ 165	0.20	0.8	–	–	–	–	–	–	–	–	–
																				
Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DCMT 11T304E-RM	**T5305**	0.4	◪ 225	0.27	0.8	–	–	–	■ 210	0.27	0.8	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.4	◪ 205	0.27	0.8	–	–	–	■ 190	0.27	0.8	–	–	–	–	–	–	◪ 40	0.15	1.0
	T7335	0.4	◪ 135	0.27	0.8	■ 105	0.24	0.8	–	–	–	–	–	–	◪ 40	0.19	0.6	–	–	–
	T8330	0.4	■ 125	0.27	0.8	■ 75	0.24	0.8	■ 115	0.27	0.8	–	–	–	◪ 30	0.19	0.6	◪ 25	0.15	1.0
	T8430	0.4	■ 135	0.27	0.8	■ 75	0.24	0.8	◪ 110	0.27	0.8	–	–	–	◪ 25	0.19	0.6	◪ 20	0.15	1.0
	T9315	0.4	■ 185	0.27	0.8	–	–	–	◪ 175	0.27	0.8	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 165	0.27	0.8	■ 95	0.24	0.8	◪ 155	0.27	0.8	–	–	–	◪ 35	0.19	0.6	–	–	–
DCMT 11T308E-RM	**T5305**	0.8	◪ 270	0.27	0.8	–	–	–	■ 255	0.27	0.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.8	◪ 240	0.27	0.8	–	–	–	■ 225	0.27	0.8	–	–	–	–	–	–	◪ 45	0.15	1.0
	T7335	0.8	◪ 165	0.27	0.8	■ 125	0.24	0.8	–	–	–	–	–	–	◪ 50	0.19	0.6	–	–	–
	T8330	0.8	■ 150	0.27	0.8	■ 90	0.24	0.8	■ 140	0.27	0.8	–	–	–	◪ 35	0.19	0.6	◪ 30	0.15	1.0
	T8430	0.8	■ 165	0.27	0.8	■ 90	0.24	0.8	◪ 135	0.27	0.8	–	–	–	◪ 35	0.19	0.6	◪ 25	0.15	1.0
	T9315	0.8	■ 220	0.27	0.8	–	–	–	◪ 205	0.27	0.8	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 200	0.27	0.8	■ 120	0.24	0.8	◪ 190	0.27	0.8	–	–	–	◪ 45	0.19	0.6	–	–	–
DCMT 11T312E-RM	**T7335**	1.2	◪ 165	0.27	1.2	■ 125	0.24	1.2	–	–	–	–	–	–	◪ 50	0.19	1.2	–	–	–
	T8330	1.2	■ 150	0.27	1.2	■ 90	0.24	1.2	■ 140	0.27	1.2	–	–	–	◪ 35	0.19	1.2	◪ 30	0.15	1.0
	T8430	1.2	■ 170	0.27	1.2	■ 90	0.24	1.2	◪ 135	0.27	1.2	–	–	–	◪ 35	0.19	1.2	◪ 25	0.15	1.0
	T9315	1.2	■ 225	0.27	1.2	–	–	–	◪ 210	0.27	1.2	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 200	0.27	1.2	■ 120	0.24	1.2	◪ 190	0.27	1.2	–	–	–	◪ 45	0.19	1.2	–	–	–
DCMT 150408E-RM	**T8330**	0.8	■ 135	0.27	1.9	■ 80	0.24	1.9	■ 125	0.27	1.9	–	–	–	◪ 30	0.22	1.5	◪ 25	0.15	1.0
	T8430	0.8	■ 150	0.27	1.9	■ 80	0.24	1.9	◪ 125	0.27	1.9	–	–	–	◪ 30	0.22	1.5	◪ 25	0.15	1.0
	T9315	0.8	■ 200	0.27	1.9	–	–	–	◪ 190	0.27	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 180	0.27	1.9	■ 105	0.24	1.9	◪ 170	0.27	1.9	–	–	–	◪ 40	0.22	1.5	–	–	–

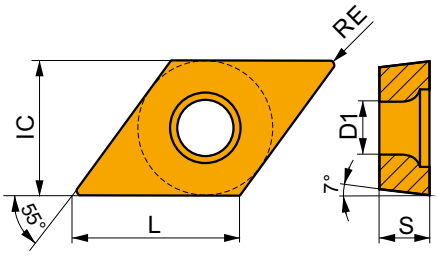
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
DCMT 070202E-UR	**T7325**	0.2	150	0.10	0.8	115	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	135	0.10	0.8	80	0.09	0.8	125	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	0.8	75	0.09	0.8	120	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	155	0.10	0.8	85	0.09	0.8	130	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	220	0.10	0.8	–	–	–	205	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	200	0.10	0.8	120	0.09	0.8	190	0.10	0.8	–	–	–	–	–	–	–	–	–
DCMT 070204E-UR	**T7325**	0.4	135	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	130	0.12	0.8	75	0.11	0.8	120	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	155	0.12	0.8	85	0.11	0.8	130	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	165	0.18	0.8	95	0.16	0.8	155	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	210	0.12	0.8	125	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T302E-UR	**T7325**	0.2	150	0.10	0.8	115	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	0.8	75	0.09	0.8	120	0.10	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	155	0.10	0.8	85	0.09	0.8	130	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.2	220	0.10	0.8	–	–	–	205	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	200	0.10	0.8	120	0.09	0.8	190	0.10	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.2	210	0.10	0.8	125	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T304E-UR	**T5315**	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.4	135	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	130	0.17	0.8	100	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	135	0.12	0.8	80	0.11	0.8	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	130	0.12	0.8	75	0.11	0.8	120	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	155	0.12	0.8	85	0.11	0.8	130	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	165	0.18	0.8	95	0.16	0.8	155	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	210	0.12	0.8	125	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T308E-UR	**T5315**	0.8	230	0.17	0.8	–	–	–	215	0.17	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.8	160	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	155	0.17	0.8	120	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	145	0.17	0.8	85	0.15	0.8	135	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.8	140	0.17	0.8	80	0.15	0.8	130	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	165	0.17	0.8	90	0.15	0.8	135	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	225	0.17	0.8	–	–	–	210	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.17	0.8	120	0.15	0.8	190	0.17	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.8	225	0.17	0.8	135	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
DCMT 11T312E-UR	**T9315**	1.2	205	0.22	1.2	–	–	–	190	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.22	1.2	105	0.20	1.2	170	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
Geometria W-FM Wiper para operações de maquinação de acabamento a acabamento fino com taxas de avanço aumentadas e acabamento superficial aprimorado.																				
DCMX 11T304W-FM	**T7325**	0.4	130	0.30	0.8	100	0.27	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	115	0.30	0.8	65	0.27	0.8	105	0.30	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	130	0.30	0.8	70	0.27	0.8	105	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	170	0.30	0.8	–	–	–	160	0.30	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	155	0.30	0.8	90	0.27	0.8	145	0.30	0.8	–	–	–	–	–	–	–	–	–
DCMX 11T308W-FM	**T7325**	0.8	140	0.40	1.0	105	0.36	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.8	130	0.40	1.0	70	0.36	1.0	105	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	175	0.40	1.0	–	–	–	165	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	160	0.40	1.0	95	0.36	1.0	150	0.40	1.0	–	–	–	–	–	–	–	–	–

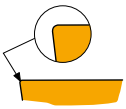
DCMW

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0702	6.350	2.80	7.80	2.38
11T3	9.525	4.40	11.60	3.97



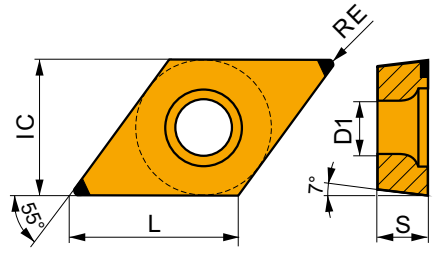
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			E																	
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a levemente interrompidos.																	
DCMW 070202	**T5305**	0.2	–	–	–	–	–	–	200	0.08	0.8	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.2	–	–	–	–	–	–	80	0.08	0.8	–	–	–	–	–	–	20	0.15	1.0
DCMW 070204	**T5305**	0.4	–	–	–	–	–	–	195	0.10	0.8	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	175	0.10	0.8	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	85	0.10	0.8	–	–	–	–	–	–	20	0.15	1.0
DCMW 11T304	**T5305**	0.4	–	–	–	–	–	–	190	0.10	1.2	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	165	0.10	1.2	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	80	0.10	1.2	–	–	–	–	–	–	20	0.15	1.0
DCMW 11T308	**T5305**	0.8	–	–	–	–	–	–	185	0.18	1.2	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	160	0.18	1.2	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	80	0.18	1.2	–	–	–	–	–	–	20	0.15	1.0

DCGW CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
11T3	9.525	4.50	11.60	3.97



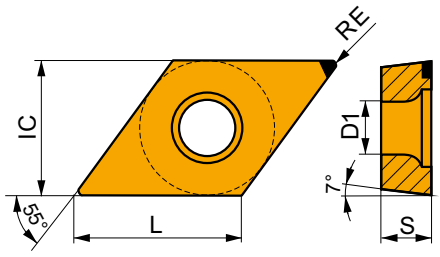
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		S															
			Para operações de maquinação de acabamento.																	
DCGW 11T304S01020B	**TB310**	0.4	–	–	–	–	–	–	370	0.10	0.4	–	–	–	95	0.07	0.3	75	0.15	1.0
DCGW 11T308S01020B	**TB310**	0.8	–	–	–	–	–	–	380	0.15	0.6	–	–	–	100	0.11	0.5	80	0.15	1.0

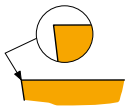
DCMW PCD

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
11T3	9.525	4.40	11.60	3.97



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC F																	
			Para operações de maquinação de acabamento, altas velocidades e condições de corte estáveis.																	
DCMW 11T304FN	**PD1**	0.4	–	–	–	–	–	–	–	–	–	■ 1035	0.12	0.5	–	–	–	–	–	–
DCMW 11T308FN	**PD1**	0.8	–	–	–	–	–	–	–	–	–	■ 1200	0.12	1.0	–	–	–	–	–	–

SDJC(RL) EXT

P M K N S H

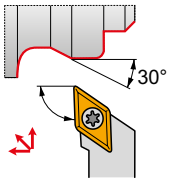
PRAMET

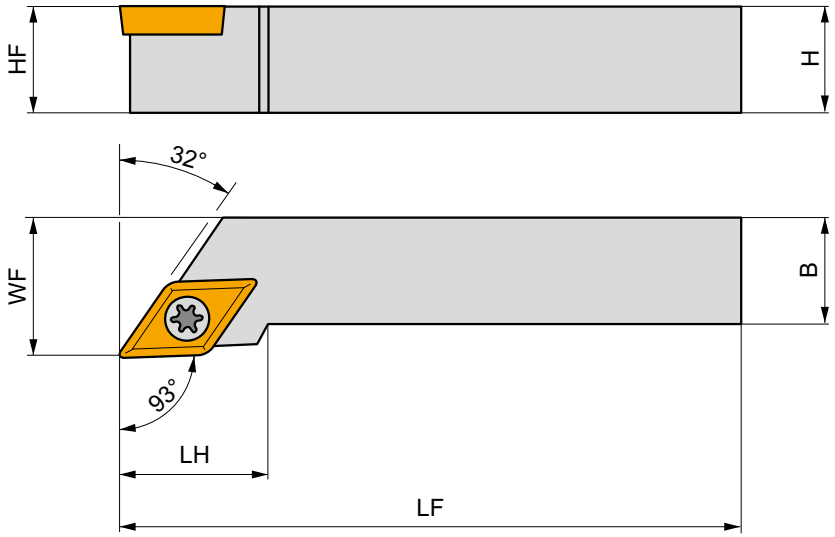
S

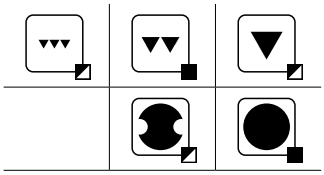


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 93 °, para Pastilhas DC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 93 ° para pastilhas tipo DC .. 07, 11 ou 15. Adequado para torneamento longitudinal com esquadria, de cópia, cónico e chanfrar. Disponível com hastes de 08x08 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SDJCR 0808 D 07	8	8	8	10	60	14	0	0	0.06	GI052	S01
	SDJCR 1010 E 07	10	10	10	12	70	14	0	0	0.06	GI052	S01
	SDJCR 1212 F 07	12	12	12	16	80	14	0	0	0.11	GI052	S01
	SDJCR 1212 F 11	12	12	12	16	80	20	0	0	0.10	GI012	S08
	SDJCR 1616 H 11	16	16	16	20	100	20	0	0	0.22	GI012	S08
	SDJCR 2020 K 11-M-A	20	20	20	25	125	20	0	0	0.40	GI012	SD10
	SDJCR 2525 M 11-M-A	25	25	25	32	150	20	0	0	0.74	GI012	SD10
	SDJCR 2525 M 15	25	25	25	32	150	28	0	0	0.75	GI243	SD11
L	SDJCL 0808 D 07	8	8	8	10	60	14	0	0	0.04	GI052	S01
	SDJCL 1010 E 07	10	10	10	12	70	14	0	0	0.08	GI052	S01
	SDJCL 1212 F 07	12	12	12	16	80	14	0	0	0.12	GI052	S01
	SDJCL 1212 F 11	12	12	12	16	80	20	0	0	0.12	GI012	S08
	SDJCL 1616 H 11	16	16	16	20	100	20	0	0	0.20	GI012	S08
	SDJCL 2020 K 11-M-A	20	20	20	25	125	20	0	0	0.41	GI012	SD10
	SDJCL 2525 M 11-M-A	25	25	25	32	150	20	0	0	0.74	GI012	SD10
	SDJCL 2525 M 15	25	25	25	32	150	28	0	0	0.07	GI243	SD11

GI012	DC.. 11T3..
GI052	DC.. 0702..
GI243	DC.. 1504..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
SD11	US 64518-T15P	5.0	M 4.5	18	SDN 150304	MS 4512	FLAG T15P	HXK 5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SDNCN EXT

P M K N S H

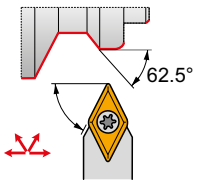
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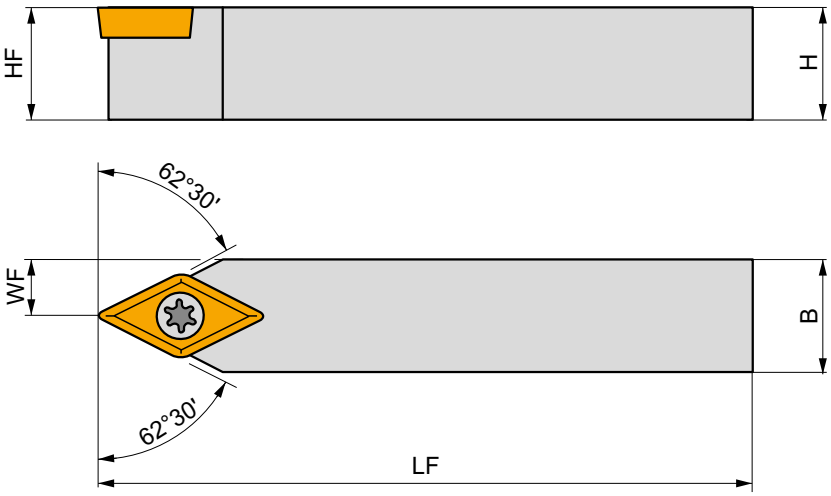
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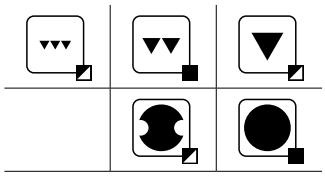


Porta-Ferramenta de Exterior, Fixação por Parafuso, Ângulo de 62,5 °, para Pastilhas DC ..

Porta-ferramentas de exterior neutro com fixação por parafuso e ângulo de corte de 62,5 ° para pastilhas positivas DC .. 07 ou 11. Adequado para torneamento longitudinal exterior sem esquadria, de cópia, torneamento cónico e de chanfro. Disponível com hastes de 08x08 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
N	**SDNCN 0808 D 07**	8	8	8	4	60	0	0	0.06	GI052	S01
	SDNCN 1010 E 07	10	10	10	5	70	0	0	0.08	GI052	S01
	SDNCN 1212 F 07	12	12	12	6	80	0	0	0.12	GI052	S01
	SDNCN 1212 F 11	12	12	12	6	80	0	0	0.12	GI012	S08
	SDNCN 1616 H 11	16	16	16	8	100	0	0	0.18	GI012	S08
	SDNCN 2020 K 11-M-A	20	20	20	10	125	0	0	0.35	GI012	SD10
	SDNCN 2525 M 11-M-A	25	25	25	12.5	150	0	0	0.70	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

NEW

C.-SDJC(RL) EXT

P M K N S H

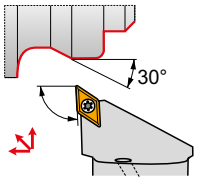
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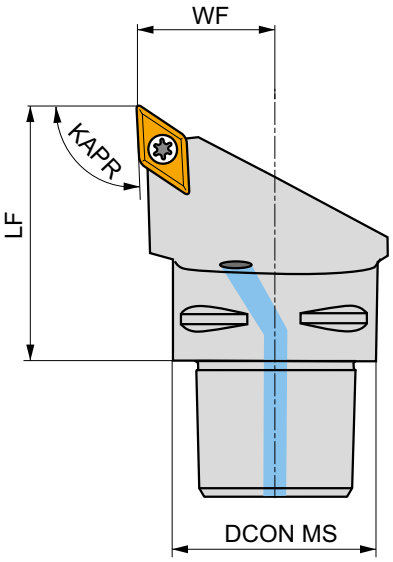
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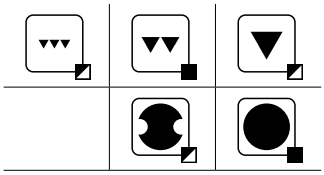


Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 93 °, p/ Pastilhas DC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, com refrigeração interna e ângulo de corte de 93 ° para pastilhas positivas DC... 07, 11 ou 15. Adequado para torneamento longitudinal com esquadria, de cópia, cónico e chanfrar. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C3 a C5. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C3-SDJCR-22040-11	32	22	40	93	0	0	✓	0.21	GI012	C-SD11V-1
	C4-SDJCR-27050-11	40	27	50	93	0	0	✓	0.38	GI012	C-SD11V-1
	C5-SDJCR-35060-11	50	35	60	93	0	0	✓	0.69	GI012	C-SD11V-2
L	C3-SDJCL-22040-11	32	22	40	93	0	0	✓	0.21	GI012	C-SD11V-1
	C4-SDJCL-27050-11	40	27	50	93	0	0	✓	0.38	GI012	C-SD11V-1
	C5-SDJCL-35060-11	50	35	60	93	0	0	✓	0.70	GI012	C-SD11V-2

GI012	DC.. 11T3..

		Nm						
C-SD11V-1	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SD11V-2	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-02

NEW

C.-SDNCN EXT

P M K N S H

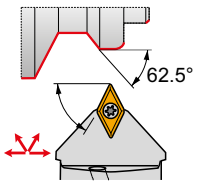
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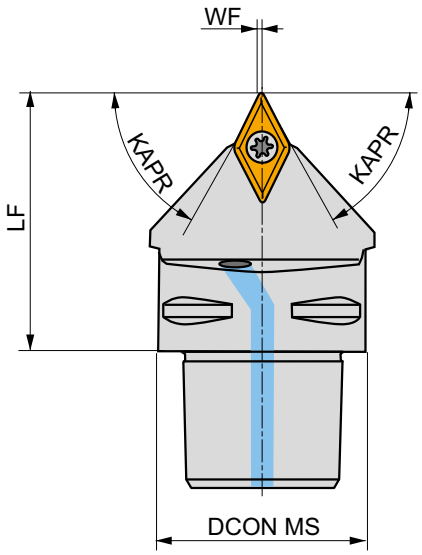
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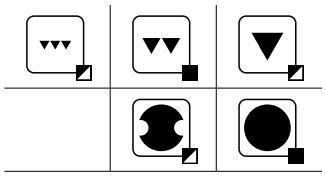


Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo 62,5 °, p/ Pastilhas DC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, com refrigeração interna e ângulo de corte de 62,5 ° para pastilhas positivas DC ... 11. Adequado para torneamento longitudinal sem esquadria, de cópia, cónico e chanfrar. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 e C5. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
N	C4-SDNCN-00050-11	40	0.5	50	62.5	0	0	✓	0.35	GI012	C-SD11V-1
	C5-SDNCN-00060-11	50	0.5	60	62.5	0	0	✓	0.62	GI012	C-SD11V-2

GI012	DC.. 11T3..

		Nm						
C-SD11V-1	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SD11V-2	US 2001-T15P	3.0	M 3.5	12.1	SDS 263-01	MS 9001	FLAG T15P/3,5	CN 034-02

SDQC(RL) INT

P M K N S H

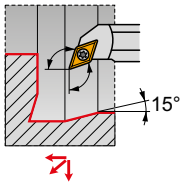
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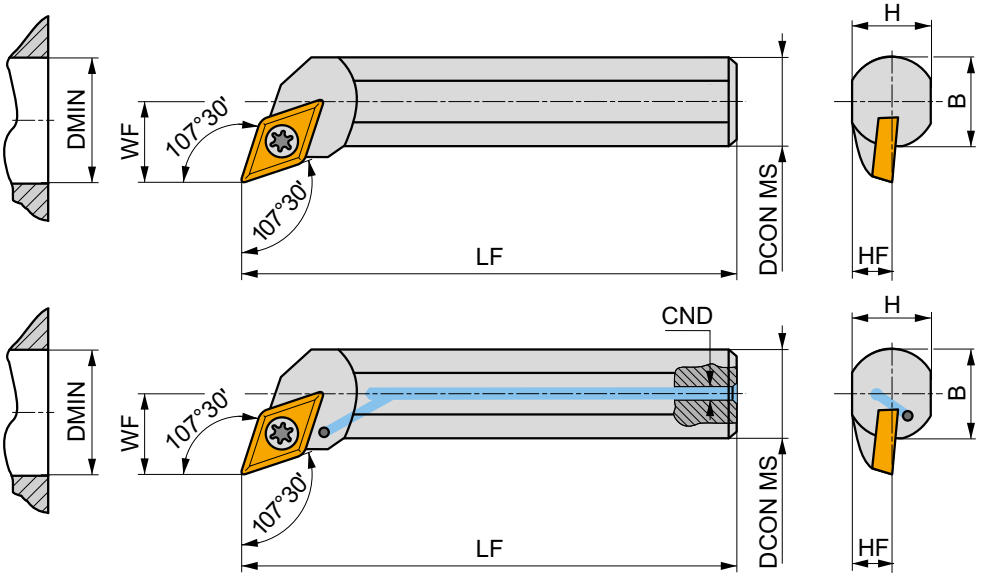
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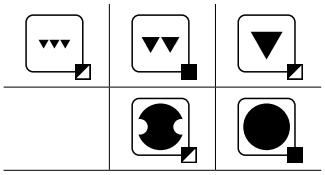


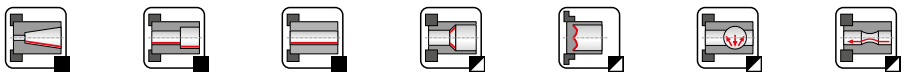
Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 107,5 ° para Pastilhas DC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, ângulo de corte de 107,5° para pastilhas DC .. 07 ou 11. Diâmetro interno mínimo de torneamento Ø13 mm. Para torneamento longitudinal interno com esquadria, cónico, de cópia e chanfrar. Hastes de Ø10 a Ø32 mm disponíveis. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	CND (mm)	LAMS (°)	GAMO (°)		kg		
R	A10H-SDQCR 07	10	13	7	9	–	100	4	-10	0	✓	0.07	GI052	S02
	A12K-SDQCR 07	12	16	9	11	–	125	5	-7	0	✓	0.10	GI052	S02
	A16M-SDQCR 07	16	20	11	14.5	–	150	6	-7	0	✓	0.24	GI052	S01
	A20Q-SDQCR 11	20	25	13	18	–	180	8	-5	0	✓	0.40	GI012	S08
	S20S-SDQCR 11	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI012	S08
	A25R-SDQCR 11	25	32	17	23	23	200	8	-3	0	✓	0.67	GI012	S08
	S25T-SDQCR 11	25	32	17	23	23	300	–	-3	0	–	1.09	GI012	S08
	A32S-SDQCR 11-A	32	40	22	30	30	250	8	-10	0	✓	1.25	GI012	SD10
	S32U-SDQCR 11-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI012	SD10
L	A10H-SDQCL 07	10	13	7	9	–	100	4	-10	0	✓	0.06	GI052	S02
	A12K-SDQCL 07	12	16	9	11	–	125	5	-7	0	✓	0.11	GI052	S02
	A16M-SDQCL 07	16	20	11	14.5	–	150	6	-7	0	✓	0.24	GI052	S01
	A20Q-SDQCL 11	20	25	13	18	–	180	8	-5	0	✓	0.37	GI012	S08
	S20S-SDQCL 11	20	25	13	18	18.5	250	–	-5	0	–	0.63	GI012	S08
	A25R-SDQCL 11	25	32	17	23	23	200	8	-3	0	✓	0.64	GI012	S08
	S25T-SDQCL 11	25	32	17	23	23	300	–	-3	0	–	1.15	GI012	S08
	A32S-SDQCL 11-A	32	40	22	30	30	250	8	-10	0	✓	1.33	GI012	SD10
	S32U-SDQCL 11-A	32	40	22	30	30	350	–	-10	0	–	2.08	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SDUC(RL) INT

P M K N S H

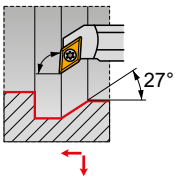
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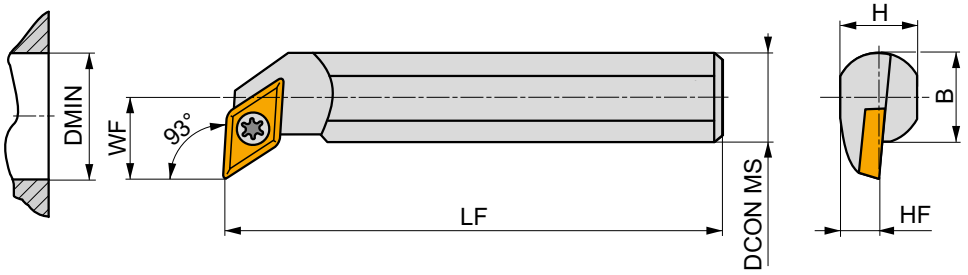
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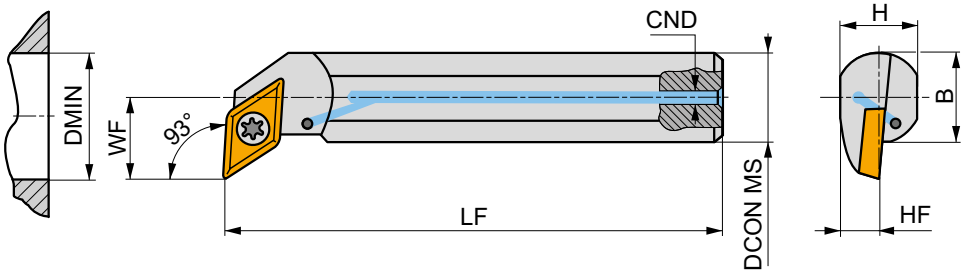


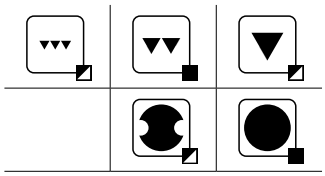
Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 93 ° para Pastilhas DC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas DC .. 07 ou 11. Diâmetro mínimo de torneamento Ø13 mm. Para torneamento longitudinal interno com esquadria, cónico, de cópia e chanfrar. Disponíveis hastes de Ø10 até Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	CND (mm)	LAMS (°)	GAMO (°)		kg		
R	A10H-SDUCR 07	10	13	7	9	–	100	4	-10	0	✓	0.05	GI052	S02
	A12K-SDUCR 07	12	16	9	11	–	125	5	-7	0	✓	0.12	GI052	S02
	A16M-SDUCR 07	16	20	11	14.5	–	150	6	-7	0	✓	0.22	GI052	S01
	A20Q-SDUCR 11	20	25	13	18	–	180	8	-3	0	✓	0.38	GI012	S08
	S20S-SDUCR 11	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI012	S08
	A25R-SDUCR 11	25	32	17	23	23	200	8	-3	0	✓	0.60	GI012	S08
	S25T-SDUCR 11	25	32	17	23	23	300	–	-3	0	–	1.15	GI012	S08
	A32S-SDUCR 11-A	32	40	22	30	30	250	8	-10	0	✓	1.30	GI012	SD10
	S32U-SDUCR 11-A	32	40	22	30	30	350	–	-10	0	–	2.10	GI012	SD10
L	A10H-SDUCL 07	10	13	7	9	–	100	4	-10	0	✓	0.06	GI052	S02
	A12K-SDUCL 07	12	16	9	11	–	125	5	-7	0	✓	0.11	GI052	S02
	A16M-SDUCL 07	16	20	11	14.5	–	150	6	-7	0	✓	0.21	GI052	S01
	A20Q-SDUCL 11	20	25	13	18	–	180	8	-3	0	✓	0.38	GI012	S08
	S20S-SDUCL 11	20	25	13	18	18.5	250	–	-5	0	–	0.60	GI012	S08
	A25R-SDUCL 11	25	32	17	23	23	200	8	-3	0	✓	0.67	GI012	S08
	S25T-SDUCL 11	25	32	17	23	23	300	–	-3	0	–	1.15	GI012	S08
	A32S-SDUCL 11-A	32	40	22	30	30	250	8	-10	0	✓	1.35	GI012	SD10
	S32U-SDUCL 11-A	32	40	22	30	30	350	–	-10	0	–	2.09	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

SDUC(RL)-E INT

P M K N S H

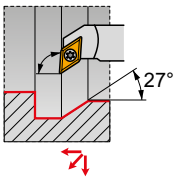
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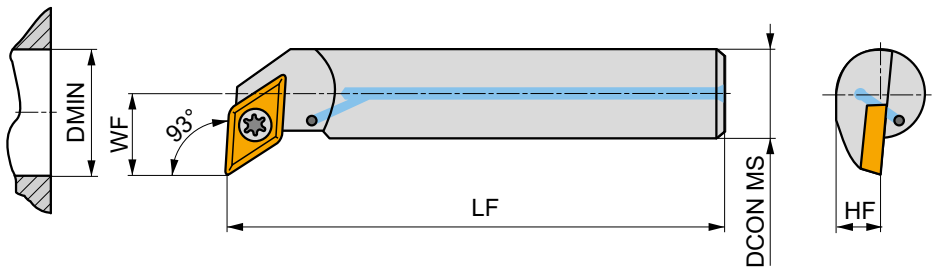
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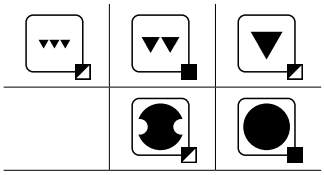


Porta-ferramentas de Interior em Metal Duro, Fixação por Parafuso, Ângulo de 93 °, para Pastilhas DC ..

Porta-ferramentas de interior à direita ou à esquerda em metal duro, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas positivas DC .. 07. Diâmetro mínimo de torneamento Ø15 mm. Para torneamento longitudinal interno com esquadria, cónico, de cópia e chanfrar. Disponíveis hastes de Ø10 a Ø16 mm. Para balanço > 3xD.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	HF (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	E10M-SDUCR 07-ER	10	15	9	5.6	150	-5	0	✓	0.14	GI052	SD21
	E12Q-SDUCR 07-ER	12	18	11	6.5	150	-5	0	✓	0.26	GI052	SD21
	E16R-SDUCR 07-ER	16	22	13	8.5	150	-5	0	✓	0.49	GI052	SD21
L	E10M-SDUCL 07-ER	10	15	9	5.6	150	-5	0	✓	0.15	GI052	SD21
	E12Q-SDUCL 07-ER	12	18	11	6.5	150	-5	0	✓	0.26	GI052	SD21
	E16R-SDUCL 07-ER	16	22	13	8.5	150	-5	0	✓	0.50	GI052	SD21

GI052	DC.. 0702..

SD21	5513 020-03	0.8	M 2.5	6.5	PT-8001

SDZC(RL) INT

P M K N S H

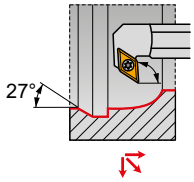
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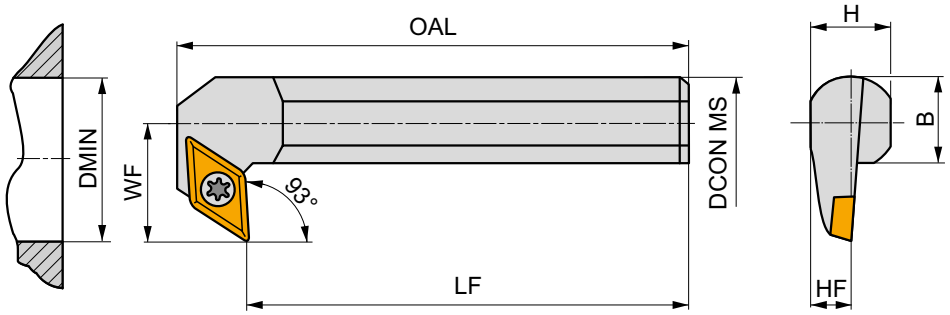
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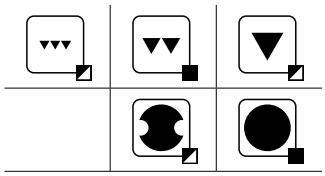


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 93 ° para Pastilhas DC ..

Porta-ferramentas de interior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 93°, para pastilhas DC .. 07 ou 11. Diâmetro mínimo de torneamento Ø27 mm. Adequado para torneamento longitudinal interno com esquadria, cónico, de cópia e chanfrar. Disponível com hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	OAL (mm)	LAMS (°)	GAMO (°)	kg		
R	**S16M-SDZCR 07-93**	16	27	17	14.5	15	150	163	-4	0	0.26	GI052	S01
	S20Q-SDZCR 11-93	20	35	22	18	18.5	180	198	-5	0	0.50	GI012	S08
	S25R-SDZCR 11-93	25	42	27	23	23	200	218	-3	0	0.83	GI012	S08
	S32S-SDZCR 11-93-A	32	53	35	30	30	250	268	-6	0	1.64	GI012	SD10
	S40T-SDZCR 11-93-A	40	65	43	38	38	300	322	-5	0	3.00	GI012	SD10
L	**S16M-SDZCL 07-93**	16	27	17	14.5	15	150	163	-4	0	0.27	GI052	S01
	S20Q-SDZCL 11-93	20	35	22	18	18.5	180	198	-5	0	0.60	GI012	S08
	S25R-SDZCL 11-93	25	42	27	23	23	200	218	-3	0	0.80	GI012	S08
	S32S-SDZCL 11-93-A	32	53	35	30	30	250	268	-6	0	1.60	GI012	SD10
	S40T-SDZCL 11-93-A	40	65	43	38	38	300	322	-5	0	3.00	GI012	SD10

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm						
SD10	US 3510-T15P	3.0	M 3.5	10.6	SDN 110304	MS 3510	FLAG T15P	HXK 3.5
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–

NEW

C.-SDUC(RL) INT

P M K N S H

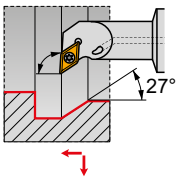
PRAMET

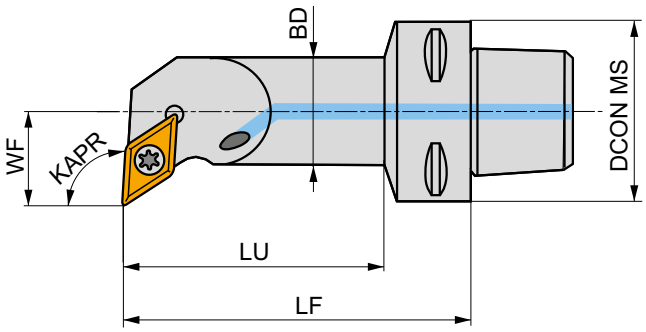
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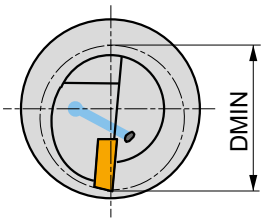


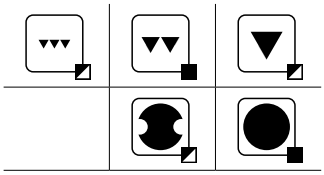
Ferramenta de Interior de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 93 °, p/ Pastilhas DC ..

Porta-ferramentas de interior à direita ou à esquerda, c/ fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas DC .. 07 ou 11. Diâmetro mínimo de torneamento Ø20 mm. Adequado para uma ampla gama de aplicações de torneamento interno. Haste poligonal PSC (Polygon Shank Coupling) de tamanho C3 a C5 com opção de comprimentos. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C3-SDUCR-11065-07	50	20	11	65	48	16	93	-4.3	0	✓	0.20	GI052	SV11
	C4-SDUCR-11070-07	40	20	11	70	47	16	93	-4.3	0	✓	0.35	GI052	SV11
	C4-SDUCR-13080-11	40	25	13	80	57	20	93	-5.8	0	✓	0.41	GI012	SC09M
	C4-SDUCR-17090-11	40	32	17	90	68	25	93	-3.4	0	✓	0.49	GI012	SV16
	C5-SDUCR-13080-11	50	25	13	80	56	20	93	-5.8	0	✓	0.60	GI012	SC09M
	C5-SDUCR-17090-11	50	32	17	90	67	25	93	-3.4	0	✓	0.68	GI012	SV16
L	C4-SDUCL-11070-07	40	20	11	70	47	16	93	-4.3	0	✓	0.35	GI052	SV11
	C4-SDUCL-13080-11	40	25	13	80	57	20	93	-5.8	0	✓	0.41	GI012	SC09M
	C4-SDUCL-17090-11	40	32	17	90	68	25	93	-3.4	0	✓	0.49	GI012	SV16
	C5-SDUCL-13080-11	50	25	13	80	56	20	93	-5.8	0	✓	0.60	GI012	SC09M

GI012	DC.. 11T3..
GI052	DC.. 0702..

		Nm				
SC09M	US 2009-T15P	3.0	M 3.5	8.1	FLAG T15P/3,5	–
SV11	US 2003-T07P	0.8	M 2.5	6.5	–	FLAG T07P
SV16	US 2010-T15P	3.0	M 3.5	10.1	–	FLAG T15P/3,5

EC 06 / 08

PASTILHAS DE METAL DURO

ECGT



104

ECMT



105

ECMW



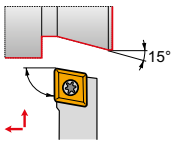
106

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
ECMT **06**0204E-FM2	S08K-SEUCR **06**

TORNEAMENTO ISO - EXTERIOR

SEGC(RL) EXT

90°



12×12
16×16

107

EC..



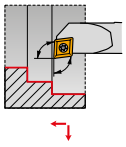
08

104 – 106

TORNEAMENTO ISO - INTERIOR

SEUC(RL) INT

93°





11
32

108

EC..



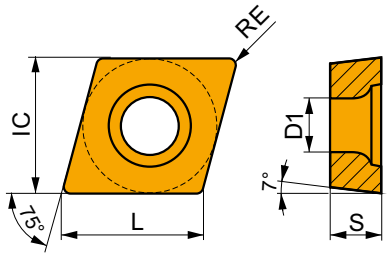
06
08

104 – 106

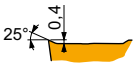
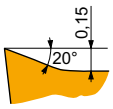
ECGT

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.50	2.38
0602-SF3	6.350	2.80	6.50	2.58
0803	7.940	3.40	8.20	3.18
0803-SF3	7.940	3.40	8.20	3.43



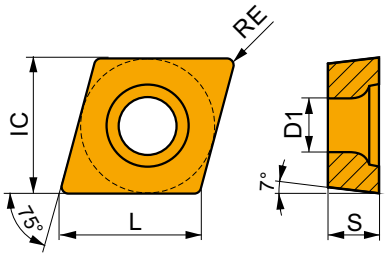
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria SF2 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																	
ECGT 060202E-SF2	**H07**	0.2	–	–	–	105	0.05	1.0	–	–	–	525	0.06	1.0	50	0.04	0.8	–	–	–
	T6310	0.2	185	0.05	1.0	130	0.05	1.0	–	–	–	555	0.06	1.0	55	0.04	0.8	–	–	–
ECGT 060204E-SF2	**H07**	0.4	–	–	–	85	0.09	1.0	–	–	–	430	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	160	0.10	1.0	115	0.09	1.0	–	–	–	480	0.12	1.0	45	0.07	0.8	–	–	–
ECGT 080302E-SF2	**H07**	0.2	–	–	–	105	0.05	1.0	–	–	–	525	0.06	1.0	50	0.04	0.8	–	–	–
	T6310	0.2	185	0.05	1.0	130	0.05	1.0	–	–	–	555	0.06	1.0	55	0.04	0.8	–	–	–
ECGT 080304E-SF2	**H07**	0.4	–	–	–	85	0.09	1.0	–	–	–	430	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	160	0.10	1.0	115	0.09	1.0	–	–	–	480	0.12	1.0	45	0.07	0.8	–	–	–
																				
			Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																	
ECGT 060202E-SF3	**H07**	0.2	–	–	–	105	0.05	0.8	170	0.05	0.8	540	0.06	0.8	55	0.04	0.6	–	–	–
	T6310	0.2	185	0.05	0.8	130	0.05	0.8	145	0.05	0.8	555	0.06	0.8	55	0.04	0.6	35	0.15	1.0
ECGT 080304E-SF3	**H07**	0.4	–	–	–	85	0.09	1.0	135	0.10	1.0	430	0.12	1.0	40	0.07	0.8	–	–	–
	T6310	0.4	160	0.10	1.0	115	0.09	1.0	125	0.10	1.0	480	0.12	1.0	45	0.07	0.8	30	0.15	1.0

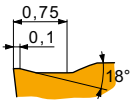
ECMT

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.50	2.38
0803	7.940	3.40	8.20	3.18



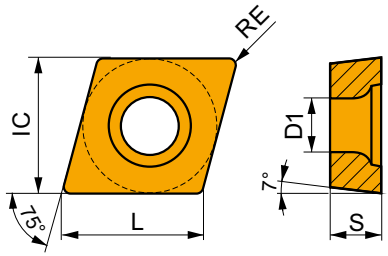
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			U S																	
			Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																	
ECMT 060204E-FM2	**T7325**	0.4	◪ 180	0.12	0.8	◪ 140	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 155	0.12	0.8	◪ 90	0.11	0.8	■ 145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 205	0.12	0.8	◪ 110	0.11	0.8	◪ 170	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 290	0.12	0.8	–	–	–	◪ 275	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 255	0.12	0.8	◪ 150	0.11	0.8	◪ 240	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 220	0.12	0.8	◪ 130	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
ECMT 080304E-FM2	**T5315**	0.4	◪ 280	0.12	1.0	–	–	–	■ 265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 170	0.12	1.0	◪ 130	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 150	0.12	1.0	◪ 90	0.11	1.0	■ 140	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 205	0.12	1.0	◪ 110	0.11	1.0	◪ 170	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 280	0.12	1.0	–	–	–	◪ 265	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 255	0.12	1.0	◪ 150	0.11	1.0	◪ 240	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 215	0.12	1.0	◪ 125	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
ECMT 080308E-FM2	**T7325**	0.8	◪ 185	0.17	1.0	◪ 140	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 165	0.17	1.0	◪ 95	0.15	1.0	■ 155	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 210	0.17	1.0	◪ 115	0.15	1.0	◪ 175	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 290	0.17	1.0	–	–	–	◪ 275	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 260	0.17	1.0	◪ 155	0.15	1.0	◪ 245	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 225	0.17	1.0	◪ 135	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–

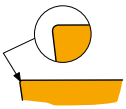
ECMW

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.50	2.38
0803	7.940	3.40	8.20	3.18



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
																				
ECMW 060204	**H07**	0.4	–	–	–	–	–	–	■ 100	0.10	2.0	–	–	–	–	–	–	–	–	–
ECMW 080304	**H07**	0.4	–	–	–	–	–	–	■ 100	0.10	2.5	–	–	–	–	–	–	–	–	–
ECMW 080308	**H07**	0.8	–	–	–	–	–	–	■ 95	0.18	2.5	–	–	–	–	–	–	–	–	–

Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramenteinterrompidos.

SEGC(RL) EXT

P M K N S H

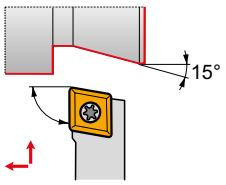
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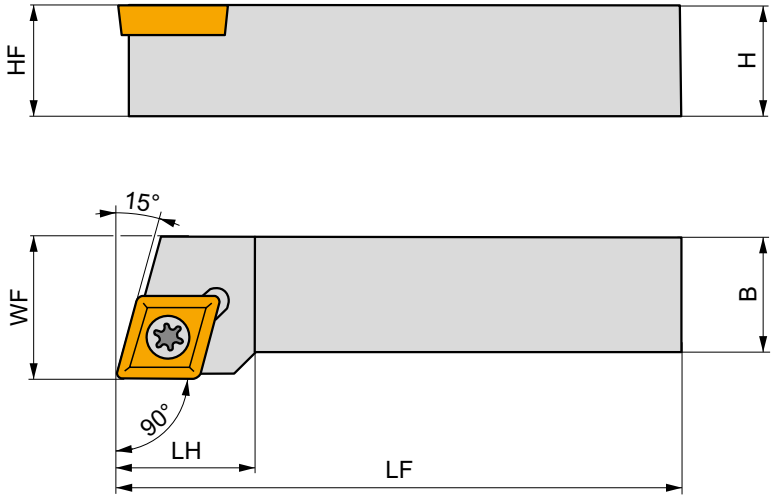
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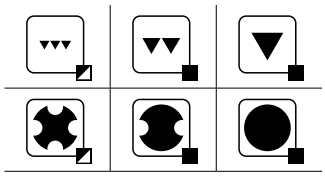


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 90 °, para Pastilhas EC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 90 ° para pastilhas positivas EC .. 08. Indicado para torneamento frontal e longitudinal com esquadria, torneamento cónico e chanfrar. Disponível com hastes de 12x12 e 16x16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SEGCR 1212 N 08	12	12	12	16	160	12	0	0	0.15	GI210	SE08
R	SEGCR 1616 H 08	16	16	16	20	100	12	0	0	0.22	GI210	SE08
L	SEGCL 1212 N 08	12	12	12	16	160	12	0	0	0.22	GI210	SE08
L	SEGCL 1616 H 08	16	16	16	20	100	12	0	0	2.14	GI210	SE08

GI210	EC.. 0803..

		Nm			
SE08	416.1-832	3.6	M 3	8.5	PT-8002

SEUC(RL) INT

P M K N S H

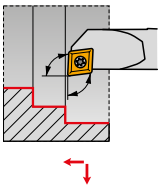
PRAMET

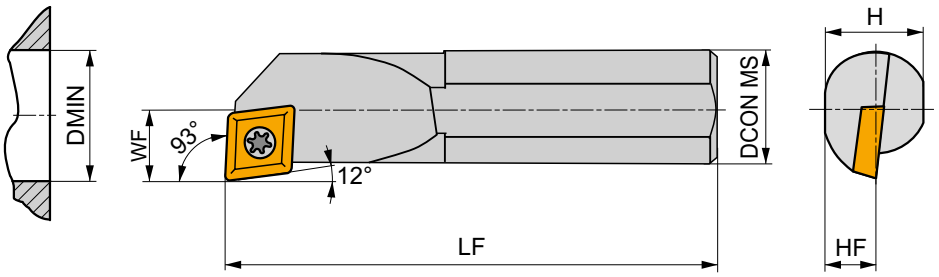
S

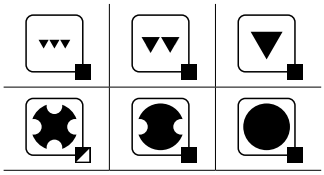


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 93 ° para Pastilhas EC ..

Porta-ferramentas de interior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 93˚, para pastilhas EC .. 06 e 08. Diâmetro mínimo de torneamento Ø11 mm. Adequado para torneamento cónico, torneamento longitudinal com esquadria e chanfrar. Disponível com hastes de Ø8 até Ø25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	S08K-SEUCR 06	8	11	7	7	3.5	125	-5	0	0.06	GI213	SE23
	S10M-SEUCR 06	10	13	8	9	4.5	150	-5	0	0.10	GI213	SE23
	S12M-SEUCR 08	12	15	9	11	5.5	150	-5	0	0.14	GI210	SE24
	S16R-SEUCR 08	16	20	11	15	7.5	200	-5	0	0.32	GI210	SE24
	S20S-SEUCR 08	20	25	13	18	9	250	-5	0	0.58	GI210	SE24
	S25T-SEUCR 08	25	32	17	23	11.5	300	-4	0	1.06	GI210	SE24
L	S08K-SEUCL 06	8	11	7	7	3.5	125	-5	0	0.06	GI213	SE23
	S10M-SEUCL 06	10	13	8	9	4.5	150	-5	0	0.10	GI213	SE23
	S12M-SEUCL 08	12	15	9	11	5.5	150	-5	0	0.14	GI210	SE24
	S16R-SEUCL 08	16	20	11	15	7.5	200	-5	0	0.32	GI210	SE24
	S20S-SEUCL 08	20	25	13	18	9	250	-5	0	0.58	GI210	SE24

GI210	EC.. 0803..
GI213	EC.. 0602..

		Nm			
SE23	5513 020-03	0.8	M 2.5	6.5	PT-8001
SE24	416.1-832	3.6	M 3	8.5	PT-8003

EP 05

PASTILHAS DE METAL DURO

EPGX



110

EPMT

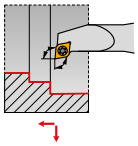
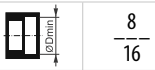


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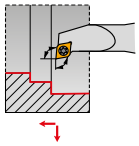
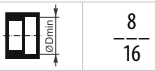
CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
EPGX **05**0202FR-JZ	S0608H-SELPR **05**

TORNEAMENTO ISO - INTERIOR

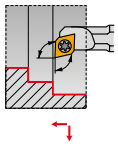
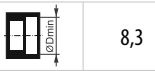
SELP(RL) INT

95°	EP..
	05
 8/16	
111	110

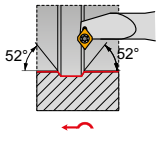
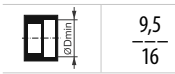
SELP(RL)-E INT

95°	EP..
	05
 8/16	
112	110

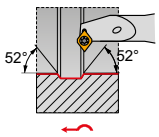
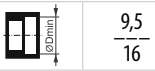
SEUP(RL) INT

93°	EP..
	05
 8,3	
113	110

SEXP(RL) INT

52°30´	EP..
	05
 9,5/16	
114	110

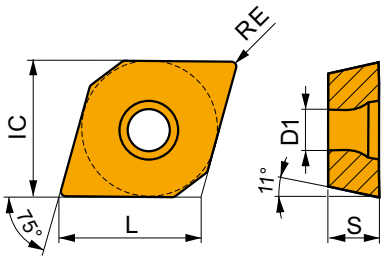
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52°30´	EP..
	05
 9,5/16	
115	110

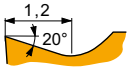
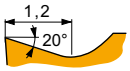
EPGX

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0502	5.560	2.50	5.70	2.38



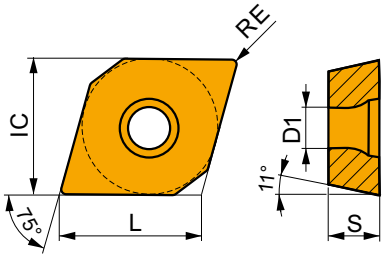
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
 			 Geometria FR-JZ com desenho positivo à direita para operações de maquinação de acabamento fino, e cortes contínuos.																	
EPGX 050202FR-JZ	**TT010**	0.2	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
 			 Geometria FL-JZ com desenho positivo à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																	
EPGX 050202FL-JZ	**TT010**	0.2	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

EPMT

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0502	5.560	2.50	5.70	2.38



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
 			 Geometria NF2 com desenho positivo para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																	
EPMT 050202E-NF2	**H07**	0.2	–	–	–	◪ 80	0.09	0.8	◪ 125	0.10	0.8	◪ 405	0.12	0.8	■ 40	0.07	0.6	–	–	–
	T7325	0.2	◪ 215	0.07	0.8	■ 165	0.06	0.8	–	–	–	–	–	–	■ 65	0.06	0.6	–	–	–
	T7335	0.2	◪ 220	0.07	0.8	■ 170	0.06	0.8	–	–	–	–	–	–	■ 70	0.06	0.6	–	–	–
	T9315	0.2	◪ 390	0.05	0.8	–	–	–	◪ 370	0.05	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	◪ 305	0.07	0.8	■ 180	0.06	0.8	◪ 285	0.07	0.8	–	–	–	◪ 65	0.06	0.6	–	–	–
	T9335	0.2	◪ 200	0.10	0.8	■ 120	0.09	0.8	–	–	–	–	–	–	◪ 45	0.07	0.6	–	–	–
	TT010	0.2	◪ 345	0.05	0.5	◪ 205	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

SELP(RL) INT

P M K N S H

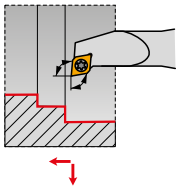
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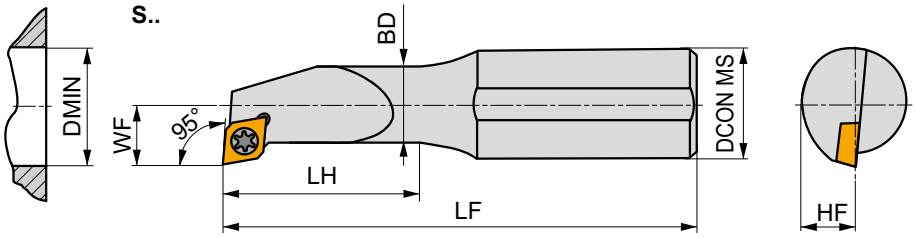
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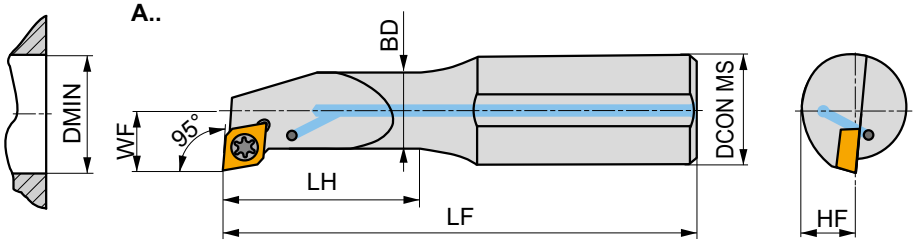


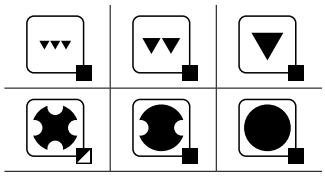
Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 95 ° para Pastilhas EP ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 95° para pastilhas EP .. 0502. Diâmetro mínimo de torneamento Ø8 mm. Adequado para torneamento cónico e longitudinal com esquadria, e chanfrar. Disponíveis hastes de Ø8 a Ø16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	S0608H-SELPR 05	8	8	6	4.5	100	20	-10	0	–	0.04	GI212	SE21
	S0810J-SELPR 05	10	11	8	6	110	26	-5	0	–	0.06	GI212	SE22
	S1012K-SELPR 05	12	13	10	7	125	32	-5	0	–	0.11	GI212	SE22
	A1216M-SELPR 05	16	16	12	9	150	40	-2	0	✓	0.18	GI212	SE22
	S1216M-SELPR 05	16	16	12	9	150	40	-2	0	–	0.21	GI212	SE22
L	S0608H-SELPL 05	8	8	6	4.5	100	20	-10	0	–	0.04	GI212	SE21
	S0810J-SELPL 05	10	11	8	6	110	26	-5	0	–	0.06	GI212	SE22
	S1012K-SELPL 05	12	13	10	7	125	32	-5	0	–	0.11	GI212	SE22
	S1216M-SELPL 05	16	16	12	9	150	40	-2	0	–	0.21	GI212	SE22

GI212	EP.. 0502..

		Nm			
SE21	28992	0.8	M 2.2	4.2	MA2-8304
SE22	28588	0.8	M 2.2	5.6	MA2-8304

SELP(RL)-E INT

P M K N S H

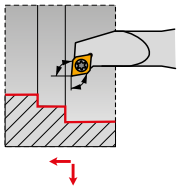
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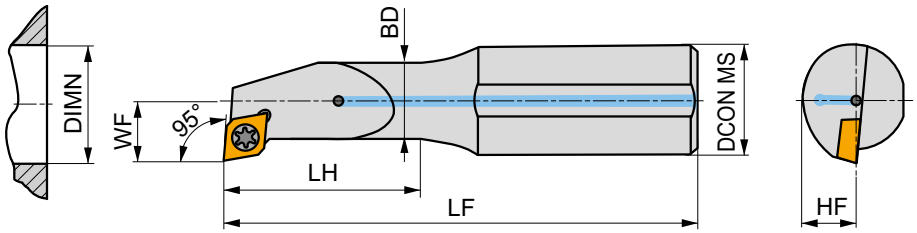
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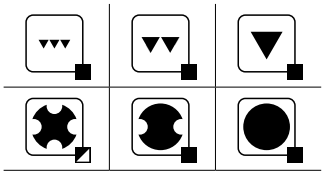


Porta-ferramentas de Interior em Metal Duro, Fixação por Parafuso, Ângulo de 95 °, para Pastilhas EP ..

Porta-ferramentas de interior à direita ou à esquerda em metal duro, com parafuso de fixação e refrigeração interna, com ângulo de corte de 95° para pastilhas EP .. 0502. Diâmetro mínimo de torneamento Ø8 mm. Adequado para torneamento cónico interno e longitudinal com esquadria, e chanfrar. Disponível com hastes de Ø8 até Ø16 mm. Para balanço > 3xD.









	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	**E0608H-SELPR 05**	8	8	6	4.5	100	28	-10	0	✓	0.06	GI212	SE22
	E0810J-SELPR 05	10	11	8	6	110	36	-5	0	✓	0.10	GI212	SE22
	E1012K-SELPR 05	12	13	10	7	125	44	-5	0	✓	0.18	GI212	SE22
L	**E0608H-SELPL 05**	8	8	6	4.5	100	28	-10	0	✓	0.06	GI212	SE22
	E0810J-SELPL 05	10	11	8	6	110	36	-5	0	✓	0.10	GI212	SE22
	E1216M-SELPL 05	16	16	12	9	150	55	-2	0	✓	0.33	GI212	SE22

GI212	EP.. 0502..

		Nm			
SE22	28588	0.8	M 2.2	5.6	MA2-8304

SEUP(RL) INT

P M K N S H

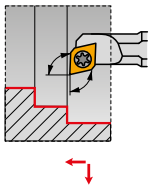
PRAMET

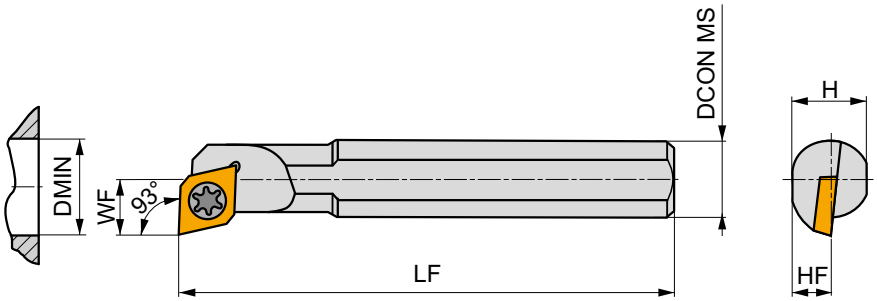
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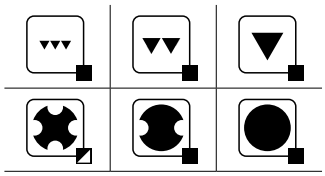


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 93 ° para Pastilhas EP ..

Porta-ferramentas de interior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 93°, para pastilhas EP .. 0502. Diâmetro mínimo de torneamento Ø8,3 mm. Adequado para torneamento cónico interno e longitudinal com esquadria, e chanfrar. Disponível com haste de Ø6 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	S06H-SEUPR 05	6	8.3	5	5.4	2.7	100	-7	0	0.03	GI212	SE21
L	S06H-SEUPL 05	6	8.3	5	5.4	2.7	100	-7	0	0.03	GI212	SE21

GI212	EP.. 0502..

SE21	28992	0.8 Nm	M 2.2	4.2	MA2-8304

SEXP(RL) INT

P M K N S H

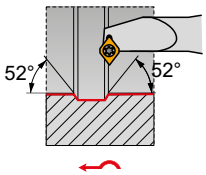
PRAMET

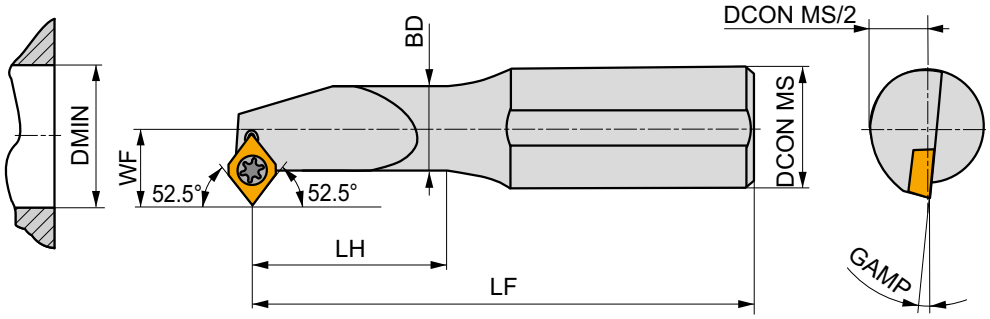
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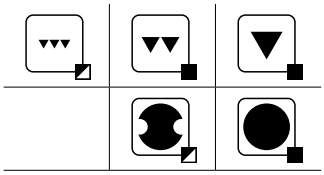


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 52,5 ° para Pastilhas EP ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e ângulo de corte de 52,5° para pastilhas EP .. 0502. Diâmetro mínimo de torneamento Ø9,5mm. Adequado para chanfro posterior interno, cónico, multidirecional, chanfro e torneamento longitudinal sem esquadria. Disponível com hastes de Ø8 até Ø16mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	LF (mm)	LH (mm)	GAMP (°)	kg		
R	S0608H-SEXPR 05	8	9.5	6	5.5	100	20	-7	0.04	GI212	SE21
	S0810J-SEXPR 05	10	11	8	6	110	26	-5	0.06	GI212	SE22
	S1012K-SEXPR 05	12	13	10	7	125	32	-5	0.11	GI212	SE22
	S1216M-SEXPR 05	16	16	12	9	150	40	-2	0.21	GI212	SE22
L	S0608H-SEXPL 05	8	9.5	6	5.5	100	20	-7	0.04	GI212	SE21
	S0810J-SEXPL 05	10	11	8	6	110	26	-5	0.07	GI212	SE22
	S1012K-SEXPL 05	12	13	10	7	125	32	-5	0.11	GI212	SE22
	S1216M-SEXPL 05	16	16	12	9	150	40	-2	0.21	GI212	SE22

GI212	EP.. 0502..

		Nm			
SE21	28992	0.8	M 2.2	4.2	MA2-8304
SE22	28588	0.8	M 2.2	5.6	MA2-8304

SEXP(RL)-E INT

P M K N S H

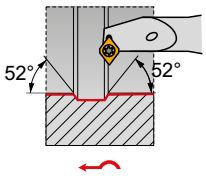
PRAMET

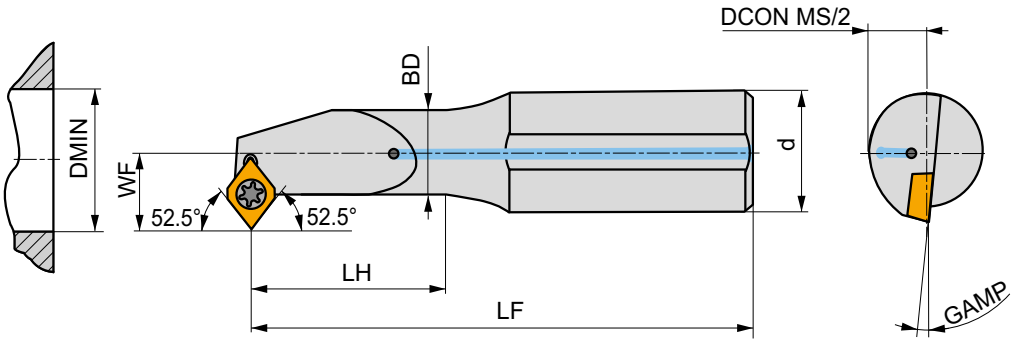
S

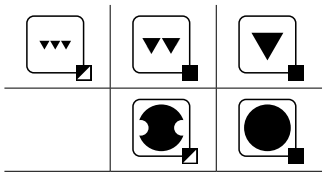


Porta-ferramentas de Interior, Fixação por Parafuso, Ângulo de 52,5 °, para Pastilhas EP ..

Porta-ferramentas de interior à direita ou à esquerda em metal duro, com fixação por parafuso e refrigeração interna, e ângulo de corte de 52,5° para pastilhas EP .. 0502. Diâmetro mínimo de torneamento Ø9,5 mm. Para chanfro posterior interno, torneamento cónico, multidirecional, longitudinal sem esquadria e chanfrar. Hastes de Ø8 a Ø16 mm disponíveis. Para balanço > 3xD.









	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	LF (mm)	LH (mm)	GAMP (°)		kg		
R	E0608H-SEXPR 05	8	9.5	6	5.5	100	28	-7	✓	0.07	GI212	SE21
	E0810J-SEXPR 05	10	11	8	6	110	36	-5	✓	0.11	GI212	SE22
	E1012K-SEXPR 05	12	13	10	7	125	44	-5	✓	0.16	GI212	SE22
	E1216M-SEXPR 05	16	16	12	9	150	55	-2	✓	0.32	GI212	SE22
L	E0608H-SEXPL 05	8	9.5	6	5.5	100	28	-7	✓	0.06	GI212	SE21

GI212	EP.. 0502..

		Nm			
SE21	28992	0.8	M 2.2	4.2	MA2-8304
SE22	28588	0.8	M 2.2	5.6	MA2-8304

RC

06/ 08/ 12/ 16/ 20/ 25/ 32

PASTILHAS DE METAL DURO

RCGT



118

RCMT



118

RCMW



120

RCMX



121

PASTILHAS CER

RCGX CER

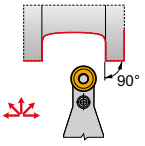


123

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
RCMT 1204MOE-RM3	SRDCN 3225 P 12-M

TORNEAMENTO ISO - EXTERIOR

PRDCN EXT

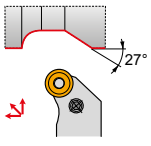


RC..
20
25
32

40×40 / 50×50

124 | 118 – 123

PRSC(RL) EXT

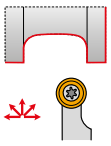


RC..
16
25

40×40

125 | 118 – 123

SRDC(RL) EXT

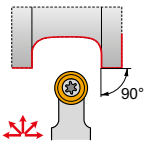


RC..
08

20×20 / 32×25

126 | 118 – 123

SRDCN EXT

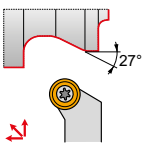


RC..
06
08
10
12
16

12×12 / 32×25

127 | 118 – 123

SRSC(RL) EXT

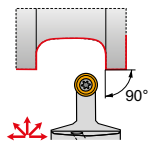


RC..
06
08
10
12
16

12×12 / 32×25

128 | 118 – 123

C.-SRDCN EXT NEW



RC..
10
12

C4 / C5

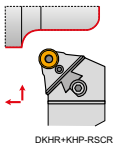
130 | 118 – 123

RC

06/ 08/ 12/ 16/ 20/ 25/ 32

TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

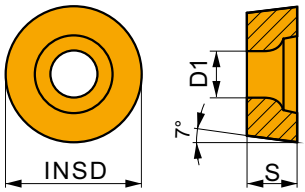
KHP-RSCR/L + DKH(RL)

	RC..
 DKHR+KHP-RSCR	20 25 32
■ 40×50 60×80	
131, 132	118 – 123

RCGT

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
0803	8.0	3.40	3.18
1003	10.0	4.40	3.18



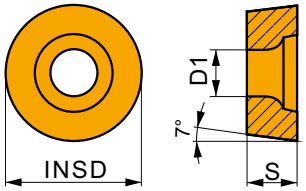
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
 			 Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a levemente interrompidos.																	
RCGT 0803MOF-AL	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 285	1.20	1.0	–	–	–	–	–	–
	T0315	–	–	–	–	–	–	–	–	–	–	■ 420	1.20	1.0	–	–	–	–	–	–
RCGT 1003MOF-AL	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 255	1.50	1.0	–	–	–	–	–	–
	T0315	–	–	–	–	–	–	–	–	–	–	■ 390	1.50	1.0	–	–	–	–	–	–

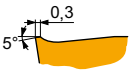
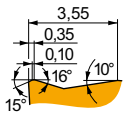
RCMT

PRAMET

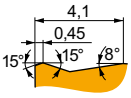
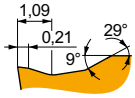
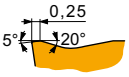
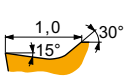
	INSD (mm)	D1 (mm)	S (mm)
0602	6.0	2.80	2.38
0803	8.0	3.40	3.18
10T3	10.0	4.40	3.97
1204	12.0	4.40	4.76
1606	16.0	5.50	6.35
2006	20.0	6.50	6.35
2507	25.0	8.60	7.94



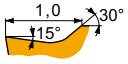
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
 			 Geometria 37 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMT 1606MOS-37	**T9315**	–	■ 165	0.60	3.0	–	–	–	◪ 155	0.60	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	■ 145	0.60	3.0	–	–	–	◪ 135	0.60	3.0	–	–	–	–	–	–	–	–	–
 			 Geometria 371 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMT 2006MOS-371	**T9315**	–	■ 145	0.80	3.0	–	–	–	◪ 135	0.80	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	■ 125	0.80	3.0	–	–	–	◪ 115	0.80	3.0	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
 																				
			Geometria 372 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMT 2507MOS-372	T9325	–	■ 90	0.80	3.0	–	–	–	◪ 85	0.80	3.0	–	–	–	–	–	–	–	–	–
 																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
RCMT 0602MOE-FM	T7325	–	◪ 215	0.45	1.2	■ 165	0.41	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 190	0.45	1.2	■ 110	0.41	1.2	◪ 180	0.45	1.2	◪ 570	0.54	1.2	–	–	–	–	–	–
	T8430	–	■ 200	0.45	1.2	■ 110	0.41	1.2	◪ 165	0.45	1.2	◪ 555	0.54	1.2	–	–	–	–	–	–
	T9315	–	■ 260	0.45	1.2	–	–	–	◪ 245	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9325	–	■ 235	0.45	1.2	■ 140	0.41	1.2	◪ 220	0.45	1.2	–	–	–	–	–	–	–	–	–
RCMT 0803MOE-FM	T7325	–	◪ 190	0.60	1.6	■ 145	0.54	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 170	0.60	1.6	■ 100	0.54	1.6	◪ 160	0.60	1.6	◪ 510	0.72	1.6	–	–	–	–	–	–
	T8430	–	■ 175	0.60	1.6	■ 95	0.54	1.6	◪ 140	0.60	1.6	◪ 480	0.72	1.6	–	–	–	–	–	–
	T9315	–	■ 225	0.60	1.6	–	–	–	◪ 210	0.60	1.6	–	–	–	–	–	–	–	–	–
	T9325	–	■ 200	0.60	1.6	■ 120	0.54	1.6	◪ 190	0.60	1.6	–	–	–	–	–	–	–	–	–
RCMT 10T3MOE-FM	T7325	–	◪ 185	0.65	1.7	■ 140	0.59	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 165	0.65	1.7	■ 95	0.59	1.7	◪ 155	0.65	1.7	◪ 495	0.78	1.7	–	–	–	–	–	–
	T8430	–	■ 170	0.65	1.7	■ 90	0.59	1.7	◪ 135	0.65	1.7	◪ 465	0.78	1.7	–	–	–	–	–	–
	T9315	–	■ 220	0.65	1.7	–	–	–	◪ 205	0.65	1.7	–	–	–	–	–	–	–	–	–
	T9325	–	■ 195	0.65	1.7	■ 115	0.59	1.7	◪ 185	0.65	1.7	–	–	–	–	–	–	–	–	–
RCMT 1204MOE-FM	T7325	–	◪ 175	0.70	1.8	■ 135	0.63	1.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 160	0.70	1.8	■ 95	0.63	1.8	◪ 150	0.70	1.8	◪ 480	0.84	1.8	–	–	–	–	–	–
	T8430	–	■ 155	0.70	1.8	■ 85	0.63	1.8	◪ 130	0.70	1.8	◪ 435	0.84	1.8	–	–	–	–	–	–
	T9315	–	■ 205	0.70	1.8	–	–	–	◪ 190	0.70	1.8	–	–	–	–	–	–	–	–	–
	T9325	–	■ 190	0.70	1.8	■ 110	0.63	1.8	◪ 180	0.70	1.8	–	–	–	–	–	–	–	–	–
 																				
			Geometria RM3 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
RCMT 0803MOE-RM3	T7325	–	◪ 185	0.50	1.3	◪ 140	0.45	1.3	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	–	■ 225	0.50	1.3	–	–	–	◪ 210	0.50	1.3	–	–	–	–	–	–	◪ 45	0.15	1.0
RCMT 1204MOE-RM3	H07	–	–	–	–	◪ 65	0.54	1.8	■ 105	0.60	1.8	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 165	0.60	1.8	◪ 125	0.54	1.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 150	0.60	1.8	◪ 90	0.54	1.8	■ 140	0.60	1.8	–	–	–	–	–	–	◪ 30	0.15	1.0
	T8430	–	■ 150	0.60	1.8	◪ 80	0.54	1.8	◪ 125	0.60	1.8	–	–	–	–	–	–	◪ 25	0.15	1.0
	T9315	–	■ 205	0.60	1.8	–	–	–	◪ 190	0.60	1.8	–	–	–	–	–	–	◪ 40	0.15	1.0
RCMT 1606MOE-RM3	T7325	–	◪ 160	0.65	2.0	◪ 120	0.59	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 145	0.65	2.0	◪ 85	0.59	2.0	■ 135	0.65	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
	T8430	–	■ 145	0.65	2.0	◪ 80	0.59	2.0	◪ 120	0.65	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
	T9315	–	■ 195	0.65	2.0	–	–	–	◪ 185	0.65	2.0	–	–	–	–	–	–	◪ 35	0.15	1.0
RCMT 2507MOE-RM3	H07	–	–	–	–	◪ 60	0.54	3.0	■ 95	0.60	3.0	–	–	–	–	–	–	–	–	–
 																				
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
RCMT 0602MOE-UR	T6310	–	■ 170	0.40	1.2	◪ 120	0.36	1.2	■ 135	0.40	1.2	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 190	0.40	1.2	◪ 145	0.36	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 170	0.40	1.2	◪ 100	0.36	1.2	■ 160	0.40	1.2	–	–	–	–	–	–	–	–	–
	T8430	–	■ 180	0.40	1.2	◪ 95	0.36	1.2	◪ 145	0.40	1.2	–	–	–	–	–	–	–	–	–
	T9315	–	■ 240	0.40	1.2	–	–	–	◪ 225	0.40	1.2	–	–	–	–	–	–	–	–	–
	T9325	–	■ 215	0.40	1.2	◪ 125	0.36	1.2	◪ 200	0.40	1.2	–	–	–	–	–	–	–	–	–

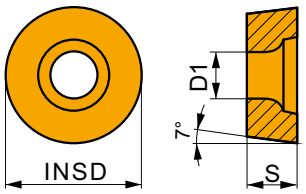
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			HFC E																	
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
RCMT 0803M0E-UR	**T6310**	–	■ 160	0.45	1.6	◪ 115	0.41	1.6	■ 125	0.45	1.6	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 180	0.45	1.6	◪ 140	0.41	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 160	0.45	1.6	◪ 95	0.41	1.6	■ 150	0.45	1.6	–	–	–	–	–	–	–	–	–
	T8430	–	■ 170	0.45	1.6	◪ 90	0.41	1.6	◪ 135	0.45	1.6	–	–	–	–	–	–	–	–	–
	T9315	–	■ 220	0.45	1.6	–	–	–	◪ 205	0.45	1.6	–	–	–	–	–	–	–	–	–
	T9325	–	■ 200	0.45	1.6	◪ 120	0.41	1.6	◪ 190	0.45	1.6	–	–	–	–	–	–	–	–	–
RCMT 10T3M0E-UR	**T6310**	–	■ 160	0.50	1.4	◪ 115	0.45	1.4	■ 125	0.50	1.4	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 175	0.50	1.4	◪ 135	0.45	1.4	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 160	0.50	1.4	◪ 95	0.45	1.4	■ 150	0.50	1.4	–	–	–	–	–	–	–	–	–
	T8430	–	■ 165	0.50	1.4	◪ 90	0.45	1.4	◪ 135	0.50	1.4	–	–	–	–	–	–	–	–	–
	T9315	–	■ 215	0.50	1.4	–	–	–	◪ 200	0.50	1.4	–	–	–	–	–	–	–	–	–
	T9325	–	■ 190	0.50	1.4	◪ 110	0.45	1.4	◪ 180	0.50	1.4	–	–	–	–	–	–	–	–	–
RCMT 1204M0E-UR	**T6310**	–	■ 150	0.55	1.8	◪ 105	0.50	1.8	■ 120	0.55	1.8	–	–	–	–	–	–	–	–	–
	T7325	–	◪ 165	0.55	1.8	◪ 125	0.50	1.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	–	■ 150	0.55	1.8	◪ 90	0.50	1.8	■ 140	0.55	1.8	–	–	–	–	–	–	–	–	–
	T8430	–	■ 145	0.55	1.8	◪ 80	0.50	1.8	◪ 120	0.55	1.8	–	–	–	–	–	–	–	–	–
	T9315	–	■ 200	0.55	1.8	–	–	–	◪ 190	0.55	1.8	–	–	–	–	–	–	–	–	–
	T9325	–	■ 180	0.55	1.8	◪ 105	0.50	1.8	◪ 170	0.55	1.8	–	–	–	–	–	–	–	–	–

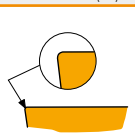
RCMW

PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
0602	6.0	2.80	2.38
0803	8.0	3.40	3.18
10T3	10.0	4.40	3.97
1204	12.0	4.40	4.76



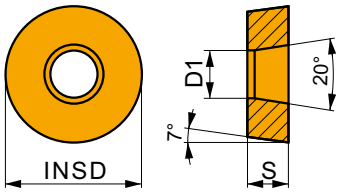
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			HFC E																	
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
RCMW 0602M0	**T5305**	–	–	–	–	–	–	–	■ 280	0.25	0.6	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 250	0.25	0.6	–	–	–	–	–	–	◪ 50	0.15	1.0
RCMW 0803M0	**T5305**	–	–	–	–	–	–	–	■ 255	0.30	0.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 230	0.30	0.8	–	–	–	–	–	–	◪ 45	0.15	1.0
RCMW 10T3M0	**T5305**	–	–	–	–	–	–	–	■ 225	0.40	1.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 200	0.40	1.0	–	–	–	–	–	–	◪ 40	0.15	1.0
RCMW 1204M0	**T5305**	–	–	–	–	–	–	–	■ 205	0.45	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	–	–	–	–	–	–	–	■ 190	0.45	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0

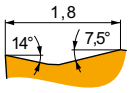
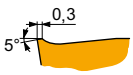
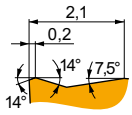
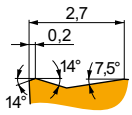
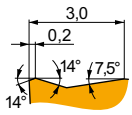
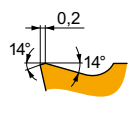
RCMX

PRAMET

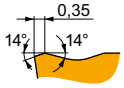
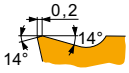
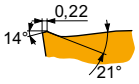
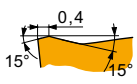
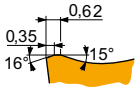
	INSD (mm)	D1 (mm)	S (mm)
1003	10.0	3.60	3.18
1204	12.0	4.20	4.76
1606	16.0	5.20	6.35
2006	20.0	6.50	6.35
2507	25.0	7.20	7.94
3209	32.0	9.50	9.53



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			 Geometria 31 para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
RCMX 1003MOS-31	**T9325**	–	165	0.50	2.0	95	0.45	2.0	155	0.50	2.0	–	–	–	–	–	–	–	–	–
	T9335	–	140	0.50	2.0	80	0.45	2.0	–	–	–	–	–	–	–	–	–	–	–	–
			 Geometria 37 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMX 1606MOS-37	**T9315**	–	165	0.60	3.0	–	–	–	155	0.60	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	145	0.60	3.0	–	–	–	135	0.60	3.0	–	–	–	–	–	–	–	–	–
			 Geometria 321 para operações de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMX 1204MOS-321	**T9315**	–	130	1.00	3.0	–	–	–	120	1.00	3.0	–	–	–	–	–	–	–	–	–
	T9325	–	120	1.00	3.0	–	–	–	110	1.00	3.0	–	–	–	–	–	–	–	–	–
	T9335	–	105	1.00	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			 Geometria 331 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMX 1606MOS-331	**T9315**	–	120	1.20	3.5	–	–	–	110	1.20	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	105	1.20	3.5	–	–	–	95	1.20	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	110	0.80	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			 Geometria 341 para operações de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMX 2006MOS-341	**6640**	–	90	1.00	3.5	–	–	–	85	1.00	3.5	–	–	–	–	–	–	–	–	–
			 Geometria 351 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
RCMX 2507MOS-351	**6640**	–	60	1.00	3.5	–	–	–	55	1.00	3.5	–	–	–	–	–	–	–	–	–

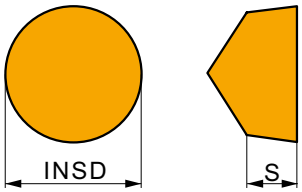
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
 			HFC S																	
Geometria 361 para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos pesados.																				
RCMX 3209M0S-361	**6640**	–	50	1.40	4.5	–	–	–	45	1.40	4.5	–	–	–	–	–	–	–	–	–
 			HFC S																	
Geometria RF1 para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																				
RCMX 2006M0-RF1	**T5305**	–	105	0.80	3.5	–	–	–	95	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9310	–	105	0.80	3.5	–	–	–	95	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	100	0.80	3.5	–	–	–	95	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	90	0.80	3.5	–	–	–	85	0.80	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	110	0.80	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RCMX 2507M0-RF1	**T8345**	–	45	1.00	3.5	–	–	–	40	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9310	–	95	1.00	3.5	–	–	–	90	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	90	1.00	3.5	–	–	–	85	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	80	1.00	3.5	–	–	–	75	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	65	1.00	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
 			HFC S																	
Geometria RM1 para operações de maquinação de acabamento a desbaste, e cortes contínuos a interrompidos.																				
RCMX 2006M0-RM1	**T9310**	–	95	1.00	3.5	–	–	–	90	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	90	1.00	3.5	–	–	–	85	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	80	1.00	3.5	–	–	–	75	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	125	0.60	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RCMX 2507M0-RM1	**T9310**	–	95	1.00	3.5	–	–	–	90	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	90	1.00	3.5	–	–	–	85	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	80	1.00	3.5	–	–	–	75	1.00	3.5	–	–	–	–	–	–	–	–	–
	T9335	–	80	0.60	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
 			HFC S																	
Geometria RM2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
RCMX 2507M0-RM2	**T9310**	–	90	1.10	3.5	–	–	–	85	1.10	3.5	–	–	–	–	–	–	–	–	–
	T9315	–	85	1.10	3.5	–	–	–	80	1.10	3.5	–	–	–	–	–	–	–	–	–
	T9325	–	75	1.10	3.5	–	–	–	70	1.10	3.5	–	–	–	–	–	–	–	–	–
RCMX 3209M0-RM2	**T5315**	–	95	1.00	4.5	–	–	–	90	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9310	–	90	1.00	4.5	–	–	–	85	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9315	–	85	1.00	4.5	–	–	–	80	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9325	–	75	1.00	4.5	–	–	–	70	1.00	4.5	–	–	–	–	–	–	–	–	–
	T9335	–	55	1.40	4.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
 			HFC P																	
Geometria RR2 para operações de maquinação de desbaste pesado, e cortes contínuos a interrompidos.																				
RCMX 3209M0-RR2	**T9315**	–	60	1.40	4.5	–	–	–	55	1.40	4.5	–	–	–	–	–	–	10	0.15	1.0
	T9316	–	60	1.40	4.5	–	–	–	55	1.40	4.5	–	–	–	–	–	–	–	–	–

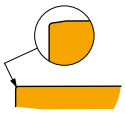
RCGX CER

PRAMET

	INSD (mm)	S (mm)
0606	6.350	6.35
0907	9.525	7.94
1207	12.700	7.94



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
RCGX 060600 K15015	**TC100**	–	–	–	–	–	–	–	365	0.30	0.8	–	–	–	–	–	–	–	–	–
RCGX 090700 K15015	**TC100**	–	–	–	–	–	–	–	410	0.20	1.2	–	–	–	–	–	–	–	–	–
RCGX 120700 K15015	**TC100**	–	–	–	–	–	–	–	405	0.20	1.5	–	–	–	–	–	–	–	–	–

PRDCN EXT

P M K N S H

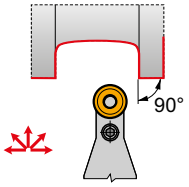
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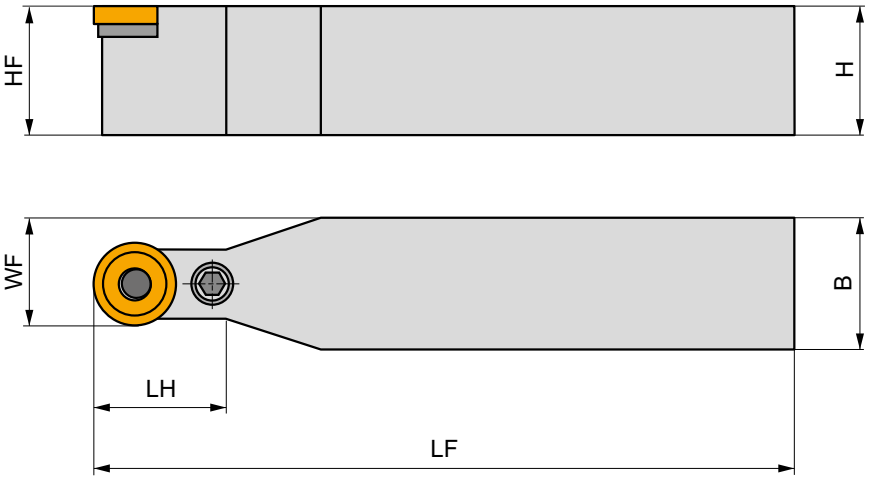
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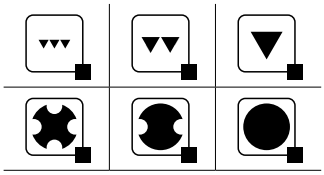


Porta-Ferramenta de Exterior, Fixação por Alavanca, para Pastilhas Redondas RC ...

Porta-ferramentas de exterior neutro com fixação por alavanca para pastilhas positivas RC .. 16 até 32. Adequado para torneamento frontal exterior e longitudinal sem esquadria, torneamento de cópia até 90 °, torneamento cónico e de chanfro. Disponível com hastes de 32x25 até 50x50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
N	**PRDCN 3225 P 16**	32	25	32	20.5	170	32	0	0	0.80	GI090	PRP70
	PRDCN 3232 P 20	32	32	32	26	170	32	0	0	1.30	GI069	PRP90
	PRDCN 4040 S 20	40	40	40	30	250	40	0	0	3.10	GI069	PRP90
	PRDCN 4040 S 25	40	40	40	32.5	250	40	0	0	3.20	GI122	PRP80
	PRDCN 5050 S 32	50	50	50	41	250	50	0	0	3.50	GI096	PRP32
	PRDCN 5050 T 32	50	50	50	41	300	50	0	0	5.12	GI096	PRP32

GI069	RCMX 2006M0
GI090	RCMX 1606M0
GI096	RCMX 3209M0
GI122	RCMX 2507M0

				Nm					
PRP32	RCU 320600	PU 10	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PRP70	RCU 160300	PU 07	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PRP80	RCU 250600	PU 08	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PRP90	RCU 200400	PU 09	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

PRSC(RL) EXT

P M K N S H

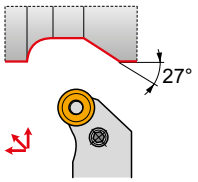
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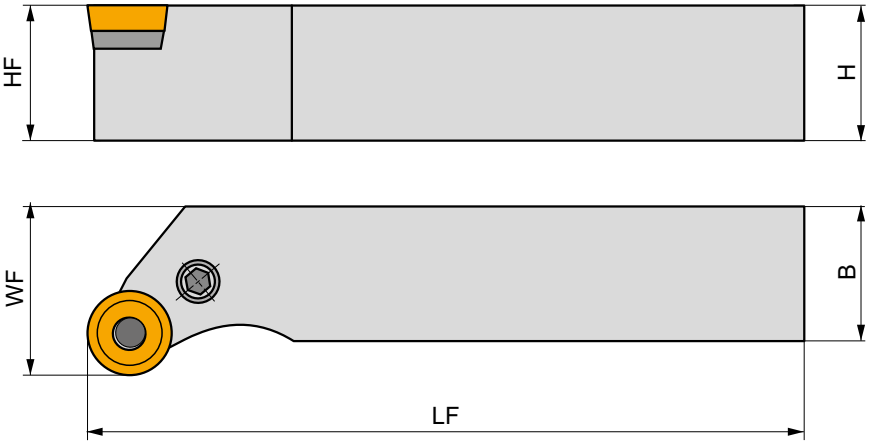
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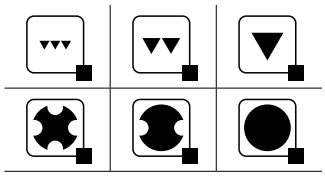


Porta-Ferramentas de Exterior, Fixação por Alavanca, para Pastilhas Redondas RC…

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca, para pastilhas positivas RC ...tamanhos de 16 até 25. Adequado para torneamento frontal e longitudinal sem esquadria, torneamento de cópia até 27 °, torneamento cónico e chanfrar, incluindo torneamento de cópia frontal. Disponível com hastes de 32x25 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	PRSCR 3225 P 16	32	25	32	32	170	0	0	0.90	GI090	PRP70
	PRSCR 4040 R 16	40	40	40	50	200	0	0	2.38	GI090	PRP70
	PRSCR 3232 P 20	32	32	32	40	170	0	0	1.40	GI069	PRP90
	PRSCR 4040 S 25	40	40	40	50	250	0	0	3.40	GI122	PRP80
L	PRSCL 3225 P 16	32	25	32	32	170	0	0	0.90	GI090	PRP70
	PRSCL 4040 R 16	40	40	40	50	200	0	0	2.38	GI090	PRP70
	PRSCL 3232 P 20	32	32	32	40	170	0	0	1.32	GI069	PRP90
	PRSCL 4040 S 25	40	40	40	50	250	0	0	3.40	GI122	PRP80

GI069	RCMX 2006M0
GI090	RCMX 1606M0
GI122	RCMX 2507M0

				Nm					
PRP70	RCU 160300	PU 07	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PRP80	RCU 250600	PU 08	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PRP90	RCU 200400	PU 09	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

SRDC(RL) EXT

P M K N S H

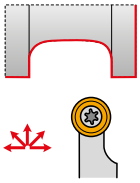
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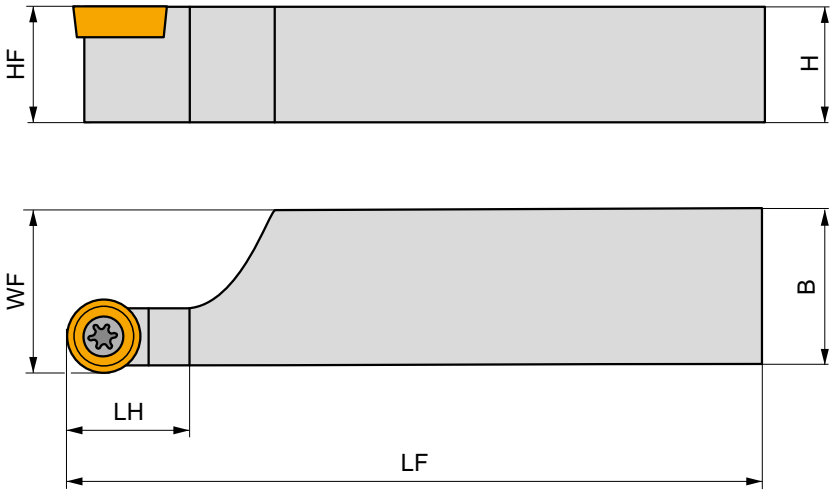
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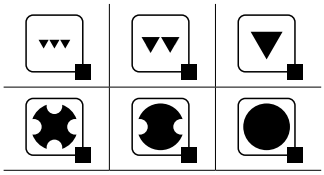


Porta-Ferramentas Exterior com Fixação por Parafuso, para Pastilhas Redondas RC …

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo RC .. 08. Adequado para torneamento frontal e longitudinal sem esquadria, torneamento cónico e chanfrar. Disponível com hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SRDCR 2020 K 08-A	20	20	20	20.5	125	20	0	0	0.36	GI051	SR21
	SRDCR 2525 M 08-A	25	25	25	25.5	150	20	0	0	0.66	GI051	SR21
	SRDCR 3225 P 08-A	32	25	32	25.5	170	20	0	0	0.95	GI051	SR21
L	SRDCL 2020 K 08-A	20	20	20	20.5	125	20	0	0	0.37	GI051	SR21
	SRDCL 2525 M 08-A	25	25	25	25.5	150	20	0	0	0.66	GI051	SR21
	SRDCL 3225 P 08-A	32	25	32	25.5	170	20	0	0	0.96	GI051	SR21

GI051	RC.. 0803M0

		Nm			
SR21	5513 020-04	1.5	M 3	7.2	PT-8002

SRDCN EXT

P M K N S H

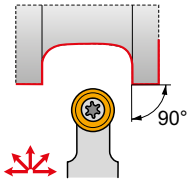
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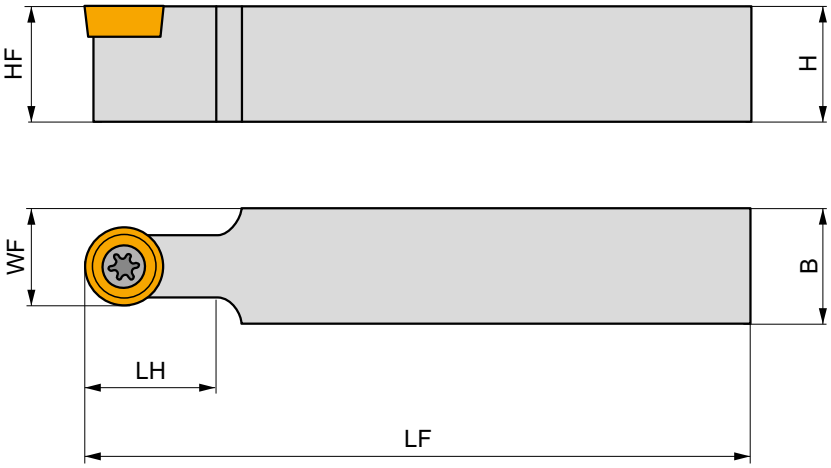
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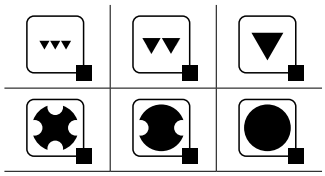


Porta-Ferramenta de Exterior, Fixação por Parafuso, para Pastilhas Redondas RC ...

Porta-ferramentas de de exterior neutro com fixação por parafuso para pastilhas positivas RC .. 06 até 16. Adequado para torneamento frontal e longitudinal sem esquadria, de cópia, torneamento cónico e de chanfro. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
N	SRDCN 1212 F 06	12	12	12	9	80	12	0	0	0.10	GI054	S01
	SRDCN 1616 H 06	16	16	16	11	100	12	0	0	0.20	GI054	S01
	SRDCN 2020 K 08	20	20	20	14	125	20	0	0	0.38	GI051	S03
	SRDCN 2020 K 1003-M-A	20	20	20	15	125	25	0	0	0.40	GI064	SR10
	SRDCN 2020 K 10-M-A	20	20	20	15	125	25	0	0	0.40	GI013	SR10
	SRDCN 2525 M 10-M-A	25	25	25	17.5	150	25	0	0	0.68	GI013	SR10
	SRDCN 2525 M 12-M-A	25	25	25	18.5	150	30	0	0	0.68	GI014	SR12
	SRDCN 3225 P 10-M	32	25	32	17.5	170	25	0	0	0.90	GI013	SR10
	SRDCN 3225 P 12-M	32	25	32	18.5	170	30	0	0	0.90	GI014	SR12
	SRDCN 3225 P 16-M	32	25	32	20.5	170	32	0	0	1.00	GI161	SR16

GI013	RC.. 10T3M0
GI014	RC.. 1204M0
GI051	RC.. 0803M0
GI054	RC.. 0602M0
GI064	RC.. 1003M0
GI161	RC.. 1606M0

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S03	US 3007-T09P	2.0	M 3	7.3	–	–	FLAG T09P	–
SR10	US 3510-T15P	3.0	M 3.5	10.6	SRN 100300	MS 3510	FLAG T15P	HXK 3.5
SR12	US 3510-T15P	3.0	M 3.5	10.6	SRN 120300	MS 3510	FLAG T15P	HXK 3.5
SR16	US 5018-T20P	5.0	M 5	18.2	SRN 16T3M0	MS 5015	FLAG T20P	HXK 5

SRSC(RL) EXT

P M K N S H

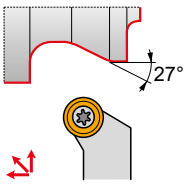
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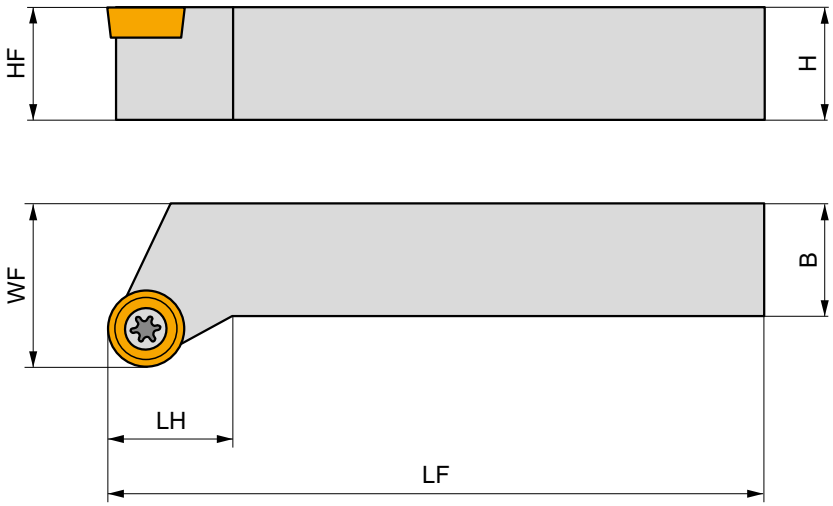
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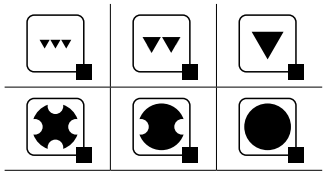


Porta-Ferramentas de Exterior, Fixação por Parafuso, para Pastilhas Redondas RC . . .

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas RC .. 06 até 16. Adequado para torneamento frontal e longitudinal sem esquadria, de cópia, cónico e chanfrar. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SRSCR 1212 F 06	12	12	12	16	80	12	0	0	0.09	GI054	S01
	SRSCR 1616 H 06	16	16	16	20	100	12	0	0	0.22	GI054	S01
	SRSCR 2020 K 08	20	20	20	25	125	20	0	0	0.45	GI051	S03
	SRSCR 2020 K 10-M-A	20	20	20	25	125	20	0	0	0.45	GI013	SR10
	SRSCR 2525 M 10-M-A	25	25	25	32	150	20	0	0	0.75	GI013	SR10
	SRSCR 3225 P 10-M	32	25	32	32	170	20	0	0	1.06	GI013	SR10
	SRSCR 2525 M 12-M-A	25	25	25	32	150	20	0	0	0.75	GI014	SR12
	SRSCR 3225 P 12-M	32	25	32	32	170	20	0	0	1.07	GI014	SR12
	SRSCR 3225 P 16-M	32	25	32	32	170	20	0	0	1.10	GI161	SR16
L	SRSCL 1212 F 06	12	12	12	16	80	12	0	0	0.10	GI054	S01
	SRSCL 1616 H 06	16	16	16	20	100	12	0	0	0.22	GI054	S01
	SRSCL 2020 K 08	20	20	20	25	125	20	0	0	0.45	GI051	S03
	SRSCL 2020 K 10-M-A	20	20	20	25	125	20	0	0	0.45	GI013	SR10
	SRSCL 2525 M 10-M-A	25	25	25	32	150	20	0	0	0.75	GI013	SR10
	SRSCL 3225 P 10-M	32	25	32	32	170	20	0	0	1.06	GI013	SR10
	SRSCL 2525 M 12-M-A	25	25	25	32	150	20	0	0	0.75	GI014	SR12
	SRSCL 3225 P 12-M	32	25	32	32	170	20	0	0	1.07	GI014	SR12
	SRSCL 3225 P 16-M	32	25	32	32	170	20	0	0	1.10	GI161	SR16

GI013	RC.. 10T3M0
GI014	RC.. 1204M0
GI051	RC.. 0803M0
GI054	RC.. 0602M0
GI161	RC.. 1606M0

								
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S03	US 3007-T09P	2.0	M 3	7.3	–	–	FLAG T09P	–
SR10	US 3510-T15P	3.0	M 3.5	10.6	SRN 100300	MS 3510	FLAG T15P	HXK 3.5
SR12	US 3510-T15P	3.0	M 3.5	10.6	SRN 120300	MS 3510	FLAG T15P	HXK 3.5
SR16	US 5018-T20P	5.0	M 5	18.2	SRN 16T3M0	MS 5015	FLAG T20P	HXK 5

NEW

C.-SRDCN EXT

P M K N S H

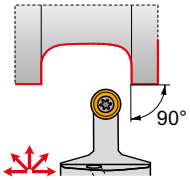
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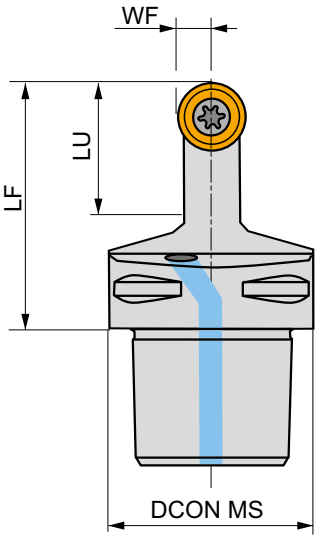
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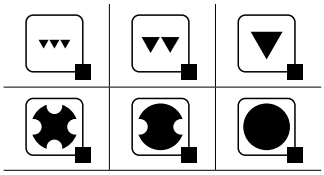


Ferramenta de Exterior de Mudança Rápida PSC, com Fixação por Parafuso, para Pastilhas RC . . .

Porta-ferramentas e exterior neutro, com refrigeração interna, para pastilhas positivas RC ... 10 até 12 . Adequado para torneamento frontal e longitudinal sem esquadria, de cópia, torneamento cónico e de chanfro. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 e C5. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	LU (mm)	LAMS (°)	GAMO (°)		kg		
N	C4-SRDCN-00050-12A	40	6	50	28	0	0	✓	0.32	GI014	C-SR12V-1
	C5-SRDCN-00060-10A	50	5	60	25	0	0	✓	0.56	GI013	C-SR10V
	C5-SRDCN-00060-12A	50	6	60	28	0	0	✓	0.56	GI014	C-SR12V-2

GI013	RC.. 10T3M0
GI014	RC.. 1204M0

		Nm						
C-SR10V	US 2010-T15P	3.0	M 3.5	10.1	SRS 110-01	MS 9001	FLAG T15P/3,5	CN 034-02
C-SR12V-1	US 2001-T15P	3.0	M 3.5	12.1	SRS 110-02	MS 9001	FLAG T15P/3,5	CN 034-01
C-SR12V-2	US 2001-T15P	3.0	M 3.5	12.1	SRS 110-02	MS 9001	FLAG T15P/3,5	CN 034-02

KHP-RSC(RL)

P M K

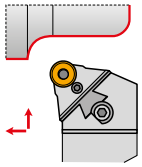
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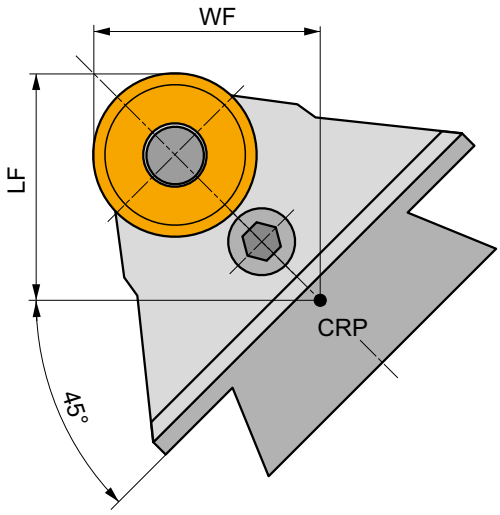


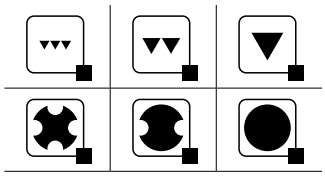
Cartucho Modular para Torneamento KHP, Fixação por Alavanca, para Pastilhas RC…

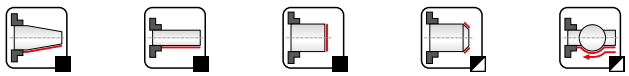
Cartucho para torneamento de fixação por alavanca à direita ou à esquerda com cauda de andorinha para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado sem esquadria, torneamento frontal, cónico e de chanfro com pastilhas positivas RC .. 20 até 32. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.



DKHR+KHP-RSCR







	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	**KHP-RSCR 20**	35	45	0	0	1.25	GI069	PRP90
	KHP-RSCR 25	35	45	0	0	1.30	GI122	PRP80
	KHP-RSCR 32	35	45	0	0	1.30	GI096	PRP32
	KHP-RSCL 20	35	45	0	0	1.30	GI069	PRP90
	KHP-RSCL 25	35	45	0	0	1.30	GI122	PRP80
	KHP-RSCL 32	35	45	0	0	1.30	GI096	PRP32

GI069	RCMX 2006M0
GI096	RCMX 3209M0
GI122	RCMX 2507M0

				Nm					
PRP32	RCU 320600	PU 10	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PRP80	RCU 250600	PU 08	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PRP90	RCU 200400	PU 09	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

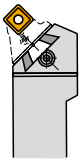
DKH(RL)

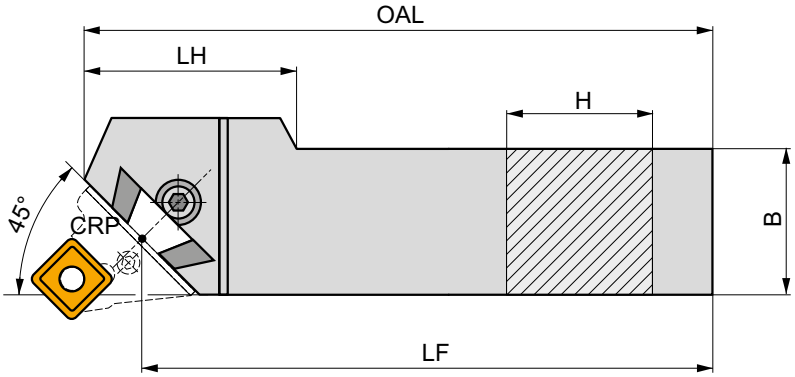
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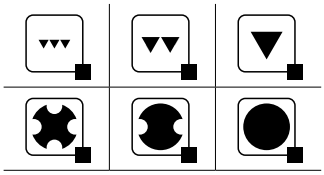


Porta-Ferramentas de Exterior para Cartuchos de Torneamento Pesado KHP/KHS

Porta-ferramentas modular à direita ou à esquerda com cauda de andorinha para cartuchos KHP / KHS. Adequado para aplicações de torneamento pesado. Disponível com hastes de 40x50 até 60x80 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	H (mm)	B (mm)	LF (mm)	OAL (mm)	LH (mm)	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

SC

09/ 12/ 25/ 38

PASTILHAS DE METAL DURO

SCGT



134

SCMT



135

SCMW



138

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
SCMT 120408E-RM	SSDCN 2020 K 12-M-A

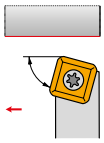
TORNEAMENTO ISO - EXTERIOR

SSBC(RL) EXT

75°

SC..

09
12
25
38



12×12
60×60

139

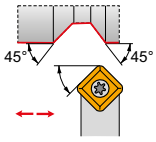
134 – 138

SSDCN EXT

45°

SC..

09
12



12×12
25×25

140

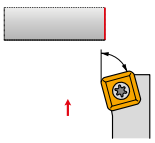
134 – 138

SSKC(RL) EXT

75°

SC..

09
12



12×12
25×25

141

134 – 138

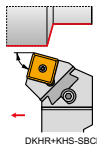
TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

KHS-SBCR + DKH(RL)

75°

SC..

25
38



40×50
60×80

142, 143

134 – 138

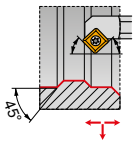
TORNEAMENTO ISO - INTERIOR

SSSC(RL) INT

45°

SC..

09





25
32

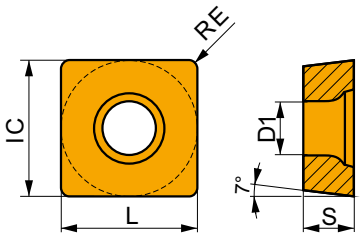
144

134 – 138

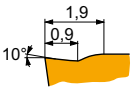
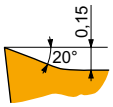
SCGT

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
09T3	9.525	4.40	9.53	3.97
09T3-SF3	9.525	4.40	9.53	4.22
1204	12.700	5.50	12.70	4.76



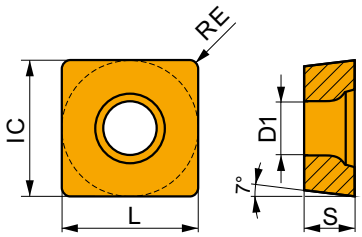
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			F																	
			Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a levemente interrompidos.																	
SCGT 120408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 315	0.48	2.0	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	■ 465	0.48	2.0	–	–	–	–	–	–
			E																	
			Geometria NF1 com desenho positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																	
SCGT 09T308E-NF1	**H07**	0.8	–	–	–	◪ 100	0.13	1.2	–	–	–	◪ 510	0.17	1.2	■ 50	0.13	1.0	–	–	–
	T6310	0.8	■ 200	0.14	1.2	■ 140	0.13	1.2	–	–	–	◪ 600	0.17	1.2	■ 60	0.13	1.0	◪ 40	0.15	1.0
	T7325	0.8	◪ 225	0.14	1.2	■ 175	0.13	1.2	–	–	–	–	–	–	■ 70	0.13	1.0	–	–	–
SCGT 120408E-NF1	**H07**	0.8	–	–	–	◪ 90	0.16	1.4	–	–	–	◪ 455	0.22	1.4	■ 45	0.16	1.1	–	–	–
	T6310	0.8	■ 180	0.18	1.4	■ 125	0.16	1.4	–	–	–	◪ 540	0.22	1.4	■ 50	0.16	1.1	◪ 35	0.15	1.0
	T7325	0.8	◪ 205	0.18	1.4	■ 155	0.16	1.4	–	–	–	–	–	–	■ 65	0.16	1.1	–	–	–
			E																	
			Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																	
SCGT 09T304E-SF3	**H07**	0.4	–	–	–	◪ 95	0.09	1.0	◪ 155	0.10	1.0	■ 495	0.12	1.0	■ 50	0.07	0.8	–	–	–
	T6310	0.4	◪ 185	0.10	1.0	■ 130	0.09	1.0	◪ 145	0.10	1.0	■ 555	0.12	1.0	■ 55	0.07	0.8	◪ 35	0.15	1.0
	T8315	0.4	◪ 200	0.10	1.0	■ 120	0.09	1.0	◪ 190	0.10	1.0	■ 600	0.12	1.0	◪ 50	0.07	0.8	◪ 40	0.15	1.0
SCGT 09T308E-SF3	**T6310**	0.8	◪ 210	0.12	1.0	■ 150	0.12	1.0	◪ 165	0.12	1.0	■ 630	0.14	1.0	■ 60	0.11	0.8	◪ 40	0.15	1.0
	T8315	0.8	◪ 220	0.12	1.0	■ 130	0.12	1.0	◪ 205	0.12	1.0	■ 660	0.14	1.0	◪ 55	0.11	0.8	◪ 40	0.15	1.0

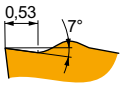
SCMT

PRAMET

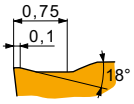
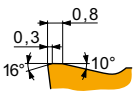
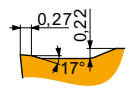
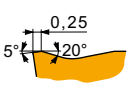
	IC (mm)	D1 (mm)	L (mm)	S (mm)
09T3	9.525	4.40	9.53	3.97
1204	12.700	5.50	12.70	4.76
2509	25.400	8.70	25.40	9.53
3809	38.100	8.70	38.10	9.53



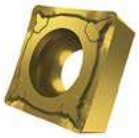
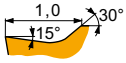
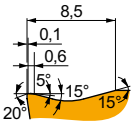
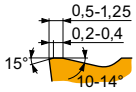
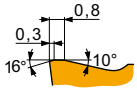
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
SCMT 09T304E-FF2	**T8430**	0.4	■ 210	0.12	1.2	–	–	–	◪ 175	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 260	0.12	1.2	–	–	–	◪ 245	0.12	1.2	–	–	–	–	–	–	–	–	–
SCMT 09T308E-FF2	**T8330**	0.8	■ 185	0.17	1.2	–	–	–	■ 175	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 220	0.17	1.2	–	–	–	◪ 180	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 265	0.17	1.2	–	–	–	◪ 250	0.17	1.2	–	–	–	–	–	–	–	–	–
																				
Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																				
SCMT 09T304E-FM	**T7325**	0.4	◪ 205	0.15	1.2	■ 155	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	◪ 200	0.15	1.2	■ 155	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 190	0.15	1.2	■ 110	0.14	1.2	◪ 180	0.15	1.2	◪ 570	0.18	1.2	–	–	–	–	–	–
	T8330	0.4	■ 180	0.15	1.2	■ 105	0.14	1.2	◪ 170	0.15	1.2	◪ 540	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	■ 210	0.15	1.2	■ 115	0.14	1.2	◪ 175	0.15	1.2	◪ 585	0.18	1.2	–	–	–	–	–	–
	T9315	0.4	■ 290	0.15	1.2	–	–	–	◪ 275	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 260	0.15	1.2	■ 155	0.15	1.2	◪ 245	0.15	1.2	–	–	–	–	–	–	–	–	–
SCMT 09T308E-FM	**T7325**	0.8	◪ 225	0.20	1.2	■ 175	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 215	0.20	1.2	■ 165	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 205	0.20	1.2	■ 120	0.18	1.2	◪ 190	0.20	1.2	◪ 615	0.24	1.2	–	–	–	–	–	–
	T8330	0.8	■ 195	0.20	1.2	■ 115	0.18	1.2	◪ 185	0.20	1.2	◪ 585	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	■ 225	0.20	1.2	■ 120	0.18	1.2	◪ 185	0.20	1.2	◪ 615	0.24	1.2	–	–	–	–	–	–
	T9315	0.8	■ 305	0.20	1.2	–	–	–	◪ 285	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 275	0.20	1.2	■ 165	0.18	1.2	◪ 260	0.20	1.2	–	–	–	–	–	–	–	–	–
SCMT 120404E-FM	**T7325**	0.4	◪ 195	0.15	1.6	■ 150	0.15	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 185	0.15	1.6	■ 110	0.14	1.6	◪ 175	0.15	1.6	◪ 555	0.18	1.6	–	–	–	–	–	–
	T8330	0.4	■ 170	0.15	1.6	■ 100	0.14	1.6	◪ 160	0.15	1.6	◪ 510	0.18	1.6	–	–	–	–	–	–
	T8430	0.4	■ 205	0.15	1.6	■ 110	0.14	1.6	◪ 170	0.15	1.6	◪ 570	0.18	1.6	–	–	–	–	–	–
	T9315	0.4	■ 280	0.15	1.6	–	–	–	◪ 265	0.15	1.6	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 250	0.15	1.6	■ 150	0.15	1.6	◪ 235	0.15	1.6	–	–	–	–	–	–	–	–	–
SCMT 120408E-FM	**T7325**	0.8	◪ 215	0.20	1.6	■ 165	0.18	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 210	0.20	1.6	■ 160	0.18	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 200	0.20	1.6	■ 120	0.18	1.6	◪ 190	0.20	1.6	◪ 600	0.24	1.6	–	–	–	–	–	–
	T8330	0.8	■ 190	0.20	1.6	■ 110	0.18	1.6	◪ 180	0.20	1.6	◪ 570	0.24	1.6	–	–	–	–	–	–
	T8430	0.8	■ 220	0.20	1.6	■ 120	0.18	1.6	◪ 180	0.20	1.6	◪ 600	0.24	1.6	–	–	–	–	–	–
	T9315	0.8	■ 300	0.20	1.6	–	–	–	◪ 285	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 265	0.20	1.6	■ 155	0.18	1.6	◪ 250	0.20	1.6	–	–	–	–	–	–	–	–	–
SCMT 120412E-FM	**T7325**	1.2	◪ 210	0.27	1.6	■ 160	0.24	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 185	0.27	1.6	■ 110	0.24	1.6	◪ 175	0.27	1.6	◪ 555	0.32	1.6	–	–	–	–	–	–
	T8430	1.2	■ 200	0.27	1.6	■ 110	0.24	1.6	◪ 165	0.27	1.6	◪ 555	0.32	1.6	–	–	–	–	–	–
	T9315	1.2	■ 275	0.27	1.6	–	–	–	◪ 260	0.27	1.6	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 245	0.27	1.6	■ 145	0.24	1.6	◪ 230	0.27	1.6	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																	
SCMT 09T304E-FM2	**T7325**	0.4	200	0.12	1.0	155	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.4	220	0.12	1.0	120	0.11	1.0	180	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	265	0.12	1.0	155	0.11	1.0	250	0.12	1.0	–	–	–	–	–	–	–	–	–
SCMT 09T308E-FM2	**T8330**	0.8	190	0.17	1.0	110	0.15	1.0	180	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	225	0.17	1.0	120	0.15	1.0	185	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	305	0.17	1.0	–	–	–	285	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	270	0.17	1.0	160	0.15	1.0	255	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	235	0.17	1.0	140	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria RF para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SCMT 09T308E-RF	**T5315**	0.8	255	0.20	1.5	–	–	–	240	0.20	1.5	–	–	–	–	–	–	50	0.15	1.0
	T7335	0.8	170	0.20	1.5	130	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	220	0.20	1.5	130	0.18	1.5	205	0.20	1.5	–	–	–	–	–	–	–	–	–
SCMT 120408E-RF	**T5315**	0.8	240	0.22	2.2	–	–	–	225	0.22	2.2	–	–	–	–	–	–	45	0.15	1.0
	T7335	0.8	160	0.22	2.2	120	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	205	0.22	2.2	120	0.22	2.2	190	0.22	2.2	–	–	–	–	–	–	–	–	–
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SCMT 09T308E-RM	**T5315**	0.8	275	0.30	2.0	–	–	–	260	0.30	2.0	–	–	–	–	–	–	55	0.15	1.0
	T7335	0.8	190	0.30	2.0	145	0.27	2.0	–	–	–	–	–	–	60	0.24	1.6	–	–	–
	T8330	0.8	175	0.30	2.0	105	0.27	2.0	165	0.30	2.0	–	–	–	40	0.24	1.6	35	0.15	1.0
	T8430	0.8	190	0.30	2.0	105	0.27	2.0	155	0.30	2.0	–	–	–	40	0.24	1.6	30	0.15	1.0
	T9315	0.8	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.8	230	0.30	2.0	135	0.27	2.0	215	0.30	2.0	–	–	–	50	0.24	1.6	–	–	–
SCMT 120408E-RM	**T5305**	0.8	305	0.30	2.3	–	–	–	285	0.30	2.3	–	–	–	–	–	–	60	0.15	1.0
	T5315	0.8	275	0.30	2.3	–	–	–	260	0.30	2.3	–	–	–	–	–	–	55	0.15	1.0
	T7335	0.8	185	0.30	2.3	140	0.27	2.3	–	–	–	–	–	–	60	0.24	1.8	–	–	–
	T8330	0.8	175	0.30	2.3	105	0.27	2.3	165	0.30	2.3	–	–	–	40	0.24	1.8	35	0.15	1.0
	T8430	0.8	190	0.30	2.3	105	0.27	2.3	155	0.30	2.3	–	–	–	40	0.24	1.8	30	0.15	1.0
	T9315	0.8	250	0.30	2.3	–	–	–	235	0.30	2.3	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.8	225	0.30	2.3	135	0.27	2.3	210	0.30	2.3	–	–	–	50	0.24	1.8	–	–	–
																				
			Geometria RM3 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SCMT 120408E-RM3	**T6310**	0.8	155	0.27	2.3	110	0.27	2.3	125	0.27	2.3	–	–	–	–	–	–	30	0.15	1.0
	T8330	0.8	155	0.27	2.3	90	0.27	2.3	145	0.27	2.3	–	–	–	–	–	–	30	0.15	1.0
	T8430	0.8	170	0.27	2.3	90	0.27	2.3	135	0.27	2.3	–	–	–	–	–	–	25	0.15	1.0
	T9315	0.8	225	0.27	2.3	–	–	–	210	0.27	2.3	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.27	2.3	120	0.27	2.3	190	0.27	2.3	–	–	–	–	–	–	–	–	–
	T9335	0.8	175	0.27	2.3	105	0.27	2.3	–	–	–	–	–	–	–	–	–	–	–	–
SCMT 120412E-RM3	**T7325**	1.2	175	0.30	2.3	135	0.27	2.3	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	205	0.30	2.3	120	0.27	2.3	190	0.30	2.3	–	–	–	–	–	–	–	–	–

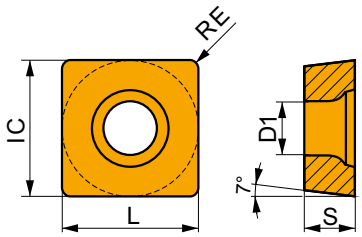
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
SCMT 09T304E-UR	**T7325**	0.4	◪ 175	0.15	1.2	◪ 135	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 155	0.15	1.2	◪ 90	0.14	1.2	■ 145	0.15	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 180	0.15	1.2	◪ 95	0.14	1.2	◪ 145	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 250	0.15	1.2	–	–	–	◪ 235	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 225	0.15	1.2	◪ 135	0.15	1.2	◪ 210	0.15	1.2	–	–	–	–	–	–	–	–	–
SCMT 09T308E-UR	**T5315**	0.8	◪ 280	0.20	1.2	–	–	–	■ 265	0.20	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 195	0.20	1.2	◪ 150	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 170	0.20	1.2	◪ 100	0.18	1.2	■ 160	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 190	0.20	1.2	◪ 105	0.18	1.2	◪ 155	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 260	0.20	1.2	–	–	–	◪ 245	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 235	0.20	1.2	◪ 140	0.18	1.2	◪ 220	0.20	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	■ 270	0.20	1.2	◪ 160	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
SCMT 120408E-UR	**T5315**	0.8	◪ 270	0.20	1.6	–	–	–	■ 255	0.20	1.6	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 185	0.20	1.6	◪ 140	0.18	1.6	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 165	0.20	1.6	◪ 95	0.18	1.6	■ 155	0.20	1.6	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 185	0.20	1.6	◪ 100	0.18	1.6	◪ 150	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 260	0.20	1.6	–	–	–	◪ 245	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 230	0.20	1.6	◪ 135	0.18	1.6	◪ 215	0.20	1.6	–	–	–	–	–	–	–	–	–
SCMT 120412E-UR	**T8330**	1.2	■ 160	0.27	1.6	◪ 95	0.24	1.6	■ 150	0.27	1.6	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 175	0.27	1.6	◪ 95	0.24	1.6	◪ 140	0.27	1.6	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 215	0.27	1.6	◪ 125	0.24	1.6	◪ 200	0.27	1.6	–	–	–	–	–	–	–	–	–
																				
			Geometria DR4 para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SCMT 380932E-DR4	**T9335**	3.2	■ 50	1.33	16.0	◪ 30	1.20	16.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria OR para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SCMT 250924E-OR	**T9226**	2.4	■ 80	1.00	10.0	■ 45	0.90	10.0	◪ 75	1.00	10.0	–	–	–	◪ 15	0.70	8.0	–	–	–
	T9325	2.4	■ 90	1.00	10.0	■ 50	0.90	10.0	◪ 85	1.00	10.0	–	–	–	◪ 20	0.70	8.0	–	–	–
	T9335	2.4	■ 70	1.00	10.0	■ 40	0.90	10.0	–	–	–	–	–	–	◪ 15	0.70	8.0	–	–	–
SCMT 380932E-OR	**6635**	3.2	■ 60	1.20	18.0	■ 35	1.08	18.0	–	–	–	–	–	–	◪ 15	1.08	9.9	–	–	–
	T9226	3.2	■ 65	1.20	18.0	■ 35	1.08	18.0	◪ 60	1.20	18.0	–	–	–	◪ 10	1.08	9.9	–	–	–
	T9315	3.2	■ 85	1.20	18.0	–	–	–	◪ 80	1.20	18.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	■ 80	1.20	18.0	■ 45	1.08	18.0	◪ 75	1.20	18.0	–	–	–	◪ 15	1.08	9.9	–	–	–
	T9335	3.2	■ 60	1.20	18.0	■ 35	1.08	18.0	–	–	–	–	–	–	◪ 10	1.08	9.9	–	–	–
																				
			Geometria SR para operações de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SCMT 250924E-SR	**T9325**	2.4	■ 70	1.00	14.0	■ 40	0.90	14.0	◪ 65	1.00	14.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 60	1.00	14.0	■ 35	0.90	14.0	–	–	–	–	–	–	–	–	–	–	–	–
SCMT 380932E-SR	**T9335**	3.2	■ 50	1.30	20.0	■ 30	1.30	20.0	–	–	–	–	–	–	–	–	–	–	–	–

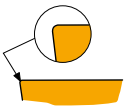
SCMW

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
09T3	9.525	4.40	9.53	3.97
1204	12.700	5.50	12.70	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
SCMW 09T304	**T5305**	0.4	–	–	–	–	–	–	■ 240	0.10	2.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	■ 205	0.10	2.0	–	–	–	–	–	–	◪ 40	0.15	1.0
SCMW 09T308	**T5305**	0.8	–	–	–	–	–	–	■ 220	0.20	2.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	■ 190	0.20	2.0	–	–	–	–	–	–	◪ 40	0.15	1.0
SCMW 120408	**T5305**	0.8	–	–	–	–	–	–	■ 205	0.20	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	■ 185	0.20	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0

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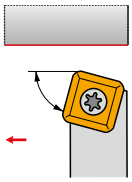
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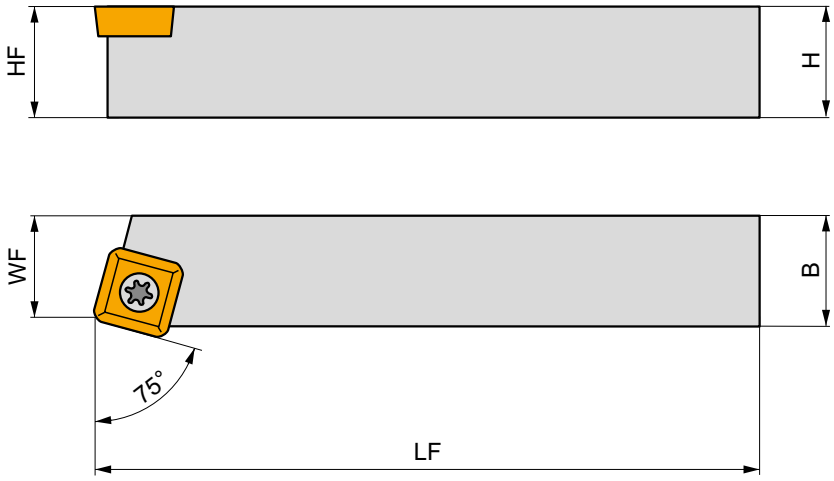
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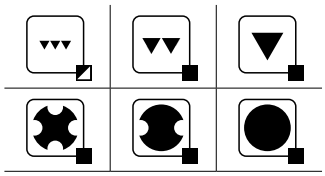


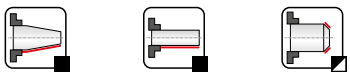
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 75 °, para Pastilhas SC . . .

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas SC .. 09 até 38. Adequado para torneamento longitudinal exterior sem esquadria, torneamento cónico e chanfrar. Disponível com hastes de 12x12 até 60x60 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	SSBCR 1212 F 09	12	12	12	11	80	0	0	0.10	GI053	S08
	SSBCR 1616 H 09	16	16	16	13	100	0	0	0.20	GI053	S08
	SSBCR 2020 K 12-M-A	20	20	20	17	125	0	0	0.40	GI015	SS20
	SSBCR 2525 M 12-M-A	25	25	25	22	150	0	0	0.76	GI015	SS20
	SSBCR 4040 S 25	40	40	40	35	250	0	0	3.01	GI131	SS25
	SSBCR 5050 T 25	50	50	50	43	300	0	0	5.65	GI131	SS25
	SSBCR 5050 T 38-A	50	50	50	43	300	0	0	4.84	GI164	SS38A
	SSBCR 6060 V 38-A	60	60	60	53	400	0	0	11.10	GI164	SS38A
L	SSBCL 1212 F 09	12	12	12	11	80	0	0	0.10	GI053	S08
	SSBCL 1616 H 09	16	16	16	13	100	0	0	0.22	GI053	S08
	SSBCL 2020 K 12-M-A	20	20	20	17	125	0	0	0.40	GI015	SS20
	SSBCL 2525 M 12-M-A	25	25	25	22	150	0	0	0.47	GI015	SS20
	SSBCL 4040 S 25	40	40	40	35	250	0	0	3.01	GI131	SS25
	SSBCL 5050 T 25	50	50	50	43	300	0	0	5.65	GI131	SS25
	SSBCL 5050 T 38-A	50	50	50	43	300	0	0	5.78	GI164	SS38A
	SSBCL 6060 V 38-A	60	60	60	53	400	0	0	11.16	GI164	SS38A

GI015	SC.. 1204..
GI053	SC.. 09T3..
GI131	SC.. 2509..
GI164	SC.. 3809..

		Nm							
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
SS20	US 5012-T15P	5.0	M 5	12.2	SSN 120304	MS 5008	FLAG T15P	HXK 5	–
SS25	US 8025-T30P	13.0	M 8	24.2	SSN 250620	MS 8020	–	HXK 5	SDR T30P
SS38A	US 8025-T30P	13.0	M 8	24.2	SSN 380920	MS 8020	–	HXK 5	SDR T30P

SSDCN EXT

P M K N S H

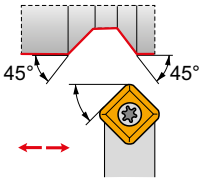
PRAMET

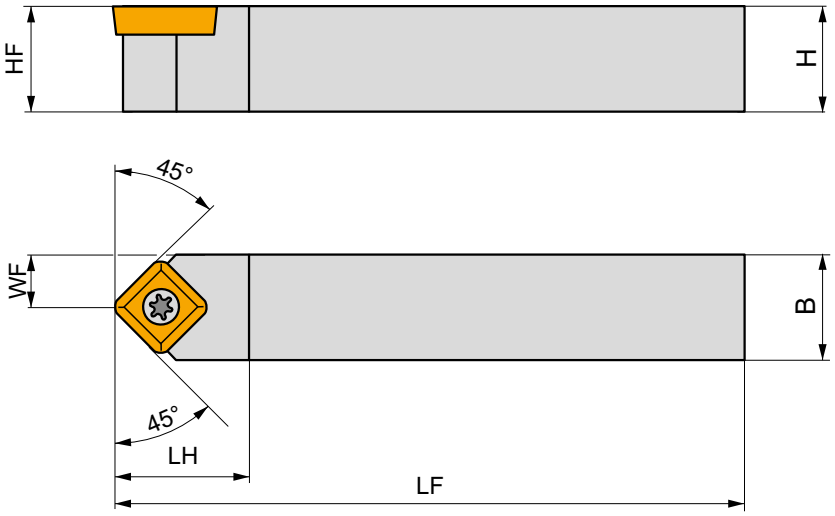
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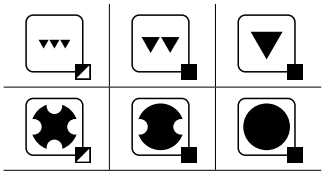


Porta-Ferramenta de Exterior, Fixação por Parafuso, Ângulo de 45 °, para Pastilhas SC ..

Porta-ferramentas de exterior neutro com fixação por parafuso para pastilhas positivas SC .. 09 ou 12. Adequado para torneamento longitudinal exterior sem esquadria, de cópia, torneamento cónico e de chanfro. Disponível com hastes de 12x12 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
N	SSDCN 1212 F 09	12	12	12	6	80	–	0	0	0.12	GI053	S08
	SSDCN 1616 H 09	16	16	16	8	100	–	0	0	0.20	GI053	S08
	SSDCN 2020 K 12-M-A	20	20	20	10	125	–	0	0	0.42	GI015	SS20
	SSDCN 2525 M 12-M-A	25	25	25	12.5	150	–	0	0	0.74	GI015	SS20

GI015	SC.. 1204..
GI053	SC.. 09T3..

		Nm						
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SS20	US 5012-T15P	5.0	M 5	12.2	SSN 120304	MS 5008	FLAG T15P	HXK 5

SSKC(RL) EXT

P M K N S H

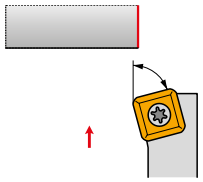
PRAMET

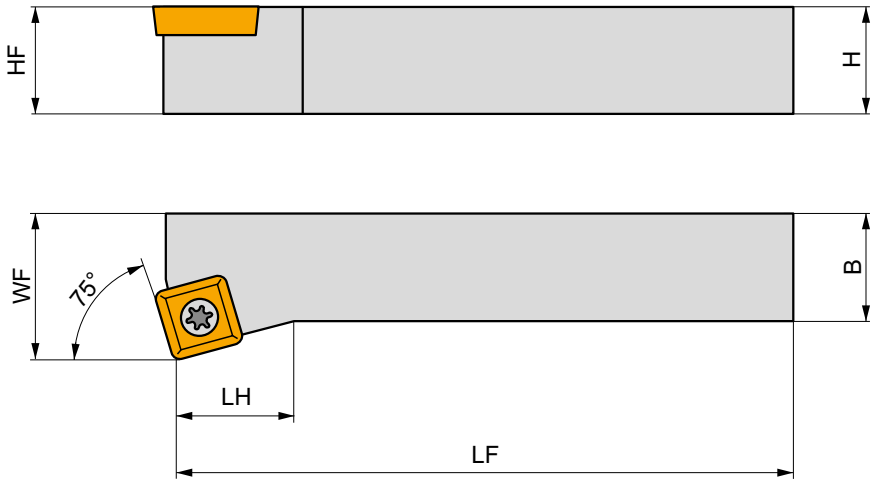
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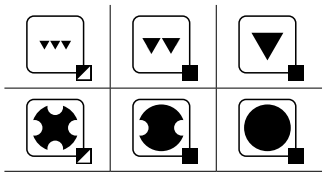


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 75 ° (Frontal), para Pastilhas SC . . .

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas SC .. 09 até 12. Adequado para torneamento de frontal exterior sem esquadria e chanfrar. Disponível com hastes de 12x12 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**SSKCR 1212 F 09**	12	12	12	16	80	32	0	0	0.10	GI053	S08
	SSKCR 1616 H 09	16	16	16	20	100	32	0	0	0.25	GI053	S08
	SSKCR 2020 K 12-M-A	20	20	20	25	125	36	0	0	0.75	GI015	SS20
	SSKCR 2525 M 12-M-A	25	25	25	32	150	36	0	0	0.75	GI015	SS20
L	**SSKCL 1212 F 09**	12	12	12	16	80	32	0	0	0.10	GI053	S08
	SSKCL 1616 H 09	16	16	16	20	100	32	0	0	0.22	GI053	S08
	SSKCL 2020 K 12-M-A	20	20	20	25	125	36	0	0	0.45	GI015	SS20
	SSKCL 2525 M 12-M-A	25	25	25	32	150	36	0	0	0.80	GI015	SS20

GI015	SC.. 1204..
GI053	SC.. 09T3..

		Nm						
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SS20	US 5012-T15P	5.0	M 5	12.2	SSN 120304	MS 5008	FLAG T15P	HXK 5

KHS-SBC(RL)

P M K

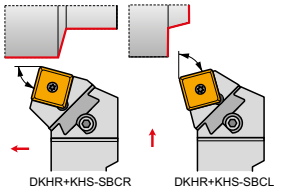
PRAMET

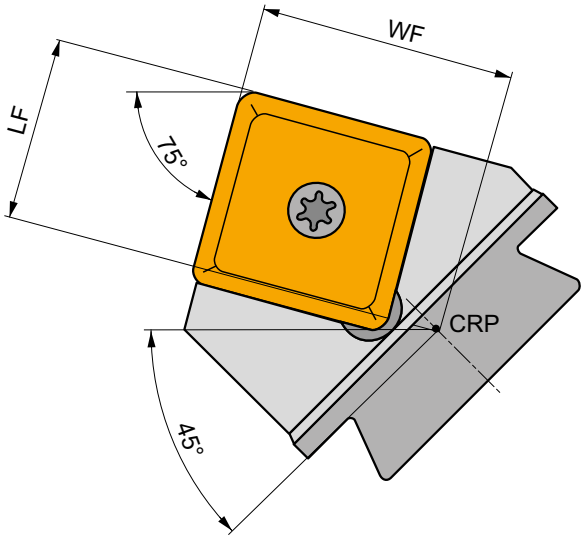
S

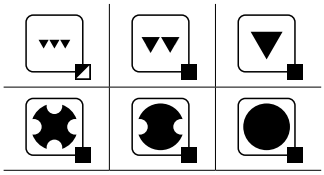


Cartucho Modular p/ Torneamento KHS, Fixação por Parafuso, Ângulo de corte de 75 ° p/ Pastilhas SC ..

Cartucho de torneamento de fixação por parafuso à direita ou à esquerda com cauda de andorinha, ângulo de corte de 75 °, para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado sem esquadria, torneamento frontal, torneamento cónico e de chanfro com pastilhas positivas SC .. 25 ou 38. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.









	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	KHS-SBCR 25	47	36	0	0	1.50	GI131	SS26
	KHS-SBCR 38-A	47	36	0	0	1.50	GI164	SS38
L	KHS-SBCL 25	47	36	0	0	1.45	GI131	SS26
	KHS-SBCL 38-A	47	36	0	0	1.48	GI164	SS38

GI131	SC.. 2509..
GI164	SC.. 3809..

SS26	US 8025-T30P	13.0	M 8	24.2	SSN 250620	MS 8020	SDR T30P	HXK 5
SS38	US 8025-T30P	13.0	M 8	24.2	SSN 380620	MS 8020	SDR T30P	HXK 5

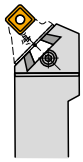
DKH(RL)

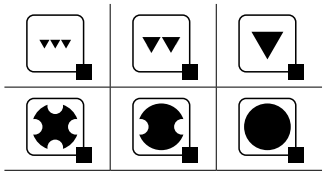
PRAMET

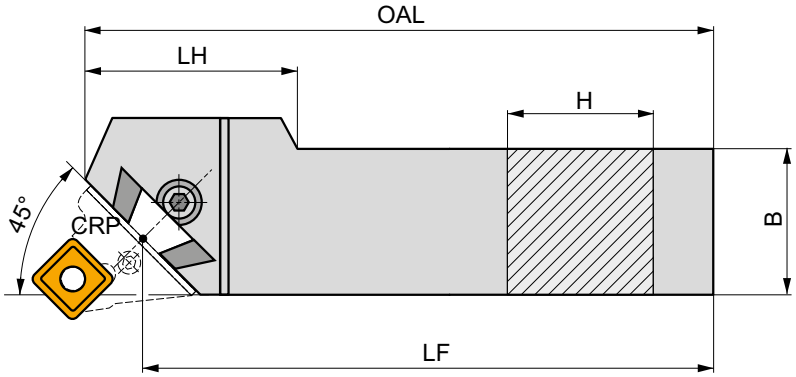


Porta-Ferramentas de Exterior para Cartuchos de Torneamento Pesado KHP/KHS

Porta-ferramentas modular à direita ou à esquerda com cauda de andorinha para cartuchos KHP / KHS. Adequado para aplicações de torneamento pesado. Disponível com hastes de 40x50 até 60x80 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	H (mm)	B (mm)	LF (mm)	OAL (mm)	LH (mm)	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

SSSC(RL) INT

P M K N S H

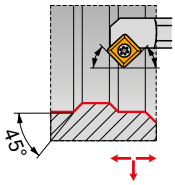
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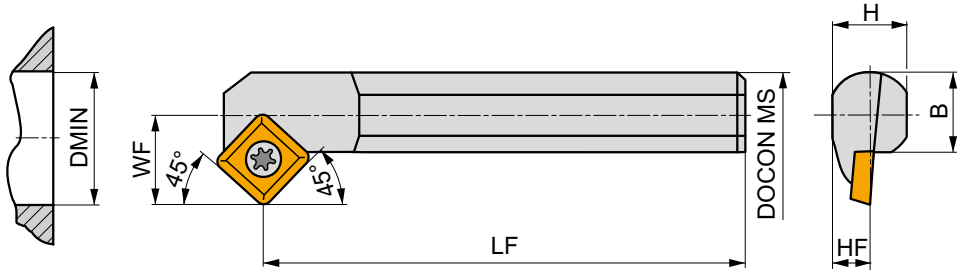
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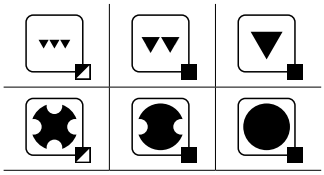


Porta-Ferramentas Interior com Fixação por Parafuso, Ângulo de 45 ° para Pastilhas SC ..

Porta-ferramentas de interior à direita ou à esquerda com fixação por parafuso e ângulo de corte de 45° para pastilhas SC .. 09. Diâmetro mínimo de torneamento Ø25 mm. Para chanfro posterior interno, torneamento cónico, multidirecional, chanfrar e torneamento longitudinal sem esquadria. Disponível com hastes de Ø20 até Ø25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	S20S-SSSCR 09	20	25	13	18	18.5	250	-5	0	0.61	GI053	S04
	S25T-SSSCR 09	25	32	17	23	23	300	-3	0	1.15	GI053	S04
L	S20S-SSSCL 09	20	25	13	18	18.5	250	-5	0	0.05	GI053	S04
	S25T-SSSCL 09	25	32	17	23	23	300	-3	0	1.11	GI053	S04

GI053	SC.. 09T3..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P

SP

09/ 12/ 15/ 19/ 25

PASTILHAS DE METAL DURO

SPMR



146

SPUN



146

PASTILHAS CER

SPGN CER

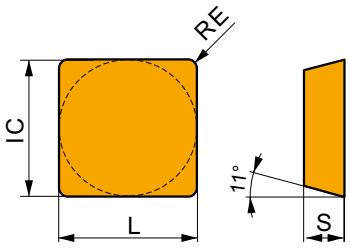


147

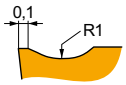
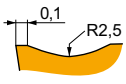
SPMR

PRAMET

	IC (mm)	L (mm)	S (mm)
0903	9.525	9.53	3.18
1203	12.700	12.70	3.18



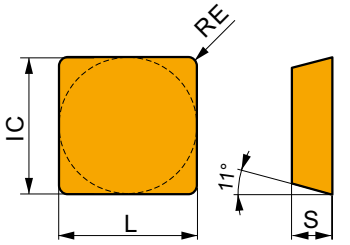
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria 46 para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a interrompidos.																				
SPMR 090304E-46	**T9325**	0.4	215	0.15	1.0	125	0.15	1.0	200	0.15	1.0	–	–	–	–	–	–	–	–	–
SPMR 090308E-46	**T9325**	0.8	255	0.15	1.0	150	0.15	1.0	240	0.15	1.0	–	–	–	–	–	–	–	–	–
																				
Geometria 48 para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																				
SPMR 120304E-48	**T9325**	0.4	170	0.22	2.2	100	0.22	2.2	160	0.22	2.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	145	0.22	2.2	85	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
SPMR 120308E-48	**6640**	0.8	160	0.22	2.2	95	0.22	2.2	150	0.22	2.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	205	0.22	2.2	120	0.22	2.2	190	0.22	2.2	–	–	–	–	–	–	–	–	–
	T9335	0.8	175	0.22	2.2	105	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
SPMR 120312E-48	**T9325**	1.2	215	0.22	2.2	125	0.22	2.2	200	0.22	2.2	–	–	–	–	–	–	–	–	–

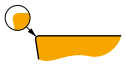
SPUN

PRAMET

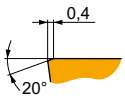
	IC (mm)	L (mm)	M (mm)	S (mm)
1203	12.700	12.70	2	3.18
1504	15.875	15.88	3	4.76
1904	19.050	19.05	3	4.76
2506	25.400	25.40	4	6.35



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
SPUN 120308	**6640**	0.8	180	0.15	4.0	–	–	–	170	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 120312	**6640**	1.2	190	0.15	4.0	–	–	–	180	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 150408	**6640**	0.8	155	0.20	5.0	–	–	–	145	0.20	5.0	–	–	–	–	–	–	–	–	–

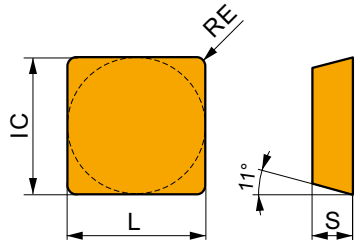
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			E																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
SPUN 150412	**6640**	1.2	165	0.20	5.0	–	–	–	155	0.20	5.0	–	–	–	–	–	–	–	–	–
SPUN 190408	**6640**	0.8	150	0.20	6.0	–	–	–	140	0.20	6.0	–	–	–	–	–	–	–	–	–
SPUN 190412	**6640**	1.2	160	0.20	6.0	–	–	–	150	0.20	6.0	–	–	–	–	–	–	–	–	–
SPUN 190416	**6640**	1.6	165	0.20	6.0	–	–	–	155	0.20	6.0	–	–	–	–	–	–	–	–	–
			S																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
SPUN 250620S	**6640**	2.0	80	0.40	12.0	–	–	–	75	0.40	12.0	–	–	–	–	–	–	–	–	–

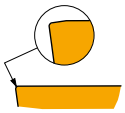
SPGN CER

PRAMET

	IC (mm)	L (mm)	S (mm)
1203	12.700	12.70	3.18



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			HSC		T															
Para operações de maquinação com altas velocidades e cortes contínuos.																				
SPGN 120308 T01020	**TC100**	0.8	–	–	–	–	–	–	530	0.20	1.5	–	–	–	–	–	–	–	–	–

TC

06/ 09/ 11/16

PASTILHAS DE METAL DURO

TCGT



149

TCMT



150

TCMW



154

PASTILHAS CBN

TCGW CBN



154

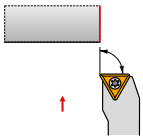
CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
TCMT 110204E-FF2	STFCR 1616 H 11

TORNEAMENTO ISO - EXTERIOR

STFC(RL) EXT

90° | TC..



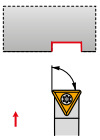
11
16

16×16
25×25

155 | 149 – 154

STFC(RL)-A EXT

90° | TC..



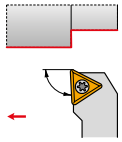
11

20×20

156 | 149 – 154

STJC(RL) EXT

93° | TC..



11
16

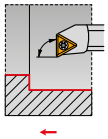
16×16
25×25

157 | 149 – 154

TORNEAMENTO ISO - INTERIOR

STFC(RL) INT

90° | TC..



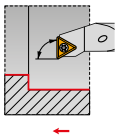
06
09
11
16

ØDmin
8,5
40

158 | 149 – 154

STFC(RL)-E INT

90° | TC..



06
09
11

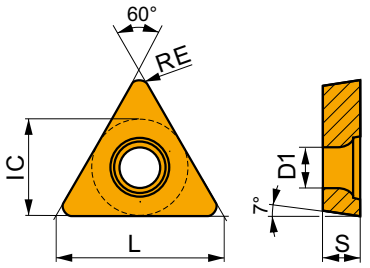
ØDmin
8,5
20

160 | 149 – 154

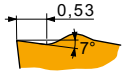
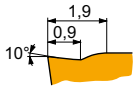
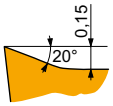
TCGT

PRAMET

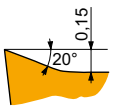
	IC (mm)	D1 (mm)	L (mm)	S (mm)
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
1102	6.350	2.80	11.00	2.38
1102-SF3	6.350	2.80	11.00	2.58
16T3	9.525	4.40	16.50	3.97
16T3-SF3	9.525	4.40	16.50	4.22



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a ligeiramente interrompidos.																				
TCGT 090202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 375	0.12	1.0	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	■ 555	0.12	1.0	–	–	–	–	–	–
TCGT 090204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 300	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 450	0.24	1.0	–	–	–	–	–	–
TCGT 110202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 360	0.12	1.5	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	■ 525	0.12	1.5	–	–	–	–	–	–
TCGT 110204F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 285	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 420	0.24	1.5	–	–	–	–	–	–
TCGT 110208F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 270	0.48	1.5	–	–	–	–	–	–
TCGT 16T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 285	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 405	0.24	2.4	–	–	–	–	–	–
TCGT 16T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 255	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	■ 360	0.48	2.4	–	–	–	–	–	–
																				
Geometria FF2 com desenho positivo para operações de acabamento fino a normal, e cortes contínuos a ligeiramente interrompidos.																				
TCGT 06T102E-FF2	**T8330**	0.2	■ 175	0.05	0.8	–	–	–	■ 165	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 235	0.05	0.8	–	–	–	◪ 190	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 295	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCGT 090202E-FF2	**TT010**	0.2	■ 295	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria NF1 com desenho positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																				
TCGT 110204E-NF1	**H07**	0.4	–	–	–	◪ 80	0.09	0.8	–	–	–	◪ 415	0.12	0.8	■ 40	0.08	0.6	–	–	–
	T6310	0.4	■ 155	0.10	0.8	■ 110	0.09	0.8	–	–	–	◪ 465	0.12	0.8	■ 45	0.08	0.6	◪ 30	0.15	1.0
	T7325	0.4	◪ 180	0.10	0.8	■ 140	0.09	0.8	–	–	–	–	–	–	■ 55	0.08	0.6	–	–	–
																				
Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																				
TCGT 110202E-SF3	**T6310**	0.2	◪ 175	0.05	0.8	■ 125	0.05	0.8	◪ 140	0.05	0.8	■ 525	0.06	0.8	■ 50	0.04	0.6	◪ 35	0.15	1.0
	T8315	0.2	◪ 185	0.05	0.8	■ 110	0.05	0.8	◪ 175	0.05	0.8	■ 555	0.06	0.8	◪ 45	0.04	0.6	◪ 35	0.15	1.0
TCGT 110204E-SF3	**H07**	0.4	–	–	–	◪ 80	0.09	0.8	◪ 130	0.10	0.8	■ 415	0.12	0.8	■ 40	0.07	0.6	–	–	–
	T6310	0.4	◪ 155	0.10	0.8	■ 110	0.09	0.8	◪ 125	0.10	0.8	■ 465	0.12	0.8	■ 45	0.07	0.6	◪ 30	0.15	1.0
	T8315	0.4	◪ 165	0.10	0.8	■ 95	0.09	0.8	◪ 155	0.10	0.8	■ 495	0.12	0.8	◪ 40	0.07	0.6	◪ 30	0.15	1.0

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				

Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.

TCGT 16T304E-SF3	**H07**	0.4	–	–	–	◪	80	0.09	1.0	◪	125	0.10	1.0	■	405	0.12	1.0	■	40	0.07	0.8	–	–	–
	T6310	0.4	◪	150	0.10	1.0	■	105	0.09	1.0	◪	120	0.10	1.0	■	450	0.12	1.0	■	45	0.07	0.8	◪	30	0.15	1.0
	T8315	0.4	◪	160	0.10	1.0	■	95	0.09	1.0	◪	150	0.10	1.0	■	480	0.12	1.0	◪	40	0.07	0.8	◪	30	0.15	1.0
TCGT 16T308E-SF3	**H07**	0.8	–	–	–	◪	90	0.09	1.2	◪	145	0.10	1.2	■	470	0.12	1.2	■	45	0.08	1.0	–	–	–
	T6310	0.8	◪	175	0.10	1.2	■	125	0.09	1.2	◪	140	0.10	1.2	■	525	0.12	1.2	■	50	0.08	1.0	◪	35	0.15	1.0
	T8315	0.8	◪	185	0.10	1.2	■	110	0.09	1.2	◪	175	0.10	1.2	■	555	0.12	1.2	◪	45	0.08	1.0	◪	35	0.15	1.0
TCGT 16T312E-SF3	**T6310**	1.2	◪	150	0.20	1.2	■	105	0.18	1.2	◪	120	0.20	1.2	■	450	0.24	1.2	■	45	0.14	1.0	◪	30	0.15	1.0

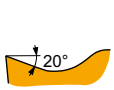




Geometria ER-SI com desenho positivo à direita para operações de maquinação de acabamento fino, e cortes contínuos.

TCGT 110202ER-SI	**T8315**	0.2	◪	190	0.10	0.8	■	110	0.09	0.8	◪	180	0.10	0.8	–	–	–	◪	45	0.08	0.6	–	–	–
	T8330	0.2	■	180	0.10	0.8	■	105	0.09	0.8	◪	170	0.10	0.8	–	–	–	◪	45	0.08	0.6	–	–	–
	T8430	0.2	■	225	0.10	0.8	■	120	0.09	0.8	◪	185	0.10	0.8	–	–	–	◪	45	0.08	0.6	–	–	–
TCGT 110204ER-SI	**T8330**	0.4	■	180	0.12	0.8	■	105	0.11	0.8	◪	170	0.12	0.8	–	–	–	◪	45	0.10	0.6	–	–	–
	T8430	0.4	■	225	0.12	0.8	■	120	0.11	0.8	◪	185	0.12	0.8	–	–	–	◪	45	0.10	0.6	–	–	–





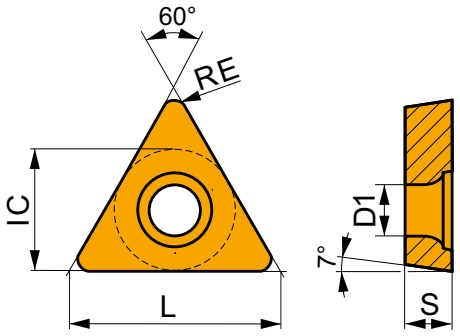
Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino e cortes contínuos.

TCGT 110202EL-SI	**T8315**	0.2	◪	190	0.10	0.8	■	110	0.09	0.8	◪	180	0.10	0.8	–	–	–	◪	45	0.08	0.6	–	–	–
	T8330	0.2	■	180	0.10	0.8	■	105	0.09	0.8	◪	170	0.10	0.8	–	–	–	◪	45	0.08	0.6	–	–	–
	T8430	0.2	■	225	0.10	0.8	■	120	0.09	0.8	◪	185	0.10	0.8	–	–	–	◪	45	0.08	0.6	–	–	–
TCGT 110204EL-SI	**T8315**	0.4	◪	195	0.12	0.8	■	115	0.11	0.8	◪	185	0.12	0.8	–	–	–	◪	45	0.10	0.6	–	–	–
	T8330	0.4	■	180	0.12	0.8	■	105	0.11	0.8	◪	170	0.12	0.8	–	–	–	◪	45	0.10	0.6	–	–	–
	T8430	0.4	■	225	0.12	0.8	■	120	0.11	0.8	◪	185	0.12	0.8	–	–	–	◪	45	0.10	0.6	–	–	–

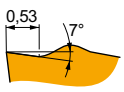
TCMT

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
1102	6.350	2.80	11.00	2.38
16T3	9.525	4.40	16.50	3.97



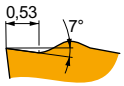
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				

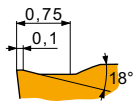
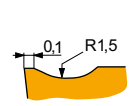
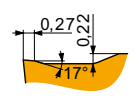
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.

TCMT 06T102E-FF2	**T8330**	0.2	■	175	0.05	0.8	–	–	–	■	165	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–
	T8430	0.2	■	235	0.05	0.8	–	–	–	◪	190	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.2	■	335	0.05	0.8	–	–	–	◪	315	0.05	0.8	–	–	–	–	–	–	–	–	–	–	–

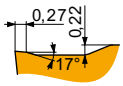
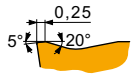
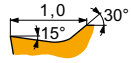
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			U		E															
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
TCMT 06T104E-FF2	**T7325**	0.4	170	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	145	0.12	0.8	–	–	–	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	180	0.12	0.8	–	–	–	145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	245	0.12	0.8	–	–	–	230	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
TCMT 090204E-FF2	**T5315**	0.4	240	0.12	1.0	–	–	–	225	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	165	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	140	0.12	1.0	–	–	–	130	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.12	1.0	–	–	–	140	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	240	0.12	1.0	–	–	–	225	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	215	0.12	1.0	–	–	–	200	0.12	1.0	–	–	–	–	–	–	–	–	–
TCMT 110204E-FF2	**T7325**	0.4	170	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	145	0.12	0.8	–	–	–	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	180	0.12	0.8	–	–	–	145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	245	0.12	0.8	–	–	–	230	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	185	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 110208E-FF2	**T7325**	0.8	180	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	155	0.17	0.8	–	–	–	145	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.17	0.8	–	–	–	150	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	250	0.17	0.8	–	–	–	235	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.17	0.8	–	–	–	210	0.17	0.8	–	–	–	–	–	–	–	–	–
TCMT 16T304E-FF2	**T7325**	0.4	170	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	145	0.12	0.8	–	–	–	135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	180	0.12	0.8	–	–	–	145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	245	0.12	0.8	–	–	–	230	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	220	0.12	0.8	–	–	–	205	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	185	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	TT010	0.4	295	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FF2	**T7325**	0.8	180	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	155	0.17	0.8	–	–	–	145	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	185	0.17	0.8	–	–	–	150	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	250	0.17	0.8	–	–	–	235	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.17	0.8	–	–	–	210	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	195	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			1		E															
Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																				
TCMT 110202E-FM	**T7325**	0.2	185	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.2	185	0.10	0.8	140	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	170	0.10	0.8	100	0.09	0.8	160	0.10	0.8	510	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	160	0.10	0.8	95	0.09	0.8	150	0.10	0.8	480	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	195	0.10	0.8	105	0.09	0.8	160	0.10	0.8	540	0.12	0.8	–	–	–	–	–	–
	T9315	0.2	270	0.10	0.8	–	–	–	255	0.10	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.2	245	0.10	0.8	145	0.09	0.8	230	0.10	0.8	–	–	–	–	–	–	–	–	–
TCMT 110204E-FM	**T7325**	0.4	160	0.19	0.8	120	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	155	0.19	0.8	120	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	170	0.12	0.8	100	0.11	0.8	160	0.12	0.8	510	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	160	0.12	0.8	95	0.11	0.8	150	0.12	0.8	480	0.14	0.8	–	–	–	–	–	–
	T8430	0.4	195	0.12	0.8	105	0.11	0.8	160	0.12	0.8	540	0.14	0.8	–	–	–	–	–	–
	T9315	0.4	270	0.12	0.8	–	–	–	255	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	205	0.18	0.8	120	0.16	0.8	190	0.18	0.8	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																				
TCMT 110208E-FM	**T7325**	0.8	◪ 195	0.17	0.8	■ 150	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 175	0.17	0.8	■ 105	0.15	0.8	◪ 165	0.17	0.8	◪ 525	0.20	0.8	–	–	–	–	–	–
	T8430	0.8	■ 200	0.17	0.8	■ 110	0.15	0.8	◪ 165	0.17	0.8	◪ 555	0.20	0.8	–	–	–	–	–	–
	T9315	0.8	■ 275	0.17	0.8	–	–	–	◪ 260	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 250	0.17	0.8	■ 150	0.15	0.8	◪ 235	0.17	0.8	–	–	–	–	–	–	–	–	–
TCMT 16T304E-FM	**T7325**	0.4	◪ 150	0.19	1.7	■ 115	0.17	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	◪ 145	0.19	1.7	■ 110	0.17	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 155	0.12	1.7	■ 90	0.11	1.7	◪ 145	0.12	1.7	◪ 465	0.14	1.7	–	–	–	–	–	–
	T8330	0.4	■ 150	0.12	1.7	■ 90	0.11	1.7	◪ 140	0.12	1.7	◪ 450	0.14	1.7	–	–	–	–	–	–
	T8430	0.4	■ 180	0.12	1.7	■ 95	0.11	1.7	◪ 145	0.12	1.7	◪ 495	0.14	1.7	–	–	–	–	–	–
	T9315	0.4	■ 250	0.12	1.7	–	–	–	◪ 235	0.12	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 190	0.18	1.7	■ 110	0.16	1.7	◪ 180	0.18	1.7	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FM	**T7325**	0.8	◪ 180	0.17	1.7	■ 140	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 175	0.17	1.7	■ 135	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 170	0.17	1.7	■ 100	0.15	1.7	◪ 160	0.17	1.7	◪ 510	0.20	1.7	–	–	–	–	–	–
	T8330	0.8	■ 160	0.17	1.7	■ 95	0.15	1.7	◪ 150	0.17	1.7	◪ 480	0.20	1.7	–	–	–	–	–	–
	T8430	0.8	■ 185	0.17	1.7	■ 100	0.15	1.7	◪ 150	0.17	1.7	◪ 510	0.20	1.7	–	–	–	–	–	–
	T9315	0.8	■ 255	0.17	1.7	–	–	–	◪ 240	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 230	0.17	1.7	■ 135	0.15	1.7	◪ 215	0.17	1.7	–	–	–	–	–	–	–	–	–
																				
Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																				
TCMT 110204E-FM2	**T8330**	0.4	■ 145	0.12	0.8	◪ 85	0.11	0.8	■ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 180	0.12	0.8	◪ 95	0.11	0.8	◪ 145	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 220	0.12	0.8	◪ 130	0.11	0.8	◪ 205	0.12	0.8	–	–	–	–	–	–	–	–	–
TCMT 110208E-FM2	**T8330**	0.8	■ 155	0.17	0.8	◪ 90	0.15	0.8	■ 145	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 185	0.17	0.8	◪ 100	0.15	0.8	◪ 150	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.17	0.8	◪ 135	0.15	0.8	◪ 210	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 195	0.17	0.8	◪ 115	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-FM2	**T7325**	0.8	◪ 170	0.20	1.0	◪ 130	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 145	0.20	1.0	◪ 85	0.18	1.0	■ 135	0.20	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 170	0.20	1.0	◪ 90	0.18	1.0	◪ 135	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 205	0.20	1.0	◪ 120	0.18	1.0	◪ 190	0.20	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 175	0.20	1.0	◪ 105	0.18	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria RF para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TCMT 16T308E-RF	**T9325**	0.8	■ 175	0.20	1.5	◪ 105	0.18	1.5	◪ 165	0.20	1.5	–	–	–	–	–	–	–	–	–
																				
Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TCMT 16T308E-RM	**T5305**	0.8	◪ 265	0.27	1.9	–	–	–	■ 250	0.27	1.9	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.8	◪ 235	0.27	1.9	–	–	–	■ 220	0.27	1.9	–	–	–	–	–	–	◪ 45	0.15	1.0
	T7335	0.8	◪ 155	0.27	1.9	■ 120	0.24	1.9	–	–	–	–	–	–	◪ 50	0.19	1.5	–	–	–
	T8330	0.8	■ 145	0.27	1.9	■ 85	0.24	1.9	■ 135	0.27	1.9	–	–	–	◪ 35	0.19	1.5	◪ 25	0.15	1.0
	T8430	0.8	■ 165	0.27	1.9	■ 90	0.24	1.9	◪ 135	0.27	1.9	–	–	–	◪ 35	0.19	1.5	◪ 25	0.15	1.0
	T9315	0.8	■ 215	0.27	1.9	–	–	–	◪ 200	0.27	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 195	0.27	1.9	■ 115	0.24	1.9	◪ 185	0.27	1.9	–	–	–	◪ 40	0.19	1.5	–	–	–

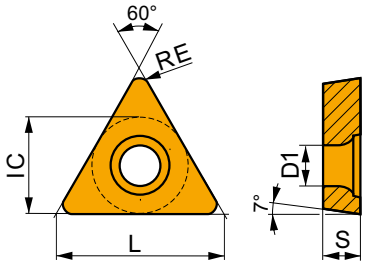
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
TCMT 16T312E-RM	**T5305**	1.2	◪ 280	0.27	1.9		–	–	–	■ 265	0.27	1.9	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	1.2	◪ 250	0.27	1.9		–	–	–	■ 235	0.27	1.9	–	–	–	–	–	–	◪ 50	0.15	1.0
	T8330	1.2	■ 150	0.27	1.9	■ 90	0.24	1.9	■ 140	0.27	1.9	–	–	–	◪ 35	0.19	1.5	◪ 30	0.15	1.0
	T8430	1.2	■ 170	0.27	1.9	■ 90	0.24	1.9	◪ 135	0.27	1.9	–	–	–	◪ 35	0.19	1.5	◪ 25	0.15	1.0
	T9315	1.2	■ 225	0.27	1.9		–	–	–	◪ 210	0.27	1.9	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 205	0.27	1.9	■ 120	0.24	1.9	◪ 190	0.27	1.9	–	–	–	◪ 45	0.19	1.5		–	–	–
																				
			Geometria RM3 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
TCMT 16T304E-RM3	**T6310**	0.4	■ 110	0.25	2.0	◪ 75	0.25	2.0	■ 85	0.25	2.0	–	–	–	–	–	–	◪ 20	0.15	1.0
	T7325	0.4	◪ 125	0.25	2.0	◪ 95	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 110	0.25	2.0	◪ 65	0.25	2.0	■ 100	0.25	2.0	–	–	–	–	–	–	◪ 20	0.15	1.0
	T8430	0.4	■ 120	0.25	2.0	◪ 65	0.25	2.0	◪ 95	0.25	2.0	–	–	–	–	–	–	◪ 20	0.15	1.0
	T9315	0.4	■ 165	0.25	2.0		–	–	◪ 155	0.25	2.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.4	■ 145	0.25	2.0	◪ 85	0.25	2.0	◪ 135	0.25	2.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 125	0.25	2.0	◪ 75	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-RM3	**T6310**	0.8	■ 125	0.27	2.0	◪ 90	0.27	2.0	■ 100	0.27	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
	T7325	0.8	◪ 145	0.27	2.0	◪ 110	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 125	0.27	2.0	◪ 75	0.27	2.0	■ 115	0.27	2.0	–	–	–	–	–	–	◪ 25	0.15	1.0
	T8430	0.8	■ 135	0.27	2.0	◪ 75	0.27	2.0	◪ 110	0.27	2.0	–	–	–	–	–	–	◪ 20	0.15	1.0
	T9315	0.8	■ 185	0.27	2.0		–	–	◪ 175	0.27	2.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 170	0.27	2.0	◪ 100	0.27	2.0	◪ 160	0.27	2.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.27	2.0	◪ 85	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria UR para operações de maquinação de acabamento fino a normal, e cortes contínuos a ligeiramente interrompidos.																	
TCMT 110204E-UR	**T7325**	0.4	◪ 135	0.19	0.8	◪ 105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 135	0.12	0.8	◪ 80	0.11	0.8	■ 125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 170	0.12	0.8	◪ 90	0.11	0.8	◪ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 235	0.12	0.8		–	–	◪ 220	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 175	0.18	0.8	◪ 105	0.16	0.8	◪ 165	0.18	0.8	–	–	–	–	–	–	–	–	–
TCMT 16T304E-UR	**T7325**	0.4	◪ 135	0.19	0.8	◪ 105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 135	0.12	0.8	◪ 80	0.11	0.8	■ 125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 170	0.12	0.8	◪ 90	0.11	0.8	◪ 135	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 235	0.12	0.8		–	–	◪ 220	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 175	0.18	0.8	◪ 105	0.16	0.8	◪ 165	0.18	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 225	0.12	0.8	◪ 135	0.11	0.8	–	–	–	–	–	–	–	–	–	–	–	–
TCMT 16T308E-UR	**T5315**	0.8	◪ 245	0.17	0.8		–	–	■ 230	0.17	0.8	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 170	0.17	0.8	◪ 130	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 150	0.17	0.8	◪ 90	0.15	0.8	■ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 175	0.17	0.8	◪ 95	0.15	0.8	◪ 140	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 240	0.17	0.8		–	–	◪ 225	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 215	0.17	0.8	◪ 125	0.15	0.8	◪ 200	0.17	0.8	–	–	–	–	–	–	–	–	–

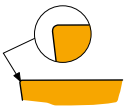
TCMW

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1102	6.350	2.80	11.00	2.38
16T3	9.525	4.40	16.50	3.97



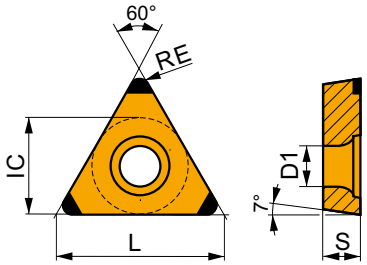
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
TCMW 110204	**T5305**	0.4	–	–	–	–	–	–	200	0.10	1.2	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	180	0.10	1.2	–	–	–	–	–	–	35	0.15	1.0
TCMW 16T304	**T5305**	0.4	–	–	–	–	–	–	195	0.10	1.5	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	175	0.10	1.5	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	85	0.10	1.5	–	–	–	–	–	–	20	0.15	1.0
TCMW 16T308	**T5305**	0.8	–	–	–	–	–	–	190	0.18	1.5	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	165	0.18	1.5	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	85	0.18	1.5	–	–	–	–	–	–	20	0.15	1.0

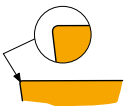
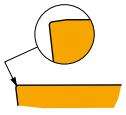
TCGW CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1102	6.350	2.90	11.00	2.38



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Para operações de maquinação de acabamento, e cortes contínuos.																				
TCGW 110204E-C	**TB310**	0.4	–	–	–	–	–	–	390	0.10	0.4	–	–	–	100	0.07	0.3	80	0.15	1.0
																				
Para operações de maquinação de acabamento, e cortes contínuos.																				
TCGW 110204S01020C	**TB310**	0.4	–	–	–	–	–	–	390	0.10	0.4	–	–	–	100	0.07	0.3	80	0.15	1.0
TCGW 110208S01020C	**TB310**	0.8	–	–	–	–	–	–	400	0.15	0.6	–	–	–	105	0.11	0.5	85	0.15	1.0

STFC(RL) EXT

P M K N S H

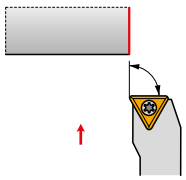
PRAMET

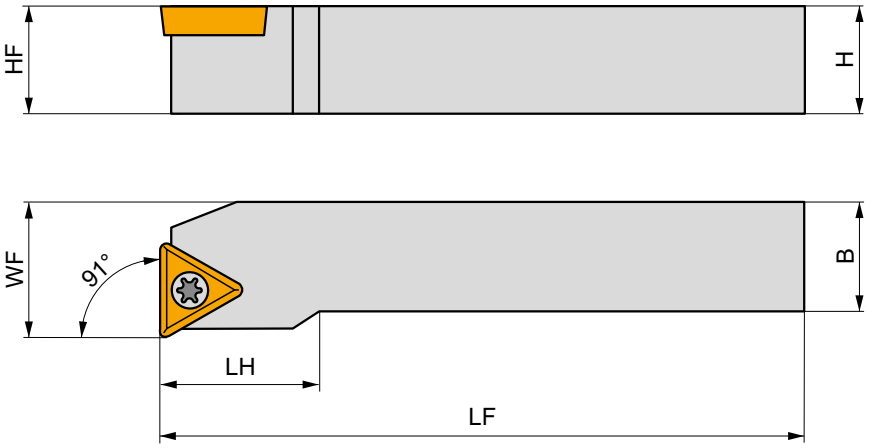
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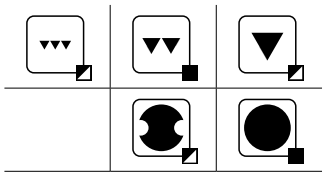


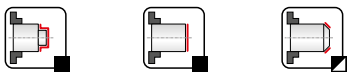
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 91 ° (Frontal), para pastilhas TC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas TC... 11 até 16. Adequado para torneamento frontal exterior com esquadria e chanfrar. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**STFCR 1616 H 11**	16	16	16	20	100	18	0	0	0.20	GI056	S01
	STFCR 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.40	GI016	ST10
	STFCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.76	GI016	ST10
L	**STFCL 1616 H 11**	16	16	16	20	100	18	0	0	0.22	GI056	S01
	STFCL 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.40	GI016	ST10
	STFCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI016	ST10

GI016	TC.. 16T3..
GI056	TC.. 1102..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
ST10	US 3510-T15P	3.0	M 3.5	10.6	STN 160308	MS 3510	FLAG T15P	HXK 3.5

STFC(RL)-A EXT

P M K N S H

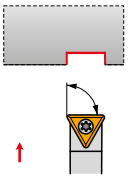
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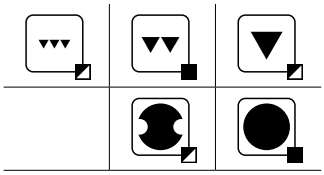
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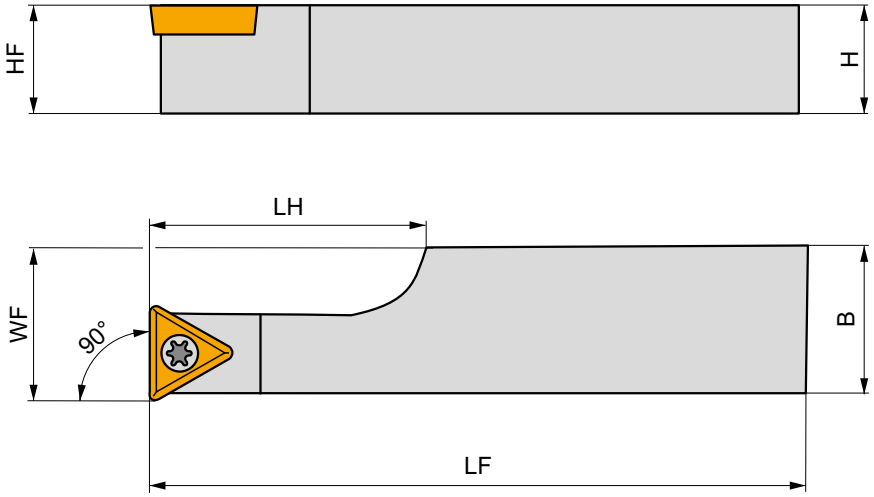


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 90 ° (Frontal), para Pastilhas TC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas TC .. 11. Adequado para torneamento frontal exterior direito e esquerdo com esquadria e chanfrar. Disponível com haste de 20x20 mm. Corpo tratado para maior tempo de vida útil da ferramenta.












	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**STFCR 2020 K 11-A**	20	20	20	25	125	21.3	0	0	0.52	GI056	ST21
L	**STFCL 2020 K 11-A**	20	20	20	25	125	21.3	0	0	0.36	GI056	ST21

GI056	TC.. 1102..

ST21	5513 020-03	0.8	M 2.5	6.5	PT-8001

STJC(RL) EXT

P M K N S H

PRAMET

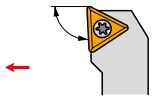
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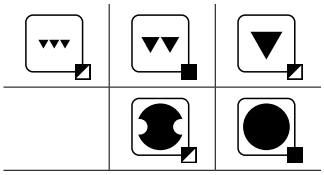


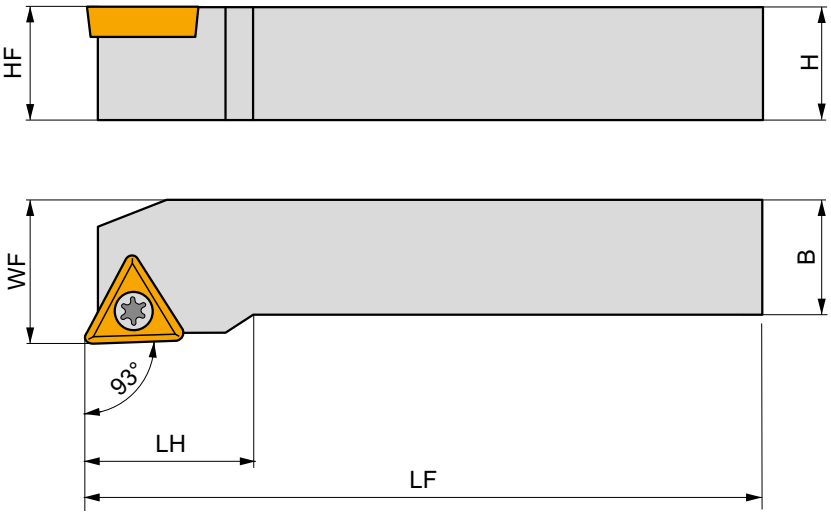
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 93 °, para pastilhas TC ..

Porta-ferramentas de de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas TC... 11 até 16. Adequado para torneamento longitudinal exterior com esquadria, torneamento cónico e chanfrar. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**STJCR 1616 H 11**	16	16	16	20	100	18	0	0	0.23	GI056	S01
	STJCR 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.44	GI016	ST10
	STJCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.76	GI016	ST10
L	**STJCL 1616 H 11**	16	16	16	20	100	18	0	0	0.22	GI056	S01
	STJCL 2020 K 16-M-A	20	20	20	25	125	25	0	0	0.43	GI016	ST10
	STJCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI016	ST10

GI016	TC.. 16T3..
GI056	TC.. 1102..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
ST10	US 3510-T15P	3.0	M 3.5	10.6	STN 160308	MS 3510	FLAG T15P	HXK 3.5

STFC(RL) INT

P M K N S H

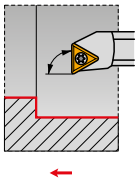
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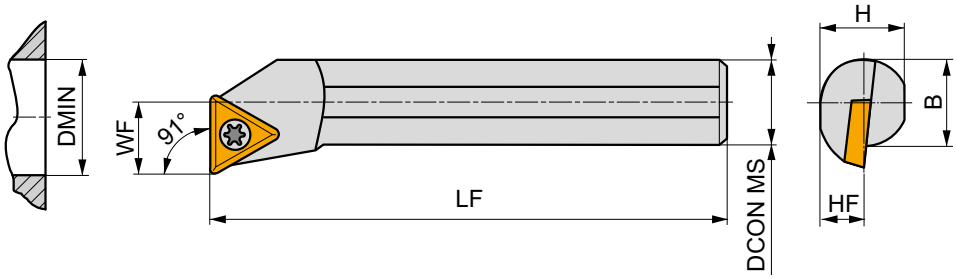
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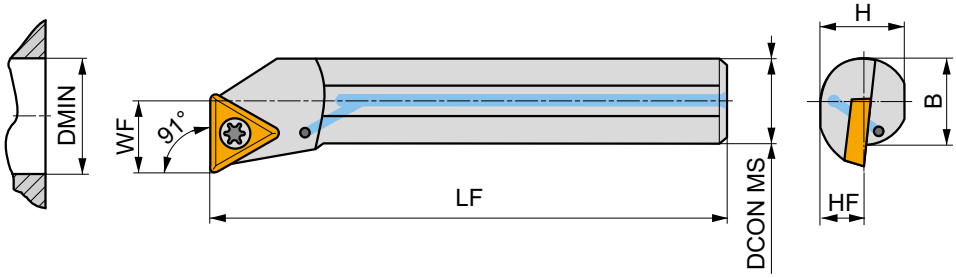


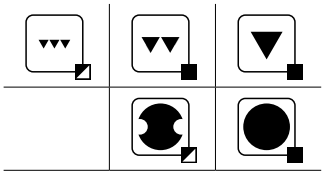
Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 91 ° para Pastilhas TC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 91° para pastilhas TC .. 06 até 16. Diâmetro mínimo de torneamento Ø8,5 mm. Adequado para torneamento cónico e longitudinal com esquadria e chanfrar. Hastes de Ø6 a Ø32 mm disponíveis. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A06F-STFCR 06	6	8.5	4.5	5	–	80	-12	0	✓	0.03	GI217	ST12
	A08H-STFCR 06	8	11	5.9	7	–	100	-10	0	✓	0.04	GI217	ST13
	A10K-STFCR 09	10	13	7	9	–	125	-9	0	✓	0.06	GI218	ST14
	A12M-STFCR 09	12	16	9	11	–	150	-6.5	0	✓	0.12	GI218	ST14
	S10H-STFCR 11	10	13	7	9	9.5	100	-10	0	–	0.08	GI056	S02
	A12M-STFCR 11	12	16	9	11	11.5	150	-10	0	✓	0.14	GI056	S01
	S12K-STFCR 11	12	16	9	11	11.5	125	-7	0	–	0.13	GI056	S01
	A16R-STFCR 11	16	20	11	14.5	15	200	-7	0	✓	0.27	GI056	S01
	S16M-STFCR 11	16	20	11	14.5	15	150	-7	0	–	0.24	GI056	S01
	A20S-STFCR 11	20	25	13	18	18.5	250	-7	0	✓	0.54	GI056	S01
	S20Q-STFCR 11	20	25	13	18	18.5	180	-7	0	–	0.40	GI056	S01
	A25R-STFCR 16	25	32	17	23	23	200	-3	0	✓	0.67	GI016	S08
	S25T-STFCR 16	25	32	17	23	23	300	-3	0	–	1.15	GI016	S08
	A32S-STFCR 16	32	40	22	30	30	250	-10	0	✓	1.36	GI016	ST10
	S32U-STFCR 16-A	32	40	22	30	30	350	-10	0	–	2.10	GI016	ST10
L	A06F-STFCL 06	6	8.5	4.5	5	–	80	-12	0	✓	0.03	GI217	ST12
	A08H-STFCL 06	8	11	5.9	7	–	100	-10	0	✓	0.05	GI217	ST13
	A10K-STFCL 09	10	13	7	9	–	125	-9	0	✓	0.06	GI218	ST14
	A12M-STFCL 09	12	16	9	11	–	150	-6.5	0	✓	0.03	GI218	ST14
	S10H-STFCL 11	10	13	7	9	9.5	100	-10	0	–	0.06	GI056	S02
	A12M-STFCL 11	12	16	9	11	11.5	150	-10	0	✓	0.12	GI056	S01
	S12K-STFCL 11	12	16	9	11	11.5	125	-7	0	–	0.12	GI056	S01
	A16R-STFCL 11	16	20	11	14.5	15	200	-7	0	✓	0.00	GI056	S01
	S16M-STFCL 11	16	20	11	14.5	15	150	-7	0	–	0.25	GI056	S01
	A20S-STFCL 11	20	25	13	18	18.5	250	-7	0	✓	0.00	GI056	S01
	S20Q-STFCL 11	20	25	13	18	18.5	180	-7	0	–	0.42	GI056	S01
	A25R-STFCL 16	25	32	17	23	23	200	-3	0	✓	0.00	GI016	S08

	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
L	**S25T-STFCL 16**	25	32	17	23	23	300	-3	0	–	1.15	GI016	S08
	A32S-STFCL 16	32	40	22	30	30	250	-10	0	✓	1.36	GI016	ST10
	S32U-STFCL 16-A	32	40	22	30	30	350	-10	0	–	2.06	GI016	ST10

GI016	TC.. 16T3..
GI056	TC.. 1102..
GI217	TC.. 06T1..
GI218	TC.. 0902..

		Nm							
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
S02	US 2505-T07P	0.9	M 2.5	5.2	–	–	FLAG T07P	–	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
ST10	US 3510-T15P	3.0	M 3.5	10.6	STN 160308	MS 3510	FLAG T15P	HXK 3.5	–
ST12	5513 020-28	0.6	M 2	4.2	–	–	–	–	PT-8000
ST13	5513 020-27	0.6	M 2	4.9	–	–	–	–	PT-8000
ST14	5513 020-05	0.8	M 2.2	6.4	–	–	–	–	PT-8001

STFC(RL)-E INT

P M K N S H

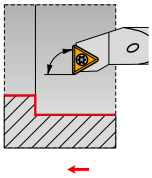
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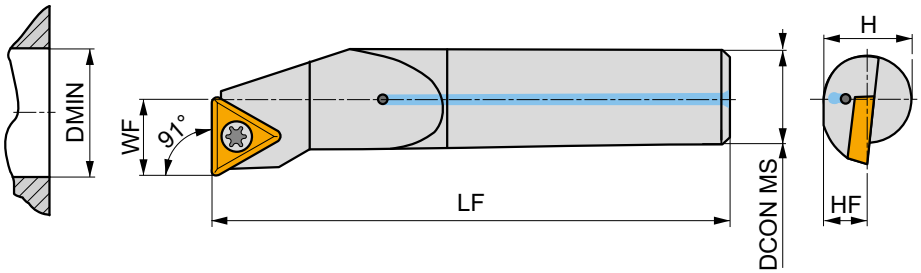
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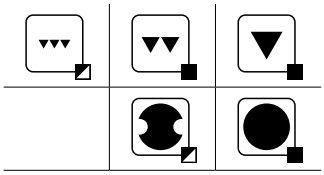


Porta-ferramentas de Interior em Metal Duro, Fixação por Parafuso, Ângulo de 91 °, para Pastilhas TC ..

Porta-ferramentas de interior à direita ou à esquerda em metal duro, com fixação por parafuso e refrigeração interna, com ângulo de corte de 91° para pastilhas TC .. 06 até 11. Diâmetro mínimo de torneamento Ø8,5 mm. Para torneamento cónico interno e longitudinal com esquadria e chanfrar. Disponível com hastes de Ø6 até Ø16 mm. Para balanço > 3xD.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	E06H-STFCR 06-R	6	8.5	4.5	6	3	100	-10	0	✓	0.05	GI217	ST22
	E08K-STFCR 06-R	8	11	5.9	8	4	125	-10	0	✓	0.09	GI217	ST23
	E10M-STFCR 09-R	10	13	7	10	5	150	-8	0	✓	0.15	GI218	ST24
	E12Q-STFCR 09-R	12	16	9	12	6	180	-6	0	✓	0.26	GI218	ST24
	E16R-STFCR 11-R	16	20	11	16	8	200	-5	0	✓	0.48	GI056	ST21
L	E06H-STFCL 06-R	6	8.5	4.5	6	3	100	-10	0	✓	0.05	GI217	ST22
	E08K-STFCL 06-R	8	11	5.9	8	4	125	-10	0	✓	0.09	GI217	ST23
	E10M-STFCL 09-R	10	13	7	10	5	150	-8	0	✓	0.15	GI218	ST24
	E12Q-STFCL 09-R	12	16	9	12	6	180	-6	0	✓	0.26	GI218	ST24
	E16R-STFCL 11-R	16	20	11	16	8	200	-5	0	✓	0.48	GI056	ST21

GI056	TC.. 1102..
GI217	TC.. 06T1..
GI218	TC.. 0902..

		Nm			
ST21	5513 020-03	0.8	M 2.5	6.5	PT-8001
ST22	5513 020-28	0.6	M 2	4.2	PT-8000
ST23	5513 020-27	0.6	M 2	4.9	PT-8000
ST24	5513 020-05	0.8	M 2.2	6.4	PT-8001

TP

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PASTILHAS DE METAL DURO

TPGX



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TPMR



163

TPUN



164

PASTILHAS CER

TPGN CER

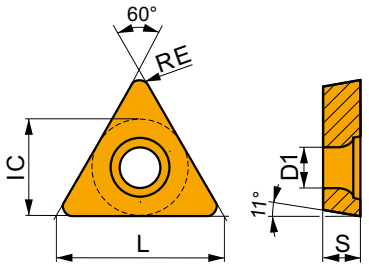


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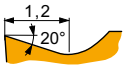
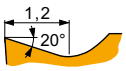
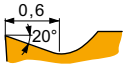
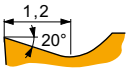
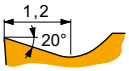
TPGX

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0902	5.560	2.50	9.60	2.38
1102	6.350	2.80	11.00	2.38
16T3	9.525	4.40	16.50	3.97



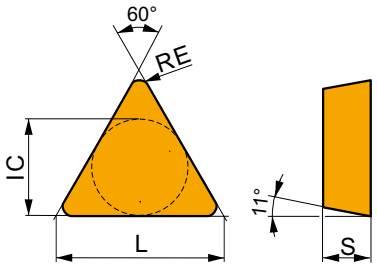
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			F																	
Geometria FR-JQ com desenho positivo à direita para operações de maquinação de acabamento fino, e cortes contínuos.																				
TPGX 110204FR-JQ	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			F																	
Geometria FL-JQ com desenho positivo à esquerda para maquinação de acabamento fino, cortes contínuos.																				
TPGX 090204FL-JQ	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
TPGX 110204FL-JQ	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			F																	
Geometria FL-JR com desenho positivo à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																				
TPGX 16T304FL-JR	**TT010**	0.4	■ 295	0.06	0.5	◪ 175	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			F																	
Geometria FR-JZ com desenho positivo à direita para operações de maquinação de acabamento fino, e cortes contínuos.																				
TPGX 090202FR-JZ	**TT010**	0.2	■ 280	0.06	0.5	◪ 165	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			F																	
Geometria FL-JZ com desenho positivo à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																				
TPGX 090202FL-JZ	**TT010**	0.2	■ 280	0.06	0.5	◪ 165	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

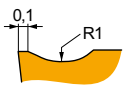
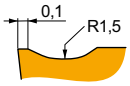
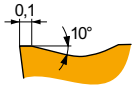
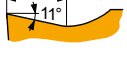
TPMR

PRAMET

	IC (mm)	L (mm)	S (mm)
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18



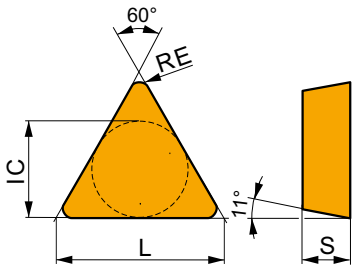
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria 46 para operações de maquinação de acabamento fino a normal, e cortes contínuos a interrompidos.																	
TPMR 110304E-46	**6640**	0.4	■ 140	0.15	1.0	◪ 80	0.14	1.0	■ 130	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 175	0.15	1.0	◪ 105	0.15	1.0	◪ 165	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 150	0.15	1.0	◪ 90	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 110308E-46	**6640**	0.8	■ 170	0.15	1.0	◪ 100	0.14	1.0	■ 160	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 205	0.15	1.0	◪ 120	0.15	1.0	◪ 190	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 180	0.15	1.0	◪ 105	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria 47 para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
TPMR 160304E-47	**6640**	0.4	■ 120	0.20	1.5	◪ 70	0.18	1.5	■ 110	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 150	0.20	1.5	◪ 90	0.18	1.5	◪ 140	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 125	0.20	1.5	◪ 75	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 160308E-47	**6640**	0.8	■ 140	0.20	1.5	◪ 80	0.18	1.5	■ 130	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 175	0.20	1.5	◪ 105	0.18	1.5	◪ 165	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 150	0.20	1.5	◪ 90	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 160312E-47	**T9325**	1.2	■ 185	0.20	1.5	◪ 110	0.18	1.5	◪ 175	0.20	1.5	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 160	0.20	1.5	◪ 95	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria 61 para operações de maquinação de acabamento com avanços e profundidades de corte moderados, e cortes contínuos a interrompidos.																	
TPMR 160308E-61	**T9325**	0.8	■ 135	0.35	1.8	◪ 80	0.32	1.8	◪ 125	0.35	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 120	0.35	1.8	◪ 70	0.32	1.8	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria PF2 para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																	
TPMR 110304-PF2	**TT010**	0.4	■ 255	0.10	0.5	◪ 150	0.10	0.5	–	–	–	–	–	–	–	–	–	–	–	–
TPMR 160304-PF2	**TT010**	0.4	■ 255	0.10	0.5	◪ 150	0.10	0.5	–	–	–	–	–	–	–	–	–	–	–	–

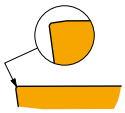
TPUN

PRAMET

	IC (mm)	L (mm)	S (mm)
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18
2204	12.700	22.00	4.76
2706	15.875	27.50	6.35
3306	19.050	33.00	6.35



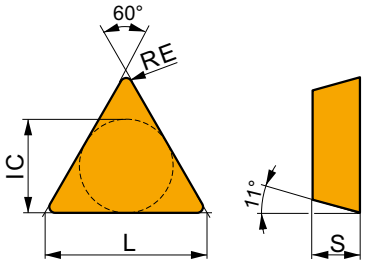
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			E																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
TPUN 110304	**6640**	0.4	135	0.10	1.2	–	–	–	125	0.10	1.2	–	–	–	–	–	–	–	–	–
TPUN 110308	**6640**	0.8	125	0.18	1.2	–	–	–	115	0.18	1.2	–	–	–	–	–	–	–	–	–
TPUN 160304	**6640**	0.4	135	0.10	1.5	–	–	–	125	0.10	1.5	–	–	–	–	–	–	–	–	–
TPUN 160308	**6640**	0.8	125	0.18	1.5	–	–	–	115	0.18	1.5	–	–	–	–	–	–	–	–	–
TPUN 160312	**6640**	1.2	125	0.20	1.5	–	–	–	115	0.20	1.5	–	–	–	–	–	–	–	–	–
TPUN 220408	**6640**	0.8	120	0.18	2.0	–	–	–	110	0.18	2.0	–	–	–	–	–	–	–	–	–
TPUN 220412	**6640**	1.2	120	0.20	2.0	–	–	–	110	0.20	2.0	–	–	–	–	–	–	–	–	–
			S																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
TPUN 270616S	**6640**	1.6	60	0.30	7.0	–	–	–	55	0.30	7.0	–	–	–	–	–	–	–	–	–
TPUN 330620S	**6640**	2.0	65	0.30	5.0	–	–	–	60	0.30	5.0	–	–	–	–	–	–	–	–	–

TPGN CER

PRAMET

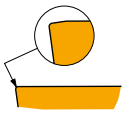
	IC (mm)	L (mm)	S (mm)
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			HSC		T															
Para operações de maquinação com altas velocidades e cortes contínuos.																				
TPGN 110304 T01020	**TC100**	0.4	–	–	–	–	–	–	460	0.10	1.5	–	–	–	–	–	–	–	–	–
TPGN 110308 T01020	**TC100**	0.8	–	–	–	–	–	–	425	0.20	1.5	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		T															
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
TPGN 160304 T01020	**TC100**	0.4	–	–	–	–	–	–	460	0.10	1.5	–	–	–	–	–	–	–	–	–
TPGN 160308 T01020	**TC100**	0.8	–	–	–	–	–	–	425	0.20	1.5	–	–	–	–	–	–	–	–	–
TPGN 160312 T01020	**TC100**	1.2	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–

VB

PASTILHAS DE METAL DURO

VBMT



168

PASTILHAS CBN

VBGW CBN



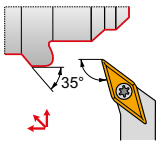
171

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
VBMT **16**0408E-FM	SVHCR 2020 K **16-M**-A

TORNEAMENTO ISO - EXTERIOR

SVHB(C)(RL) EXT

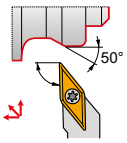
107°30´



VB, VC..	
11 16	16×16 25×25
172	168 – 171 186 – 192

SVJB(C)(RL) EXT

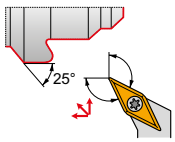
93°



VB, VC..	
11 13 16	12×12 32×25
173	168 – 171 186 – 192

SVPB(C)(RL) EXT

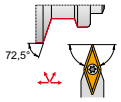
117°30´



VB, VC..	
11 16	16×16 32×25
174	168 – 171 186 – 192

SVVB(C)N EXT

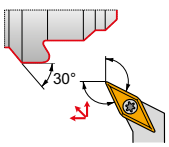
72°30´



VB, VC..	
11 13 16	12×12 32×25
175	168 – 171 186 – 192

SVXB(C)(RL) EXT

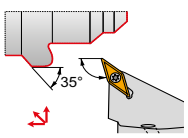
98°



VB, VC..	
11 13 16	12×12 32×25
176	168 – 171 186 – 192

C.-SVHB(RL) EXT NEW

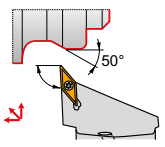
107°30´



VB, VC..	
16	C4 C6
177	168 – 171 186 – 192

C.-SVJB(RL) EXT NEW

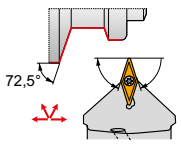
93°



VB, VC..	
11 16	C3 C6
178	168 – 171 186 – 192

C.-SVVBN EXT NEW

72°30´



VB, VC..	
16	C4 C6
179	168 – 171 186 – 192

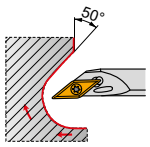
VB

TORNEAMENTO ISO - INTERIOR

SVJB(RL) INT

93°

VB, VC..



11



25/32

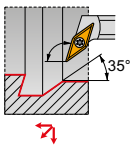
180

168 – 171
186 – 192

SVQB(C)(RL) INT

107°30´

VB, VC..



11
13
16



20/50

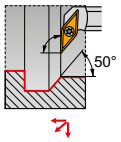
181

168 – 171
186 – 192

SVUB(C)(RL) INT

93°

VB, VC..



11
13
16



20/50

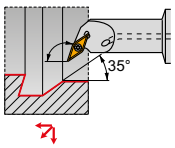
182

168 – 171
186 – 192

C.-SVQB(C)(RL) INT NEW

108°

VB, VC..



16



33

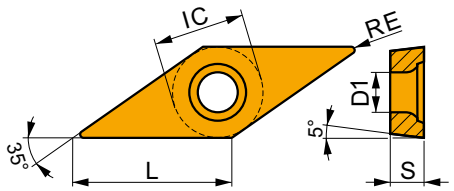
183

168 – 171
186 – 192

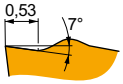
VBMT

PRAMET

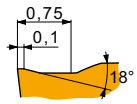
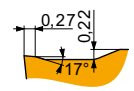
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1102	6.350	2.80	11.10	2.38
1103	6.350	2.80	11.10	3.18
1604	9.525	4.40	16.60	4.76



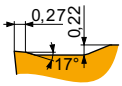
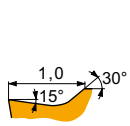
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
VBMT 160404E-FF2	**T7325**	0.4	145	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	125	0.12	0.8	–	–	–	115	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	150	0.12	0.8	–	–	–	125	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	215	0.12	0.8	–	–	–	200	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.12	0.8	–	–	–	180	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	160	0.12	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
VBMT 110302E-FM	**T7325**	0.2	160	0.10	0.8	120	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.2	145	0.10	0.8	85	0.09	0.8	135	0.10	0.8	435	0.12	0.8	–	–	–	–	–	–
	T8330	0.2	135	0.10	0.8	80	0.09	0.8	125	0.10	0.8	405	0.12	0.8	–	–	–	–	–	–
	T8430	0.2	170	0.10	0.8	90	0.09	0.8	135	0.10	0.8	465	0.12	0.8	–	–	–	–	–	–
	T9325	0.2	210	0.10	0.8	125	0.09	0.8	195	0.10	0.8	–	–	–	–	–	–	–	–	–
VBMT 110304E-FM	**T7325**	0.4	140	0.19	0.8	105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	135	0.19	0.8	105	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	145	0.12	0.8	85	0.11	0.8	135	0.12	0.8	435	0.14	0.8	–	–	–	–	–	–
	T8330	0.4	140	0.12	0.8	80	0.11	0.8	130	0.12	0.8	420	0.14	0.8	–	–	–	–	–	–
	T8430	0.4	170	0.12	0.8	90	0.11	0.8	135	0.12	0.8	465	0.14	0.8	–	–	–	–	–	–
	T9315	0.4	235	0.12	0.8	–	–	–	220	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	175	0.19	0.8	105	0.17	0.8	165	0.19	0.8	–	–	–	–	–	–	–	–	–
VBMT 110308E-FM	**T7325**	0.8	170	0.17	0.8	130	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.17	0.8	90	0.15	0.8	140	0.17	0.8	450	0.20	0.8	–	–	–	–	–	–
	T8430	0.8	175	0.17	0.8	95	0.15	0.8	140	0.17	0.8	480	0.20	0.8	–	–	–	–	–	–
	T9315	0.8	240	0.17	0.8	–	–	–	225	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	215	0.17	0.8	125	0.15	0.8	200	0.17	0.8	–	–	–	–	–	–	–	–	–
VBMT 160402E-FM	**T7325**	0.2	150	0.10	1.2	115	0.09	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	1.2	75	0.09	1.2	120	0.10	1.2	390	0.12	1.2	–	–	–	–	–	–
	T8430	0.2	165	0.10	1.2	90	0.09	1.2	135	0.10	1.2	450	0.12	1.2	–	–	–	–	–	–
	T9315	0.2	230	0.10	1.2	–	–	–	215	0.10	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.2	205	0.10	1.2	120	0.09	1.2	190	0.10	1.2	–	–	–	–	–	–	–	–	–
VBMT 160404E-FM	**T5315**	0.4	225	0.12	1.2	–	–	–	210	0.12	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	130	0.19	1.2	100	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	130	0.19	1.2	100	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	140	0.12	1.2	80	0.11	1.2	130	0.12	1.2	420	0.14	1.2	–	–	–	–	–	–
	T8330	0.4	135	0.12	1.2	80	0.11	1.2	125	0.12	1.2	405	0.14	1.2	–	–	–	–	–	–
	T8430	0.4	165	0.12	1.2	90	0.11	1.2	135	0.12	1.2	450	0.14	1.2	–	–	–	–	–	–
	T9315	0.4	225	0.12	1.2	–	–	–	210	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	165	0.19	1.2	95	0.17	1.2	155	0.19	1.2	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
VBMT 160408E-FM	**T5315**	0.8	◪ 235	0.17	1.2	–	–	–	◪ 220	0.17	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 165	0.17	1.2	■ 125	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 160	0.17	1.2	■ 120	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 150	0.17	1.2	■ 90	0.15	1.2	◪ 140	0.17	1.2	◪ 450	0.20	1.2	–	–	–	–	–	–
	T8330	0.8	■ 145	0.17	1.2	■ 85	0.15	1.2	◪ 135	0.17	1.2	◪ 435	0.20	1.2	–	–	–	–	–	–
	T8430	0.8	■ 170	0.17	1.2	■ 90	0.15	1.2	◪ 135	0.17	1.2	◪ 465	0.20	1.2	–	–	–	–	–	–
	T9310	0.8	■ 255	0.17	1.2	–	–	–	◪ 240	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 230	0.17	1.2	–	–	–	◪ 215	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 205	0.17	1.2	■ 120	0.15	1.2	◪ 190	0.17	1.2	–	–	–	–	–	–	–	–	–
VBMT 160412E-FM	**T7325**	1.2	◪ 160	0.22	1.2	■ 120	0.22	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 140	0.22	1.2	■ 80	0.22	1.2	◪ 130	0.22	1.2	◪ 420	0.26	1.2	–	–	–	–	–	–
	T8430	1.2	■ 155	0.22	1.2	■ 85	0.22	1.2	◪ 130	0.22	1.2	◪ 435	0.26	1.2	–	–	–	–	–	–
	T9315	1.2	■ 215	0.22	1.2	–	–	–	◪ 200	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 195	0.22	1.2	■ 115	0.22	1.2	◪ 185	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
			Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																	
VBMT 160404E-FM2	**T6310**	0.4	■ 120	0.12	1.2	◪ 85	0.11	1.2	■ 95	0.12	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 140	0.12	1.2	◪ 105	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 125	0.12	1.2	◪ 75	0.11	1.2	■ 115	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 145	0.12	1.2	◪ 80	0.11	1.2	◪ 120	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 200	0.12	1.2	–	–	–	◪ 190	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 185	0.12	1.2	◪ 110	0.11	1.2	◪ 175	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 155	0.12	1.2	◪ 90	0.11	1.2	–	–	–	–	–	–	–	–	–	–	–	–
VBMT 160408E-FM2	**T6310**	0.8	■ 125	0.20	1.2	◪ 90	0.18	1.2	■ 100	0.20	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 145	0.20	1.2	◪ 110	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 125	0.20	1.2	◪ 75	0.18	1.2	■ 115	0.20	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 140	0.20	1.2	◪ 75	0.18	1.2	◪ 115	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 195	0.20	1.2	–	–	–	◪ 185	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 175	0.20	1.2	◪ 105	0.18	1.2	◪ 165	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 150	0.20	1.2	◪ 90	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
VBMT 160412E-FM2	**T8430**	1.2	■ 145	0.22	1.2	◪ 80	0.20	1.2	◪ 120	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 195	0.22	1.2	–	–	–	◪ 185	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 175	0.22	1.2	◪ 105	0.20	1.2	◪ 165	0.22	1.2	–	–	–	–	–	–	–	–	–
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
VBMT 160404E-RM	**T5305**	0.4	◪ 270	0.12	1.2	–	–	–	■ 255	0.12	1.2	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	0.4	◪ 235	0.12	1.2	–	–	–	■ 220	0.12	1.2	–	–	–	–	–	–	◪ 45	0.15	1.0
	T7335	0.4	◪ 140	0.18	1.2	■ 105	0.16	1.2	–	–	–	–	–	–	◪ 45	0.16	1.0	–	–	–
	T8330	0.4	■ 140	0.12	1.2	■ 80	0.11	1.2	■ 130	0.12	1.2	–	–	–	◪ 35	0.11	1.0	◪ 25	0.15	1.0
	T8430	0.4	■ 170	0.12	1.2	■ 90	0.11	1.2	◪ 135	0.12	1.2	–	–	–	◪ 35	0.11	1.0	◪ 25	0.15	1.0
	T9315	0.4	■ 235	0.12	1.2	–	–	–	◪ 220	0.12	1.2	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 170	0.20	1.2	■ 100	0.18	1.2	◪ 160	0.20	1.2	–	–	–	◪ 35	0.18	1.0	–	–	–
VBMT 160408E-RM	**T5305**	0.8	◪ 285	0.17	1.2	–	–	–	■ 270	0.17	1.2	–	–	–	–	–	–	◪ 55	0.15	1.0
	T5315	0.8	◪ 250	0.17	1.2	–	–	–	■ 235	0.17	1.2	–	–	–	–	–	–	◪ 50	0.15	1.0
	T7335	0.8	◪ 155	0.20	1.2	■ 120	0.18	1.2	–	–	–	–	–	–	◪ 50	0.18	1.0	–	–	–
	T8330	0.8	■ 150	0.17	1.2	■ 90	0.15	1.2	■ 140	0.17	1.2	–	–	–	◪ 35	0.12	1.0	◪ 30	0.15	1.0
	T8430	0.8	■ 175	0.17	1.2	■ 95	0.15	1.2	◪ 140	0.17	1.2	–	–	–	◪ 35	0.12	1.0	◪ 30	0.15	1.0
	T9315	0.8	■ 240	0.17	1.2	–	–	–	◪ 225	0.17	1.2	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.8	■ 200	0.20	1.2	■ 120	0.18	1.2	◪ 190	0.20	1.2	–	–	–	◪ 45	0.18	1.0	–	–	–

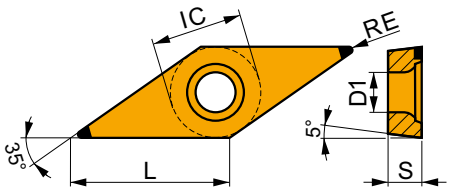
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
VBMT 160412E-RM	**T7335**	1.2	◪ 150	0.27	1.2	■ 115	0.24	1.2		–	–	–	–	–	–	◪ 45	0.19	1.0	–	–	–
	T8330	1.2	■ 140	0.27	1.2	■ 80	0.24	1.2	■ 130	0.27	1.2	–	–	–	◪ 35	0.19	1.0	◪ 25	0.15	1.0
	T8430	1.2	■ 155	0.27	1.2	■ 85	0.24	1.2	◪ 130	0.27	1.2	–	–	–	◪ 30	0.19	1.0	◪ 25	0.15	1.0
	T9315	1.2	■ 210	0.27	1.2	–	–	–	◪ 195	0.27	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 185	0.27	1.2	■ 110	0.24	1.2	◪ 175	0.27	1.2	–	–	–	◪ 40	0.19	1.0	–	–	–
																				
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
VBMT 110202E-UR	**TT310**	0.2	■ 195	0.10	0.8	◪ 115	0.09	0.8		–	–	–	–	–	–	–	–	–	–	–
VBMT 110204E-UR	**T7325**	0.4	◪ 120	0.19	0.8	◪ 90	0.17	0.8		–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 120	0.12	0.8	◪ 70	0.11	0.8	■ 110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 145	0.12	0.8	◪ 80	0.11	0.8	◪ 120	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 200	0.12	0.8	–	–	–	◪ 190	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 150	0.19	0.8	◪ 90	0.17	0.8	◪ 140	0.19	0.8	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 195	0.12	0.8	◪ 115	0.11	0.8		–	–	–	–	–	–	–	–	–	–	–
VBMT 160402E-UR	**T8330**	0.2	■ 115	0.10	1.2	◪ 65	0.09	1.2	■ 105	0.10	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 140	0.10	1.2	◪ 75	0.09	1.2	◪ 115	0.10	1.2	–	–	–	–	–	–	–	–	–
VBMT 160404E-UR	**T5315**	0.4	◪ 195	0.12	1.2	–	–	–	■ 185	0.12	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 115	0.19	1.2	◪ 85	0.17	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 115	0.12	1.2	◪ 65	0.11	1.2	■ 105	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	1.2	◪ 75	0.11	1.2	◪ 115	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.4	■ 215	0.12	1.2	–	–	–	◪ 200	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 190	0.12	1.2	–	–	–	◪ 180	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 145	0.18	1.2	◪ 85	0.16	1.2	◪ 135	0.18	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.4	■ 185	0.12	1.2	◪ 110	0.11	1.2		–	–	–	–	–	–	–	–	–	–	–
VBMT 160408E-UR	**T5315**	0.8	◪ 205	0.17	1.2	–	–	–	■ 190	0.17	1.2	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 140	0.17	1.2	◪ 105	0.15	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 125	0.17	1.2	◪ 75	0.15	1.2	■ 115	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 145	0.17	1.2	◪ 80	0.15	1.2	◪ 120	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 220	0.17	1.2	–	–	–	◪ 205	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 200	0.17	1.2	–	–	–	◪ 190	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.17	1.2	◪ 105	0.15	1.2	◪ 170	0.17	1.2	–	–	–	–	–	–	–	–	–
	TT310	0.8	■ 200	0.17	1.2	◪ 120	0.15	1.2		–	–	–	–	–	–	–	–	–	–	–
VBMT 160412E-UR	**T7325**	1.2	◪ 135	0.22	1.2	◪ 105	0.20	1.2		–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 120	0.22	1.2	◪ 70	0.20	1.2	■ 110	0.22	1.2	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 135	0.22	1.2	◪ 75	0.20	1.2	◪ 110	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 205	0.22	1.2	–	–	–	◪ 190	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 185	0.22	1.2	–	–	–	◪ 175	0.22	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 170	0.22	1.2	◪ 100	0.20	1.2	◪ 160	0.22	1.2	–	–	–	–	–	–	–	–	–

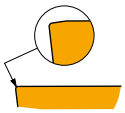
VBGW CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	4.50	16.00	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		S															
			Para operações de maquinação de acabamento, e cortes contínuos.																	
VBGW 160404S01020B	**TB310**	0.4	–	–	–	–	–	–	◪ 340	0.10	0.4	–	–	–	◪ 90	0.07	0.3	■ 70	0.15	1.0
VBGW 160408S01020B	**TB310**	0.8	–	–	–	–	–	–	◪ 350	0.15	0.6	–	–	–	◪ 90	0.11	0.5	■ 70	0.15	1.0

SVHB(C)(RL) EXT

P M K N S H

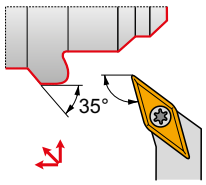
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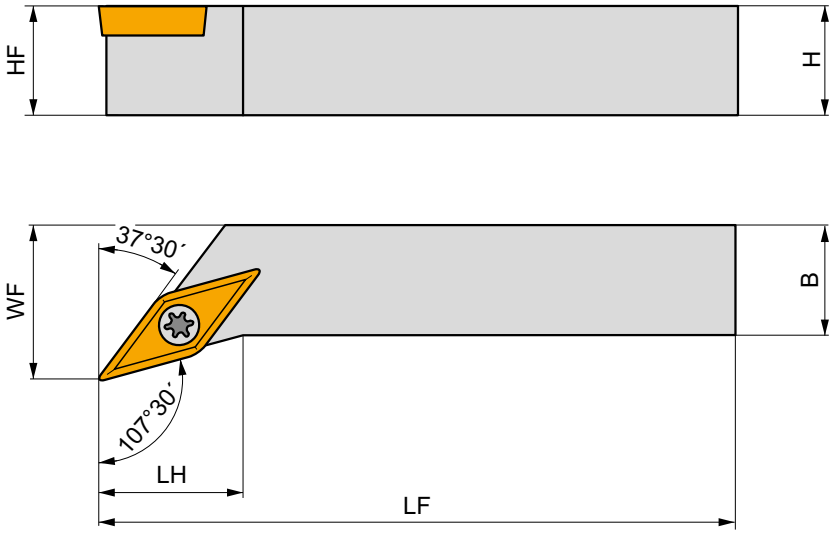
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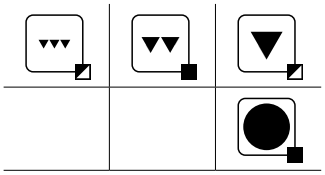


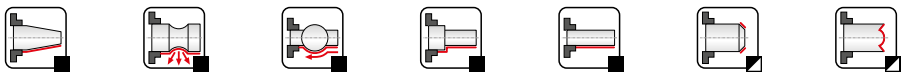
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 107,5 °, para Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo VB .. 11 ou 16 e VC .. 11 ou 16. Adequado para torneamento exterior frontal e longitudinal com esquadria, cónico, frontal, de cópia longitudinal até 35 ° e chanfrar. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**SVHBR 1616 H 11**	16	16	16	20	100	14	0	0	0.21	GI194	SO1
	SVHCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCR 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.68	GI017	SV10
L	**SVHBL 1616 H 11**	16	16	16	20	100	14	0	0	0.19	GI194	SO1
	SVHCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCL 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.07	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
SO1	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVJB(C)(RL) EXT

P M K N S H

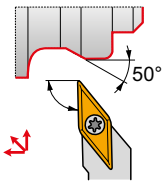
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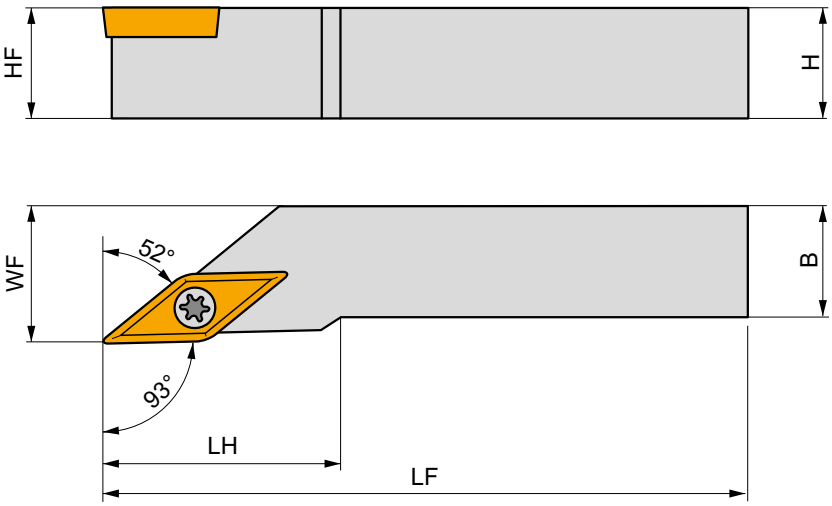
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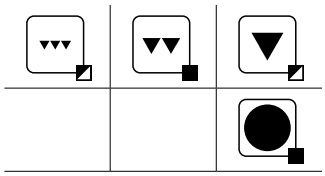


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 93 °, para pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal exterior com esquadria, torneamento cónico, de cópia até 50 ° e chanfrar. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SVJBR 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBR 1616 H 11	16	16	16	20	100	20	0	0	0.20	GI194	S01
	SVJCR 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCR 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCR 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCR 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCR 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.35	GI017	SV10
	SVJCR 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.68	GI017	SV10
	SVJCR 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10
L	SVJBL 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBL 1616 H 11	16	16	16	20	100	20	0	0	0.19	GI194	S01
	SVJCL 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCL 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCL 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCL 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCL 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.40	GI017	SV10
	SVJCL 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.70	GI017	SV10
	SVJCL 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVPB(C)(RL) EXT

P M K N S H

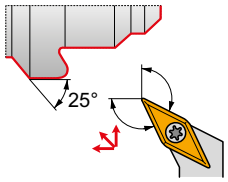
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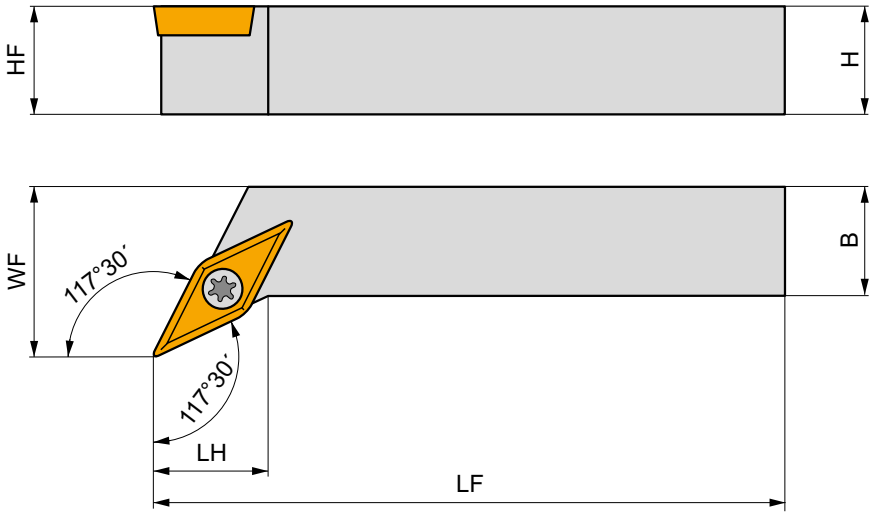
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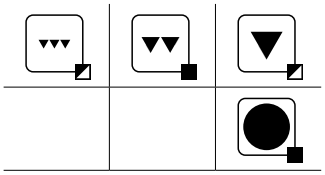


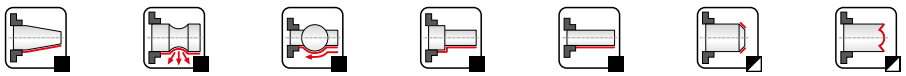
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 117,5 °, para Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo VB .. 11 ou 16 e VC .. 11 ou 16. Adequado para torneamento exterior frontal e longitudinal com esquadria, torneamento cónico, de cópia de frontal até 25 ° e chanfrar. Disponível com hastes de tamanho 16x16 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SVPBR 1616 H 11	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBR 2020 K 11	20	20	20	25	125	12	0	0	0.41	GI194	S01
	SVPCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVPCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI017	SV10
	SVPCR 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10
L	SVPBL 1616 H 11	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBL 2020 K 11	20	20	20	25	125	12	0	0	0.39	GI194	S01
	SVPCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.70	GI017	SV10
	SVPCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.70	GI017	SV10
	SVPCL 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVVB(C)N EXT

P M K N S H

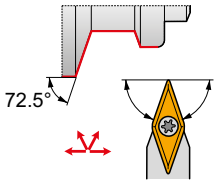
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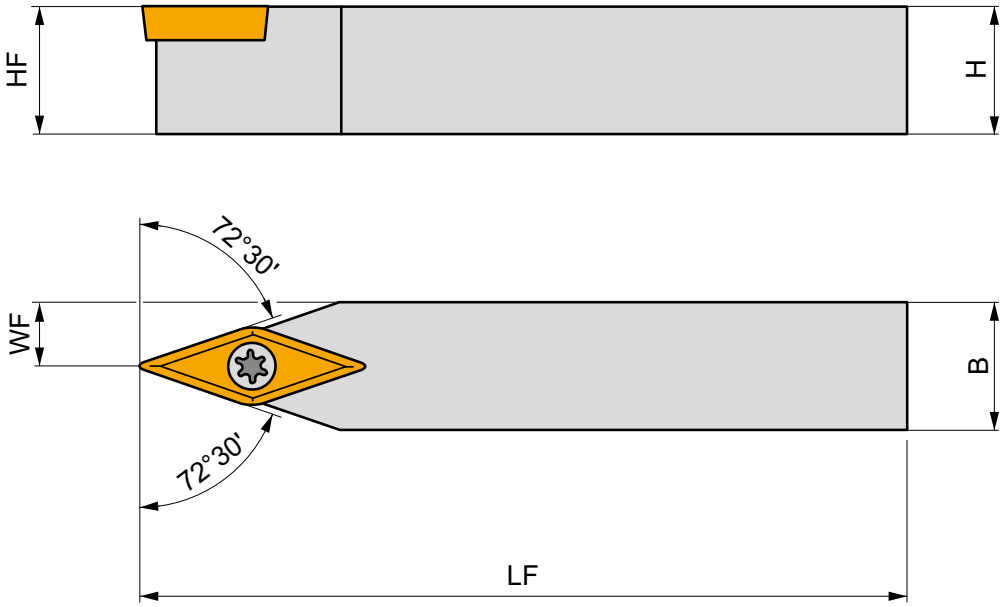
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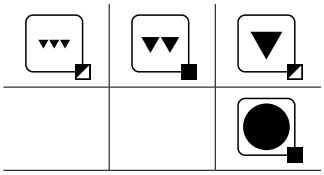


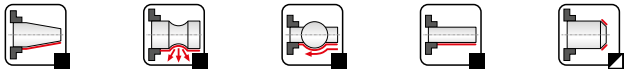
Porta-Ferramenta de Exterior, Fixação por Parafuso, Ângulo de 72,5 °, para Pastilhas VB / VC ...

Porta-ferramentas de exterior neutro com fixação por parafuso para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal exterior sem esquadria, torneamento cónico, de cópia até 72,5 ° e torneamento de chanfro. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
N	**SVVBN 1212 F 11**	12	12	12	6	80	–	0	0	0.11	GI194	S01
	SVVBN 1616 H 11	16	16	16	8	100	–	0	0	0.18	GI194	S01
	SVVBN 2020 K 11	20	20	20	10	125	–	0	0	0.38	GI194	S01
	SVVCN 1212 N 13	12	12	12	6	160	–	0	0	0.19	GI211	SV21
	SVVCN 1616 H 13	16	16	16	8	100	–	0	0	0.20	GI211	SV21
	SVVCN 2020 K 13	20	20	20	10	125	–	0	0	0.36	GI211	SV22
	SVVCN 2525 M 13	25	25	25	12.5	150	–	0	0	0.66	GI211	SV22
	SVVCN 2020 K 16-M-A	20	20	20	10	125	–	0	0	0.34	GI017	SV10
	SVVCN 2525 M 16-M-A	25	25	25	12.5	150	–	0	0	0.68	GI017	SV10
	SVVCN 3225 P 16-M-A	32	25	32	12.5	170	–	0	0	0.98	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVXB(C)(RL) EXT

P M K N S H

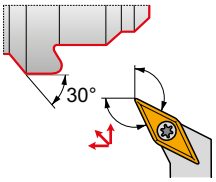
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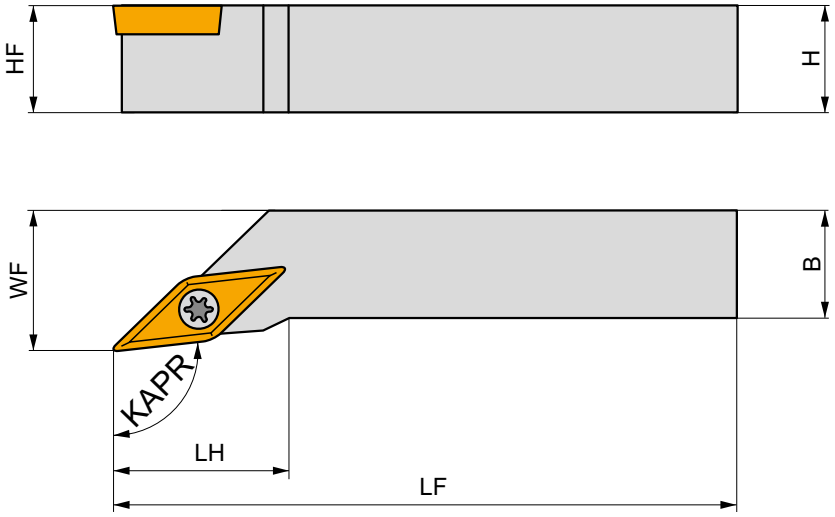
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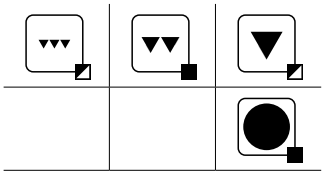


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 98/113 °, para Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal com esquadria, torneamento cónico, de cópia até 30 ° e chanfrar. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	KAPR (°)	LAMS (°)	GAMO (°)	kg		
R	SVXBR 1212 F 11	12	12	12	16	80	20	98	0	0	0.09	GI194	S01
	SVXBR 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	S01
	SVXCR 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCR 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.41	GI017	SV10
	SVXCR 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.68	GI017	SV10
	SVXCR 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	1.00	GI017	SV10
L	SVXBL 1212 F 11	12	12	12	16	80	20	98	0	0	0.09	GI194	S01
	SVXBL 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	S01
	SVXCL 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCL 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.38	GI017	SV10
	SVXCL 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.69	GI017	SV10
	SVXCL 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

NEW

C.-SVHB(RL) EXT

P M K N S H

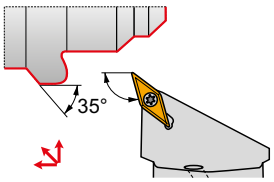
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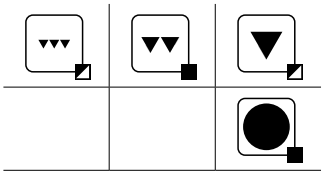
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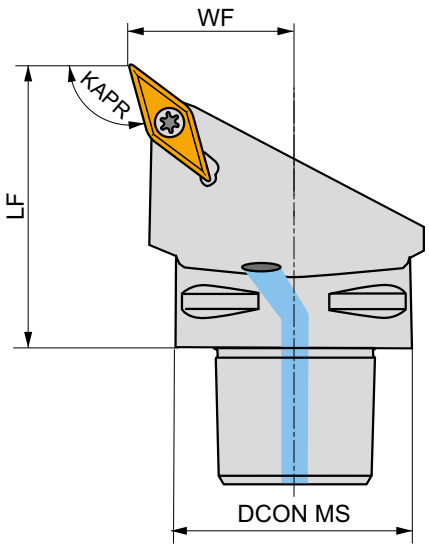


Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Âng. 107,5 °, Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e refrigeração interna, para pastilhas positivas VB .. 16 e VC .. 16. Adequado para torneamento longitudinal com esquadria, cónico, de cópia até 35 ° e chanfrar. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-SVHBR-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBR-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBR-45065-16	63	45	65	107.5	0	0	✓	1.13	GI017	C-SV16S-2
L	C4-SVHBL-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBL-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBL-45065-16	63	45	65	107.5	0	0	✓	1.12	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

NEW

C.-SVJB(RL) EXT

P M K N S H

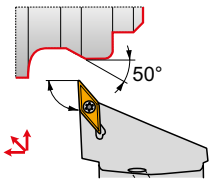
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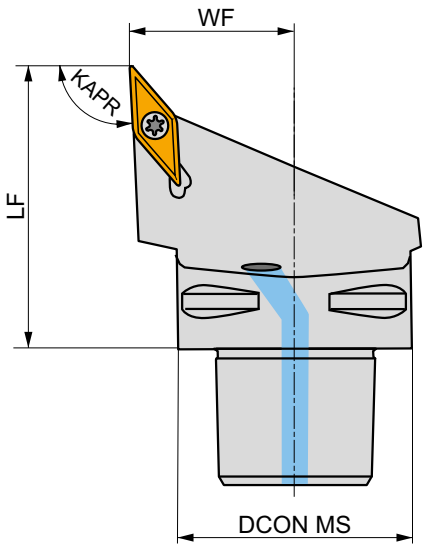
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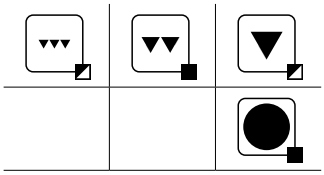


Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo 93 °, Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e refrigeração interna, para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal com esquadria, cónico, de cópia até 50 ° e chanfrar. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C3 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C3-SVJBR-22040-11-B1	32	22	40	93	0	0	✓	0.17	GI194	C-SV11
	C4-SVJBR-27050-11-B1	40	27	50	93	0	0	✓	0.34	GI194	C-SV11
	C4-SVJBR-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBR-35060-16	50	35	60	93	0	0	✓	0.63	GI017	C-SV16S-2
	C6-SVJBR-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2
L	C4-SVJBL-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBL-35060-16	50	35	60	93	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVJBL-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
C-SV11	US 2003-T07P	0.8	M 2.5	6.5	–	–	FLAG T07P	CN 034-01
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

NEW

C.-SVVBN EXT

P M K N S H

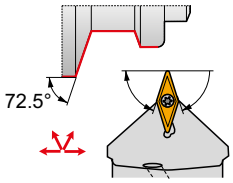
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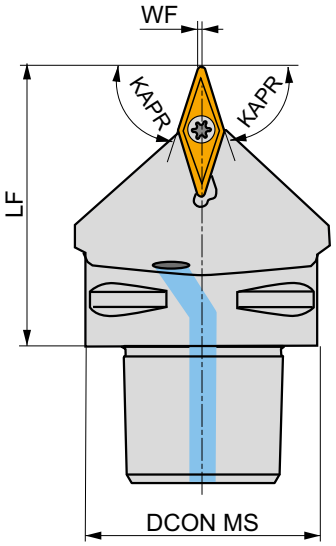
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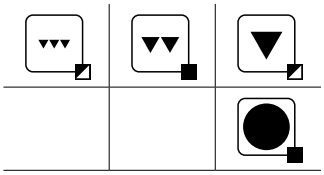


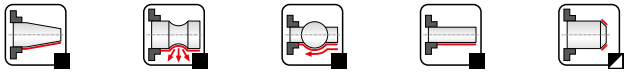
Ferramenta de Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 72,5 °, p/ Pastilhas VB / VC . . .

Porta-ferramentas de exterior neutro, com refrigeração interna, para pastilhas positivas VB .. 16 e VC .. 16. Adequado para torneamento longitudinal exterior sem esquadria, cónico, torneamento de cópia até 72,5 ° e torneamento de chanfro. Disponível com haste poligonal PSC (Polygon Shank Coupling) de tamanho C4 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
N	**C4-SVVBN-00050-16**	40	0.6	50	72.5	0	0	✓	0.32	GI017	C-SV16S-1
	C5-SVVBN-00060-16	50	0.6	60	72.5	0	0	✓	0.56	GI017	C-SV16S-2
	C6-SVVBN-00065-16	63	0.6	65	72.5	0	0	✓	0.99	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

SVJB(RL) INT

P M K N S H

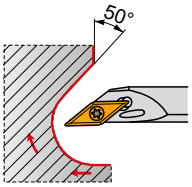
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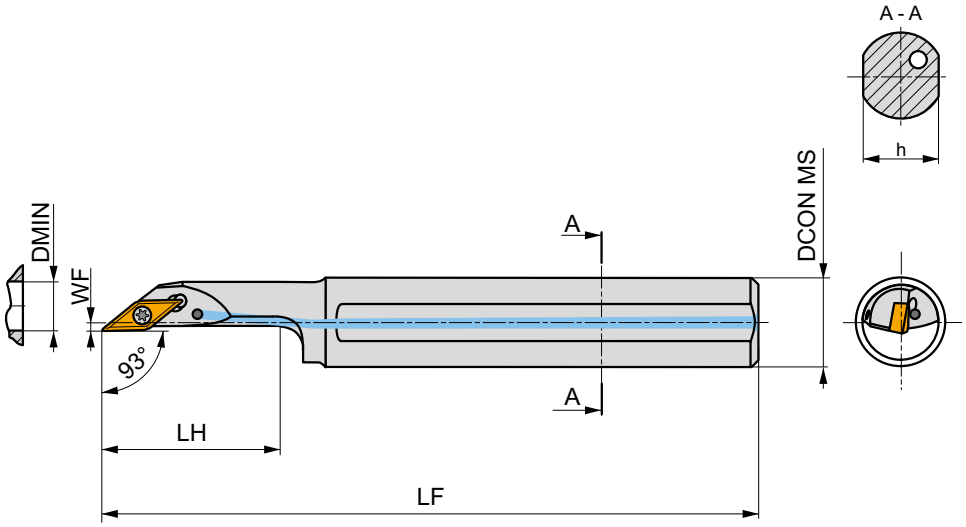
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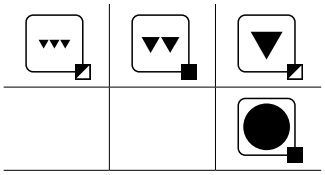


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 93 ° para Pastilhas VB/VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas VB .. 11 e VC .. 11. Diâmetro mínimo de torneamento Ø25 mm. Adequado para torneamento frontal de cópia abaixo de 50°. Disponível com hastes de Ø20 e Ø25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	A20R-SVJBR 11	20	25	2	18	200	40	-5	-5	✓	0.44	GI194	S07
	A25S-SVJBR 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07
L	A20R-SVJBL 11	20	25	2	18	200	40	-5	-5	✓	0.42	GI194	S07
	A25S-SVJBL 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07

GI194	VB.. 1103..	VC.. 1103..

		Nm			
S07	US 2506-T07P	0.9	M 2.5	6.3	FLAG T07P

SVQB(C)(RL) INT

P M K N S H

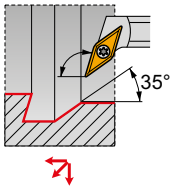
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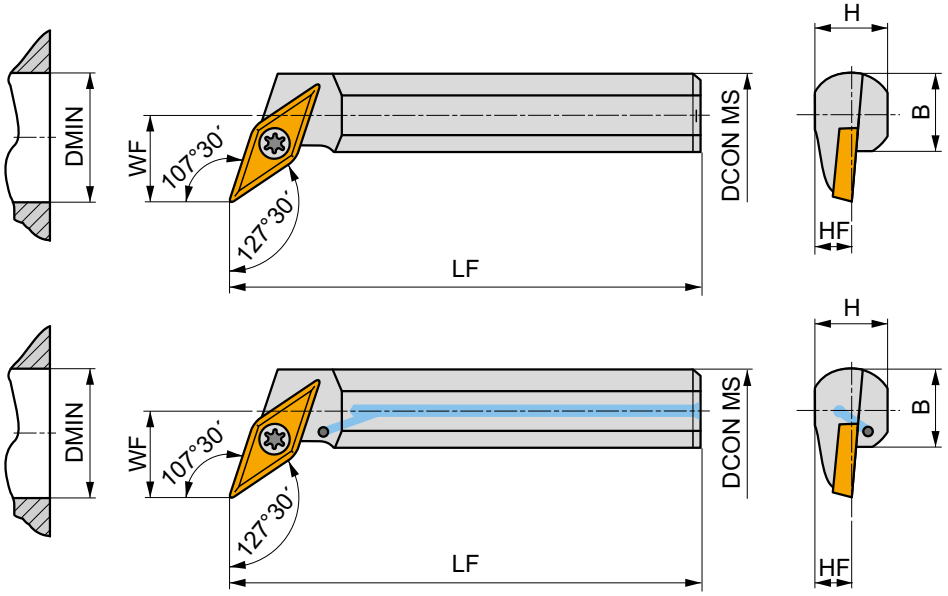
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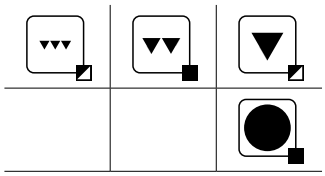


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 107,5 ° para Pastilhas VB/VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 107,5° para pastilhas VB ../ VC .. 11 e 16. Diâmetro mínimo de torneamento Ø20 mm. Adequado para uma ampla gama de operações de torneamento interno. Disponível com hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A16R-SVQBR 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBR 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCR 13	16	21	11	15	15	200	-6	0	✓	0.30	GI211	SV21
	A20S-SVQCR 13	20	25	13	18	18.5	250	-4	0	✓	0.12	GI211	SV21
	S25T-SVQCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVQCR 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCR 16-A	40	50	27	38	38	400	-5	0	–	3.80	GI017	SV10
L	A16R-SVQBL 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCL 13	16	21	11	15	15	200	-6	0	✓	0.29	GI211	SV21
	A20S-SVQCL 13	20	25	13	18	18.5	250	-4	0	✓	0.54	GI211	SV21
	S25T-SVQCL 16	25	32	17	23	23	300	-7	0	–	1.09	GI017	S08
	S32U-SVQCL 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–

SVUB(C)(RL) INT

P M K N S H

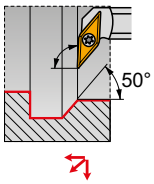
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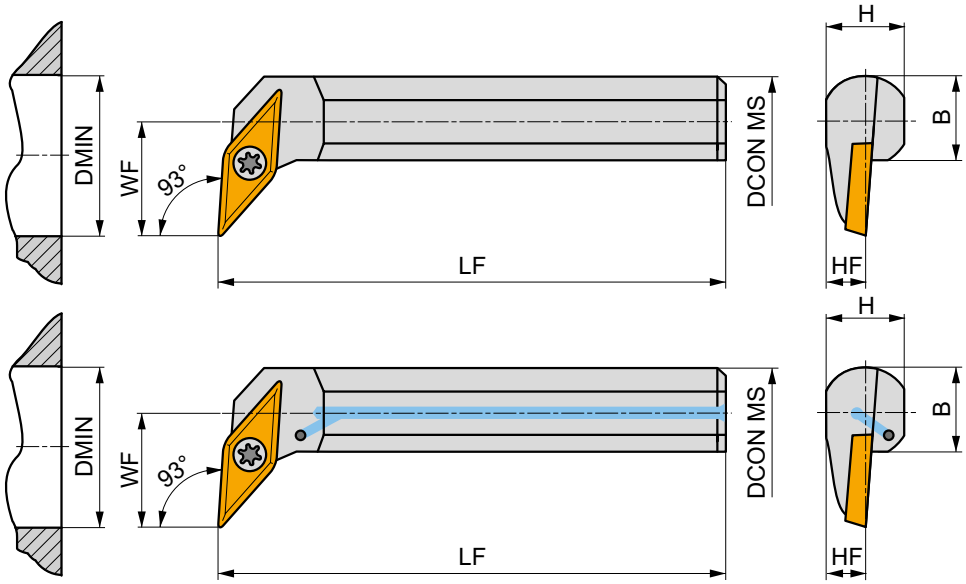
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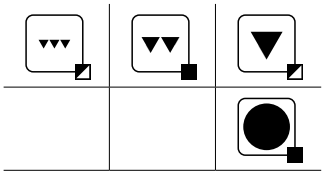


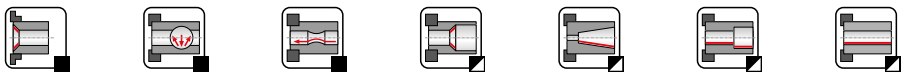
Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 93 ° para Pastilhas VB/VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas VB ../ VC .. 11 e 16. Diâmetro mínimo de torneamento Ø20 mm. Para uma ampla gama de operações de torneamento interno e de cópia abaixo de 50°. Disponíveis hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A16R-SVUBR 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBR 11	20	25	13	18	18.8	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCR 13	20	25	13	19	18.5	250	-4	2	✓	0.40	GI211	SV21
	A25T-SVUCR 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCR 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCR 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCR 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10
L	A16R-SVUBL 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCL 13	20	25	13	19	18.5	250	-4	2	✓	0.32	GI211	SV21
	A25T-SVUCL 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCL 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCL 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCL 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

NEW

C.-SVQB(RL) INT

P M K N S H

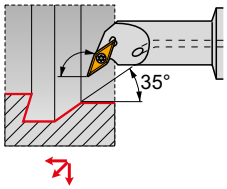
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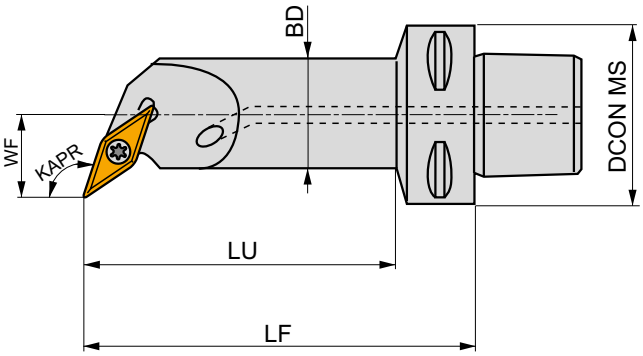
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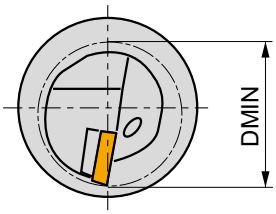


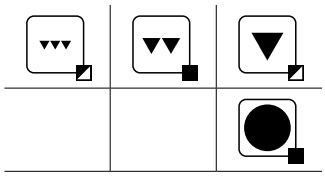
Ferramenta de Int. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 107,5 °, Pastilhas VB / VC ..

Porta-ferramentas de interior à direita ou à esquerda, c/ fixação por parafuso e refrigeração interna, ângulo de corte de 107,5° para pastilhas VB .. 16 ou VC .. 16. Diâmetro mínimo de torneamento Ø33 mm. Adequado para uma ampla gama de operações de torneamento interno. Haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 e C5 com opção de comprimentos. Corpo tratado para maior vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-SVQBR-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
R	C5-SVQBR-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.67	GI017	SV16
L	C4-SVQBL-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
L	C5-SVQBL-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.68	GI017	SV16

GI017	VB.. 1604..	VC.. 1604..

SV16	US 2010-T15P	3.0 Nm	M 3.5	10.1	FLAG T15P/3,5

VC

07/ 11/ 13/ 16

PASTILHAS DE METAL DURO

VCGT



186

VCGW



189

VCGX



189

VCMT



190

VCMW



191

PASTILHAS PCD

VCMW PCD

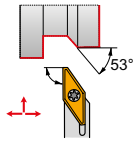


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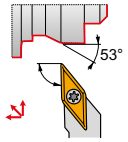
CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
VCGT **07**0204E-FF2	SVGCR 1010 M **07**

TORNEAMENTO ISO - EXTERIOR

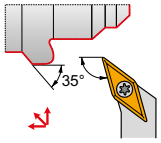
SVAC(RL)-DC EXT

90°	VC..
	13
10×10 25×25	
193	186 – 192

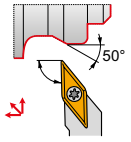
SVGC(RL) EXT

90°	VC..
	07
08×08 16×16	
194	186 – 192

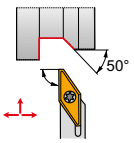
SVHB(C)(RL) EXT

107°30´	VB, VC..
	11 16
16×16 25×25	
195	168 – 171 186 – 192

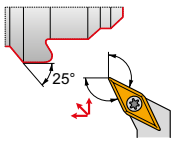
SVJB(C)(RL) EXT

93°	VB, VC..
	11 13 16
12×12 32×25	
196	168 – 171 186 – 192

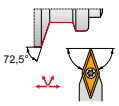
SVJC(RL)-DC EXT

93°	VC..
	13
10×10 25×25	
197	186 – 192

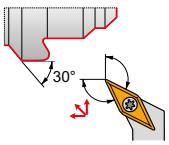
SVPB(C)(RL) EXT

117°30´	VB, VC..
	11 16
16×16 32×25	
198	168 – 171 186 – 192

SVVB(C)N EXT

72°30´	VB, VC..
	11 13 16
12×12 32×25	
199	168 – 171 186 – 192

SVXB(C)(RL) EXT

98°	VB, VC..
	11 13 16
12×12 32×25	
200	168 – 171 186 – 192

VC

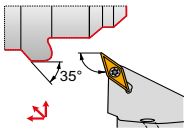
07/ 11/ 13/ 16

C.-SVHB(RL) EXT NEW

107°30´

VB, VC..

16



C4 / C6

201

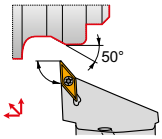
168 – 171
186 – 192

C.-SVJB(RL) EXT NEW

93°

VB, VC..

11
16



C3 / C6

202

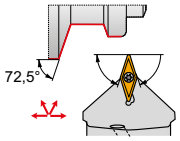
168 – 171
186 – 192

C.-SVVBN EXT NEW

72°30´

VB, VC..

16



C4 / C6

203

168 – 171
186 – 192

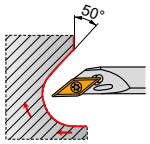
TORNEAMENTO ISO - INTERIOR

SVJB(RL) INT

93°

VB, VC..

11



ØDmin

25 / 32

204

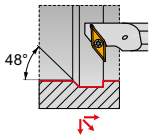
168 – 171
186 – 192

SVLC(RL) INT

95°

VC..

13



ØDmin

27 / 43

205

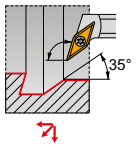
186 – 192

SVQB(C)(RL) INT

107°30´

VB, VC..

11
13
16



ØDmin

20 / 50

206

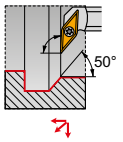
168 – 171
186 – 192

SVUB(C)(RL) INT

93°

VB, VC..

11
13
16



ØDmin

20 / 50

207

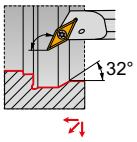
168 – 171
186 – 192

SVXC(RL) INT

113°

VC..

07



ØDmin

12,5 / 17,5

208

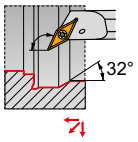
186 – 192

SVXC(RL)-E INT

113°

VC..

07



ØDmin

12,5 / 17,5

209

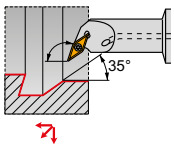
186 – 192

C.-SVQB(C)(RL) INT NEW

108°

VB, VC..

16



ØDmin

33

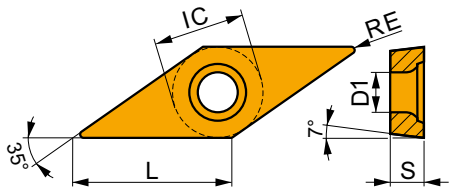
210

168 – 171
186 – 192

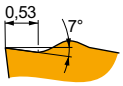
VCGT

PRAMET

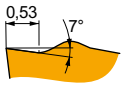
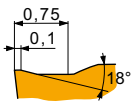
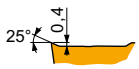
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0702	3.970	2.20	6.90	2.38
1102-SF3	6.350	2.80	11.10	2.58
1103	6.350	2.80	11.10	3.18
1103-SF3	6.350	2.80	11.10	3.43
1303	7.940	3.40	13.80	3.18
1303-AL	7.940	3.40	13.80	3.43
1303-SF3	7.940	3.40	13.80	3.43
1604	9.525	4.40	16.60	4.76
1604-SF3	9.525	4.40	16.60	5.01



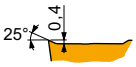
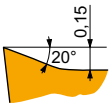
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a ligeiramente interrompidos.																				
VCGT 070202F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	315	0.12	1.0	–	–	–	–	–	–
VCGT 110302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	300	0.12	1.5	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	465	0.12	0.8	–	–	–	–	–	–
VCGT 110304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	240	0.24	1.5	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	375	0.24	0.8	–	–	–	–	–	–
VCGT 130302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	285	0.12	1.7	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	420	0.12	1.7	–	–	–	–	–	–
VCGT 130304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	240	0.24	1.7	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	345	0.24	1.7	–	–	–	–	–	–
VCGT 130308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	210	0.48	1.7	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	315	0.48	1.7	–	–	–	–	–	–
VCGT 160402F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	285	0.12	2.4	–	–	–	–	–	–
	T0315	0.2	–	–	–	–	–	–	–	–	–	420	0.12	2.4	–	–	–	–	–	–
VCGT 160404F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	225	0.24	2.4	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	330	0.24	2.4	–	–	–	–	–	–
VCGT 160408F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	210	0.48	2.4	–	–	–	–	–	–
	T0315	0.8	–	–	–	–	–	–	–	–	–	300	0.48	2.4	–	–	–	–	–	–
VCGT 160412F-AL	**HF7**	1.2	–	–	–	–	–	–	–	–	–	180	0.72	2.4	–	–	–	–	–	–
	T0315	1.2	–	–	–	–	–	–	–	–	–	270	0.72	2.4	–	–	–	–	–	–
																				
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino e cortes contínuos a ligeiramente interrompidos.																				
VCGT 070202E-FF2	**T8315**	0.2	150	0.05	0.8	–	–	–	140	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	145	0.05	0.8	–	–	–	135	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	190	0.05	0.8	–	–	–	155	0.05	0.8	–	–	–	–	–	–	–	–	–
VCGT 070204E-FF2	**T8315**	0.4	125	0.12	0.8	–	–	–	115	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	120	0.12	0.8	–	–	–	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	145	0.12	0.8	–	–	–	120	0.12	0.8	–	–	–	–	–	–	–	–	–
VCGT 130302E-FF2	**T5315**	0.2	250	0.05	1.0	–	–	–	235	0.05	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.2	165	0.05	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.2	140	0.05	1.0	–	–	–	130	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.2	185	0.05	1.0	–	–	–	150	0.05	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.2	265	0.05	1.0	–	–	–	250	0.05	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.2	240	0.05	1.0	–	–	–	225	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.2	240	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
VCGT 130304E-FF2	**T5315**	0.4	◪ 195	0.12	1.0	–	–	–	■ 185	0.12	1.0	–	–	–	–	–	–	–	–	–
	T7325	0.4	◪ 135	0.12	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 115	0.12	1.0	–	–	–	■ 105	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 140	0.12	1.0	–	–	–	◪ 115	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 195	0.12	1.0	–	–	–	◪ 185	0.12	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 175	0.12	1.0	–	–	–	◪ 165	0.12	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 245	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VCGT 130308E-FF2	**T7325**	0.8	◪ 145	0.17	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 200	0.17	1.0	–	–	–	◪ 190	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.17	1.0	–	–	–	◪ 170	0.17	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.8	■ 245	0.10	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria FM2 para operações de maquinação de acabamento a média, e cortes contínuos a interrompidos.																				
VCGT 130308E-FM2	**T8330**	0.8	■ 125	0.17	1.0	◪ 75	0.15	1.0	■ 115	0.17	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 145	0.17	1.0	◪ 80	0.15	1.0	◪ 120	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.17	1.0	◪ 105	0.15	1.0	◪ 170	0.17	1.0	–	–	–	–	–	–	–	–	–
																				
Geometria NF2 com desenho positivo para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																				
VCGT 130302E-NF2	**H07**	0.2	–	–	–	◪ 60	0.09	1.0	◪ 95	0.10	1.0	◪ 310	0.12	1.0	■ 30	0.07	0.8	–	–	–
	T6310	0.2	◪ 125	0.07	1.0	■ 90	0.06	1.0	◪ 100	0.07	1.0	◪ 375	0.08	1.0	■ 35	0.06	0.8	–	–	–
	T7325	0.2	◪ 150	0.07	1.0	■ 115	0.06	1.0	–	–	–	–	–	–	■ 45	0.06	0.8	–	–	–
	T7335	0.2	◪ 150	0.07	1.0	■ 115	0.06	1.0	–	–	–	–	–	–	■ 45	0.06	0.8	–	–	–
	T9315	0.2	◪ 200	0.10	1.0	–	–	–	◪ 190	0.10	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.2	◪ 210	0.07	1.0	■ 125	0.06	1.0	◪ 195	0.07	1.0	–	–	–	◪ 45	0.06	0.8	–	–	–
	T9335	0.2	◪ 155	0.10	1.0	■ 90	0.09	1.0	–	–	–	–	–	–	◪ 30	0.07	0.8	–	–	–
	TT010	0.2	◪ 240	0.05	0.5	◪ 140	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–
VCGT 130304E-NF2	**H07**	0.4	–	–	–	◪ 60	0.11	1.0	◪ 95	0.12	1.0	◪ 310	0.14	1.0	■ 30	0.11	0.8	–	–	–
	T5315	0.4	◪ 195	0.12	1.0	–	–	–	◪ 185	0.12	1.0	–	–	–	–	–	–	–	–	–
	T6310	0.4	◪ 115	0.12	1.0	■ 80	0.11	1.0	◪ 90	0.12	1.0	◪ 345	0.14	1.0	■ 30	0.11	0.8	–	–	–
	T7325	0.4	◪ 135	0.12	1.0	■ 105	0.11	1.0	–	–	–	–	–	–	■ 40	0.08	0.8	–	–	–
	T7335	0.4	◪ 135	0.12	1.0	■ 105	0.11	1.0	–	–	–	–	–	–	■ 40	0.08	0.8	–	–	–
	T9315	0.4	◪ 210	0.10	1.0	–	–	–	◪ 195	0.10	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.4	◪ 175	0.12	1.0	■ 105	0.11	1.0	◪ 165	0.12	1.0	–	–	–	◪ 35	0.08	0.8	–	–	–
	T9335	0.4	◪ 150	0.12	1.0	■ 90	0.11	1.0	–	–	–	–	–	–	◪ 30	0.11	0.8	–	–	–
	TT010	0.4	◪ 245	0.06	0.5	◪ 145	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–
VCGT 130308E-NF2	**T5315**	0.8	◪ 205	0.17	1.0	–	–	–	◪ 190	0.17	1.0	–	–	–	–	–	–	–	–	–
	T6310	0.8	◪ 125	0.17	1.0	■ 90	0.15	1.0	◪ 100	0.17	1.0	◪ 375	0.20	1.0	■ 35	0.12	0.8	–	–	–
	T7325	0.8	◪ 145	0.17	1.0	■ 110	0.15	1.0	–	–	–	–	–	–	■ 45	0.12	0.8	–	–	–
	T7335	0.8	◪ 140	0.17	1.0	■ 105	0.15	1.0	–	–	–	–	–	–	■ 45	0.12	0.8	–	–	–
	T9315	0.8	◪ 200	0.17	1.0	–	–	–	◪ 190	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	◪ 180	0.17	1.0	■ 105	0.15	1.0	◪ 170	0.17	1.0	–	–	–	◪ 40	0.12	0.8	–	–	–
	T9335	0.8	◪ 155	0.18	1.0	■ 90	0.16	1.0	–	–	–	–	–	–	◪ 30	0.16	0.8	–	–	–
	TT010	0.8	◪ 245	0.10	0.8	◪ 145	0.09	0.8	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria SF2 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																				
VCGT 130301E-SF2	**H07**	0.1	–	–	–	◪ 80	0.05	1.0	–	–	–	◪ 405	0.06	1.0	■ 40	0.04	0.8	–	–	–
	T6310	0.1	◪ 140	0.05	1.0	■ 100	0.05	1.0	–	–	–	◪ 420	0.06	1.0	■ 40	0.04	0.8	–	–	–

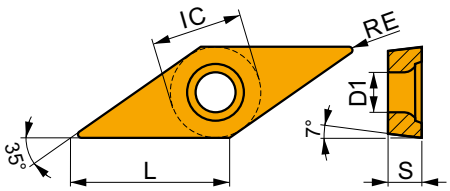
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			 Geometria SF2 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																	
VCGT 130302E-SF2	**H07**	0.2	–	–	–	80	0.05	1.0	–	–	–	405	0.06	1.0	40	0.04	0.8	–	–	–
	HF7	0.2	–	–	–	90	0.05	1.0	–	–	–	450	0.06	1.0	–	–	–	–	–	–
	T6310	0.2	140	0.05	1.0	100	0.05	1.0	–	–	–	420	0.06	1.0	40	0.04	0.8	–	–	–
VCGT 130304E-SF2	**H07**	0.4	–	–	–	65	0.09	1.0	–	–	–	335	0.12	1.0	30	0.07	0.8	–	–	–
	HF7	0.4	–	–	–	75	0.09	1.0	–	–	–	375	0.12	1.0	–	–	–	–	–	–
	T6310	0.4	125	0.10	1.0	90	0.09	1.0	–	–	–	375	0.12	1.0	35	0.07	0.8	–	–	–
VCGT 130308E-SF2	**H07**	0.8	–	–	–	75	0.09	1.0	–	–	–	390	0.12	1.0	35	0.08	0.8	–	–	–
	HF7	0.8	–	–	–	85	0.09	1.0	–	–	–	435	0.12	1.0	–	–	–	–	–	–
	T6310	0.8	145	0.10	1.0	100	0.09	1.0	–	–	–	435	0.12	1.0	40	0.08	0.8	–	–	–
			 Geometria SF3 com desenho altamente positivo para operações de maquinação de acabamento a acabamento fino e cortes contínuos.																	
VCGT 070202E-SF3	**H07**	0.2	–	–	–	80	0.05	0.8	130	0.05	0.8	415	0.06	0.8	40	0.04	0.6	–	–	–
	T6310	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
VCGT 070204E-SF3	**T6310**	0.4	125	0.10	0.8	90	0.09	0.8	100	0.10	0.8	375	0.12	0.8	35	0.07	0.6	25	0.15	1.0
VCGT 110201E-SF3	**T6310**	0.1	140	0.05	0.5	100	0.05	0.5	110	0.05	0.5	420	0.06	0.5	40	0.04	0.4	25	0.15	1.0
VCGT 110202E-SF3	**H07**	0.2	–	–	–	80	0.05	0.8	130	0.05	0.8	415	0.06	0.8	40	0.04	0.6	–	–	–
	T6310	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
	T8315	0.2	150	0.05	0.8	90	0.05	0.8	140	0.05	0.8	450	0.06	0.8	35	0.04	0.6	30	0.15	1.0
VCGT 110204E-SF3	**H07**	0.4	–	–	–	65	0.09	0.8	105	0.10	0.8	335	0.12	0.8	30	0.07	0.6	–	–	–
	T6310	0.4	125	0.10	0.8	90	0.09	0.8	100	0.10	0.8	375	0.12	0.8	35	0.07	0.6	25	0.15	1.0
	T8315	0.4	135	0.10	0.8	80	0.09	0.8	125	0.10	0.8	405	0.12	0.8	30	0.07	0.6	25	0.15	1.0
VCGT 110301E-SF3	**T6310**	0.1	140	0.05	0.5	100	0.05	0.5	110	0.05	0.5	420	0.06	0.5	40	0.04	0.4	25	0.15	1.0
VCGT 110302E-SF3	**T6310**	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
VCGT 110304E-SF3	**T6310**	0.4	125	0.10	0.8	90	0.09	0.8	100	0.10	0.8	375	0.12	0.8	35	0.07	0.6	25	0.15	1.0
VCGT 130302E-SF3	**H07**	0.2	–	–	–	80	0.05	0.8	130	0.05	0.8	415	0.06	0.8	40	0.04	0.6	–	–	–
	T6310	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
	T8315	0.2	150	0.05	0.8	90	0.05	0.8	140	0.05	0.8	450	0.06	0.8	35	0.04	0.6	30	0.15	1.0
VCGT 130304E-SF3	**H07**	0.4	–	–	–	65	0.09	1.0	105	0.10	1.0	335	0.12	1.0	30	0.07	0.8	–	–	–
	T6310	0.4	125	0.10	1.0	90	0.09	1.0	100	0.10	1.0	375	0.12	1.0	35	0.07	0.8	25	0.15	1.0
	T8315	0.4	130	0.10	1.0	75	0.09	1.0	120	0.10	1.0	390	0.12	1.0	30	0.07	0.8	25	0.15	1.0
VCGT 130308E-SF3	**H07**	0.8	–	–	–	75	0.09	1.0	120	0.10	1.0	390	0.12	1.0	35	0.08	0.8	–	–	–
	T6310	0.8	145	0.10	1.0	100	0.09	1.0	115	0.10	1.0	435	0.12	1.0	40	0.08	0.8	25	0.15	1.0
	T8315	0.8	155	0.10	1.0	90	0.09	1.0	145	0.10	1.0	465	0.12	1.0	35	0.08	0.8	30	0.15	1.0
VCGT 160402E-SF3	**T6310**	0.2	145	0.05	0.8	100	0.05	0.8	115	0.05	0.8	435	0.06	0.8	40	0.04	0.6	25	0.15	1.0
VCGT 160404E-SF3	**H07**	0.4	–	–	–	65	0.09	1.0	105	0.10	1.0	335	0.12	1.0	30	0.07	0.8	–	–	–
	T6310	0.4	125	0.10	1.0	90	0.09	1.0	100	0.10	1.0	375	0.12	1.0	35	0.07	0.8	25	0.15	1.0
	T8315	0.4	130	0.10	1.0	75	0.09	1.0	120	0.10	1.0	390	0.12	1.0	30	0.07	0.8	25	0.15	1.0
VCGT 160408E-SF3	**H07**	0.8	–	–	–	75	0.09	1.2	120	0.10	1.2	390	0.12	1.2	35	0.08	1.0	–	–	–
	T6310	0.8	145	0.10	1.2	100	0.09	1.2	115	0.10	1.2	435	0.12	1.2	40	0.08	1.0	25	0.15	1.0
	T8315	0.8	155	0.10	1.2	90	0.09	1.2	145	0.10	1.2	465	0.12	1.2	35	0.08	1.0	30	0.15	1.0
VCGT 160412E-SF3	**H07**	1.2	–	–	–	60	0.18	1.2	95	0.20	1.2	310	0.24	1.2	30	0.14	1.0	–	–	–
	T6310	1.2	125	0.20	1.2	90	0.18	1.2	100	0.20	1.2	375	0.24	1.2	35	0.14	1.0	25	0.15	1.0

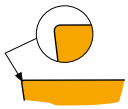
VCGW

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1303	7.940	3.40	13.80	3.18



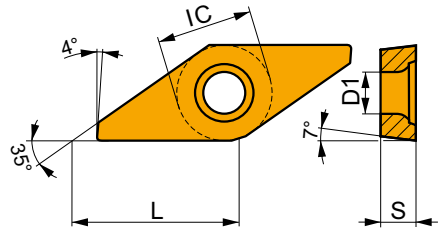
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			E																	
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
VCGW 130302	**T5305**	0.2	–	–	–	–	–	–	■ 170	0.08	1.3	–	–	–	–	–	–	◪ 35	0.15	1.0
VCGW 130304	**T5305**	0.4	–	–	–	–	–	–	■ 165	0.10	1.3	–	–	–	–	–	–	◪ 35	0.15	1.0
VCGW 130308	**T5305**	0.8	–	–	–	–	–	–	■ 160	0.18	1.3	–	–	–	–	–	–	◪ 30	0.15	1.0

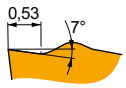
VCGX

PRAMET

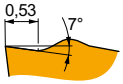
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1303	7.940	3.40	13.80	3.18



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc	M f	M ap	K vc	K f	K ap	N vc	N f	N ap	S vc	S f	S ap	H vc	H f	H ap
			U E																	
			Geometria FR-FF2 com desenho positivo à direita para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																	
VCGX 130300FR-FF2	**T6310**	0.0	■	140	0.05	1.0	–	–	–	■	110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.0	◪	150	0.05	1.0	–	–	–	■	140	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.0	■	240	0.05	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–
VCGX 130301FR-FF2	**T6310**	0.1	■	140	0.05	1.0	–	–	–	■	110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.1	◪	150	0.05	1.0	–	–	–	■	140	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.1	■	240	0.05	0.5	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

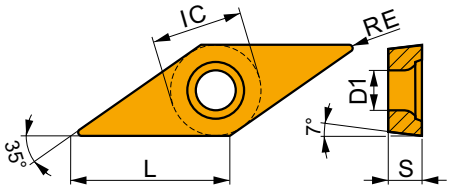
Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
VCGX 130300FL-FF2	**T6310**	0.0	140	0.05	1.0	–	–	–	110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.0	150	0.05	1.0	–	–	–	140	0.05	1.0	–	–	–	–	–	–	–	–	–
	TT010	0.0	240	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VCGX 130301FL-FF2	**T6310**	0.1	140	0.05	1.0	–	–	–	110	0.05	1.0	–	–	–	–	–	–	–	–	–
	T8315	0.1	150	0.05	1.0	–	–	–	140	0.05	1.0	–	–	–	–	–	–	–	–	–

Geometria FL-FF2 com desenho positivo à esquerda para operações de acabamento a acabamento fino, e cortes contínuos.

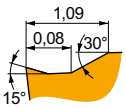
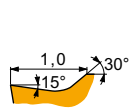
VCMT

PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1103	6.350	2.80	11.10	3.18
1604	9.525	4.40	16.60	4.76



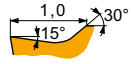
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
VCMT 160404E-FM	**T7325**	0.4	125	0.19	1.2	95	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	130	0.12	1.2	75	0.11	1.2	120	0.12	1.2	390	0.14	1.2	–	–	–	–	–	–
	T8430	0.4	150	0.12	1.2	80	0.11	1.2	125	0.12	1.2	420	0.14	1.2	–	–	–	–	–	–
	T9315	0.4	210	0.12	1.2	–	–	–	195	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	155	0.19	1.2	90	0.17	1.2	145	0.19	1.2	–	–	–	–	–	–	–	–	–
VCMT 160408E-FM	**T7325**	0.8	155	0.17	1.2	120	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	135	0.17	1.2	80	0.15	1.2	125	0.17	1.2	405	0.20	1.2	–	–	–	–	–	–
	T8430	0.8	155	0.17	1.2	85	0.15	1.2	130	0.17	1.2	435	0.20	1.2	–	–	–	–	–	–
	T9315	0.8	220	0.17	1.2	–	–	–	205	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	195	0.17	1.2	115	0.15	1.2	185	0.17	1.2	–	–	–	–	–	–	–	–	–
																				
VCMT 110304E-UR	**T7325**	0.4	110	0.19	0.8	85	0.17	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	110	0.12	0.8	65	0.11	0.8	100	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	135	0.12	0.8	75	0.11	0.8	110	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	190	0.12	0.8	–	–	–	180	0.12	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	140	0.19	0.8	80	0.17	0.8	130	0.19	0.8	–	–	–	–	–	–	–	–	–
VCMT 110308E-UR	**T7325**	0.8	140	0.17	0.8	105	0.15	0.8	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	125	0.17	0.8	75	0.15	0.8	115	0.17	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.8	140	0.17	0.8	75	0.15	0.8	115	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	195	0.17	0.8	–	–	–	185	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	175	0.17	0.8	105	0.15	0.8	165	0.17	0.8	–	–	–	–	–	–	–	–	–

Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.

Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.

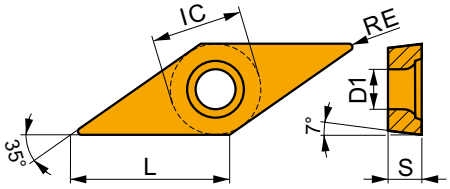
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
VCMT 160404E-UR	**T7325**	0.4	110	0.19	1.2	85	0.17	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.4	110	0.12	1.2	65	0.11	1.2	100	0.12	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.4	130	0.12	1.2	70	0.11	1.2	105	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	180	0.12	1.2	–	–	–	170	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	135	0.19	1.2	80	0.17	1.2	125	0.19	1.2	–	–	–	–	–	–	–	–	–
VCMT 160408E-UR	**T7325**	0.8	135	0.17	1.2	105	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	0.8	115	0.17	1.2	65	0.15	1.2	105	0.17	1.2	–	–	–	–	–	–	–	–	–
	T8430	0.8	135	0.17	1.2	75	0.15	1.2	110	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	190	0.17	1.2	–	–	–	180	0.17	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	170	0.17	1.2	100	0.15	1.2	160	0.17	1.2	–	–	–	–	–	–	–	–	–

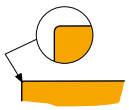
VCMW

PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1103	6.350	2.80	11.10	3.18
1604	9.525	4.40	16.60	4.76



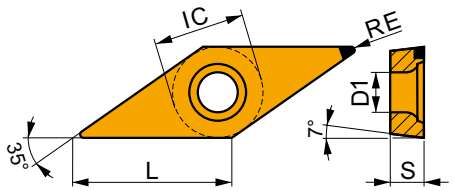
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
VCMW 110302	**T5305**	0.2	–	–	–	–	–	–	170	0.08	1.2	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.2	–	–	–	–	–	–	145	0.08	1.2	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.2	–	–	–	–	–	–	70	0.08	1.2	–	–	–	–	–	–	15	0.15	1.0
VCMW 110304	**T5305**	0.4	–	–	–	–	–	–	165	0.10	1.2	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	145	0.10	1.2	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	70	0.10	1.2	–	–	–	–	–	–	15	0.15	1.0
VCMW 160404	**T5305**	0.4	–	–	–	–	–	–	165	0.10	1.5	–	–	–	–	–	–	35	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	140	0.10	1.5	–	–	–	–	–	–	30	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	70	0.10	1.5	–	–	–	–	–	–	15	0.15	1.0
VCMW 160408	**T5305**	0.8	–	–	–	–	–	–	155	0.18	1.5	–	–	–	–	–	–	30	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	135	0.18	1.5	–	–	–	–	–	–	25	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	70	0.18	1.5	–	–	–	–	–	–	15	0.15	1.0

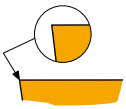
VCMW PCD

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	4.40	16.60	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			HSC F																	
			Com ponta PCD para operações de maquinação de acabamento a semi-desbaste, altas velocidades e condições de corte estáveis.																	
VCMW 160404FN	**PD1**	0.4	–	–	–	–	–	–	–	–	–	900	0.12	0.5	–	–	–	–	–	–
VCMW 160408FN	**PD1**	0.8	–	–	–	–	–	–	–	–	–	1050	0.12	1.0	–	–	–	–	–	–

SVAC(RL)-DC EXT

P M K N S H

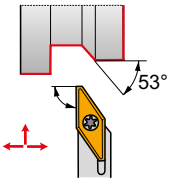
PRAMET

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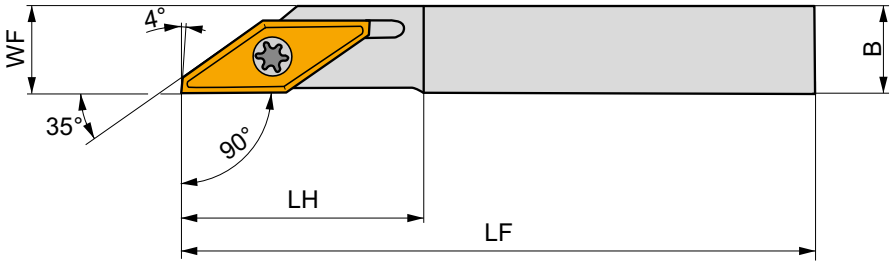


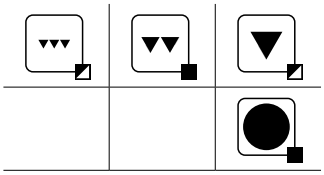
Porta-Ferramentas de Exterior p/ Décolletage, Fixação por Parafuso, Ângulo 90 °, p/ Pastilhas VCGX 13

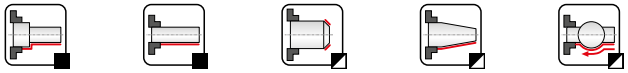
Porta-ferramentas exterior à direita ou à esquerda para pastilhas positivas para décolletage VCGX 13. Adequado para torneamento frontal e longitudinal com esquadria, torneamento cónico, de cópia até 53 ° e chanfrar. Disponível com hastes de 10x10 até 25x25mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SVACR 1010 L 13-DC	10	10	10	10	140	25	0	0	0.12	GI222	SV20
	SVACR 1212 L 13-DC	12	12	12	12	140	25	0	0	0.17	GI222	SV20
	SVACR 1616 M 13-DC	16	16	16	16	150	25	0	0	0.29	GI222	SV20
	SVACR 2020 M 13-DC	20	20	20	20	150	25	0	0	0.46	GI222	SV20
	SVACR 2525 M 13-DC	25	25	25	25	150	25	0	0	0.67	GI222	SV20
L	SVACL 1010 L 13-DC	10	10	10	10	140	25	0	0	0.10	GI222	SV20
	SVACL 1212 L 13-DC	12	12	12	12	140	25	0	0	0.19	GI222	SV20
	SVACL 1616 M 13-DC	16	16	16	16	150	25	0	0	0.29	GI222	SV20
	SVACL 2020 M 13-DC	20	20	20	20	150	25	0	0	0.43	GI222	SV20
	SVACL 2525 M 13-DC	25	25	25	25	150	25	0	0	0.67	GI222	SV20

GI222	VCGX 1303..

		Nm			
SV20	5513 020-24	1.5	M 3	8.5	PT-8002

SVGC(RL) EXT

P M K N S H

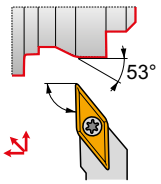
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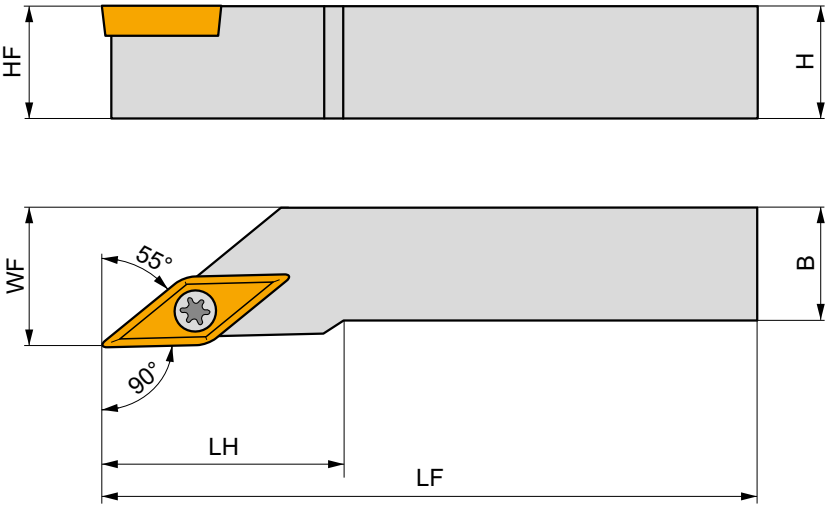
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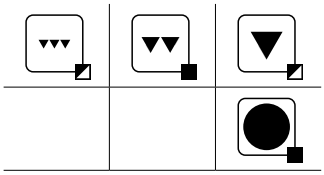


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 90 °, para Pastilhas VC.

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo VC .. 07. Adequado para torneamento longitudinal exterior com esquadria, torneamento cónico, de cópia até 53 ° e chanfrar. Disponível com hastes de 08x08 até 16x16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SVGCR 0808 K 07	8	8	8	8.5	125	15	0	0	0.07	GI234	SV23
	SVGCR 1010 M 07	10	10	10	10.5	150	15	0	0	0.13	GI234	SV23
	SVGCR 1212 M 07	12	12	12	12.5	150	18	0	0	0.17	GI234	SV23
	SVGCR 1616 P 07	16	16	16	16.3	170	23	0	0	0.33	GI234	SV23
L	SVGCL 0808 K 07	8	8	8	8.5	125	15	0	0	0.07	GI234	SV23
	SVGCL 1010 M 07	10	10	10	10.5	150	15	0	0	0.13	GI234	SV23
	SVGCL 1212 M 07	12	12	12	12.5	150	18	0	0	0.17	GI234	SV23
	SVGCL 1616 P 07	16	16	16	16.3	170	23	0	0	0.33	GI234	SV23

GI234	VC.. 0702..

		Nm			
SV23	DVF 3584	0.6	M 2	5.5	DMD 1650

SVHB(C)(RL) EXT

P M K N S H

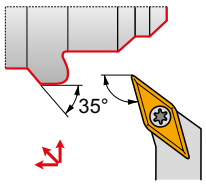
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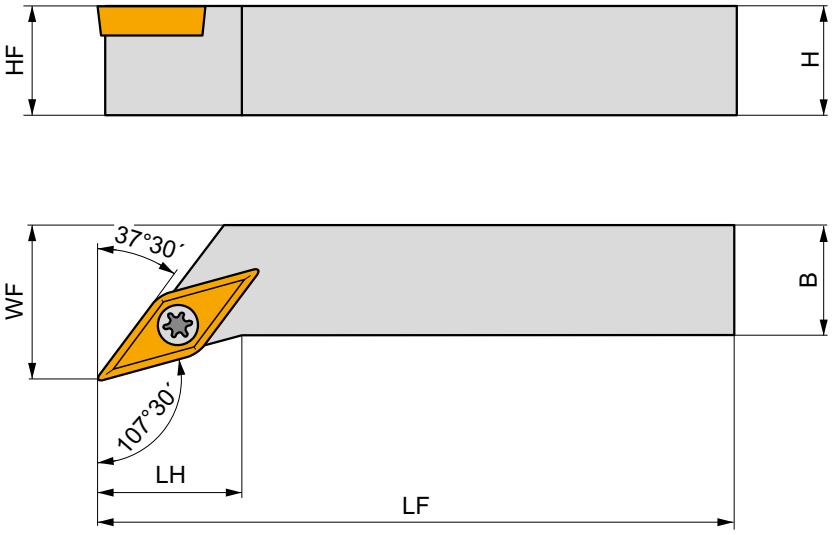
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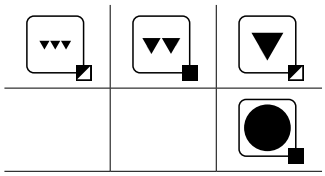


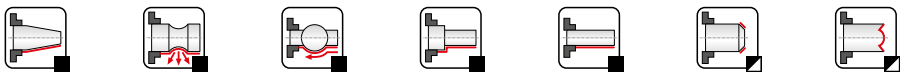
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 107,5 °, para Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo VB .. 11 ou 16 e VC .. 11 ou 16. Adequado para torneamento exterior frontal e longitudinal com esquadria, cónico, frontal, de cópia longitudinal até 35 ° e chanfrar. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**SVHBR 1616 H 11**	16	16	16	20	100	14	0	0	0.21	GI194	S01
	SVHCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCR 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.68	GI017	SV10
L	**SVHBL 1616 H 11**	16	16	16	20	100	14	0	0	0.19	GI194	S01
	SVHCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVHCL 2525 M 16-M-A	25	25	25	32	150	20	0	0	0.07	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVJB(C)(RL) EXT

P M K N S H

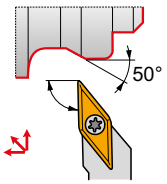
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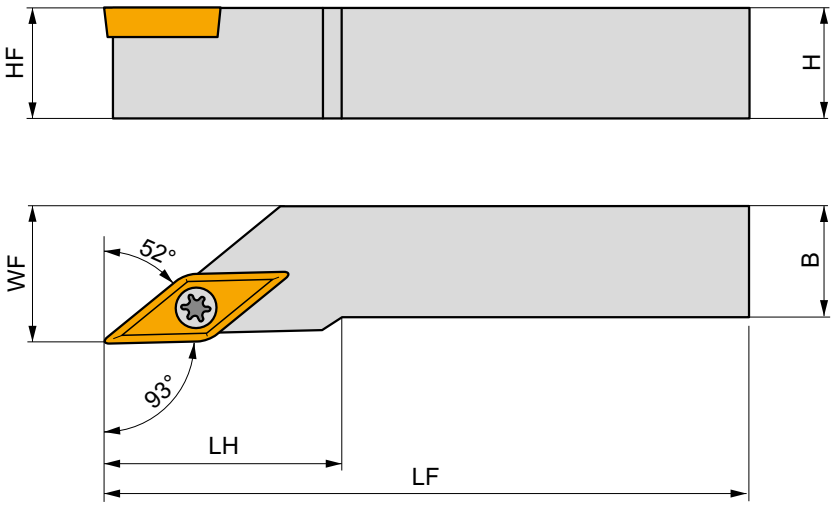
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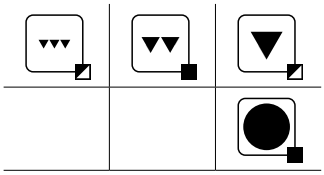


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 93 °, para pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal exterior com esquadria, torneamento cónico, de cópia até 50 ° e chanfrar. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SVJBR 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBR 1616 H 11	16	16	16	20	100	20	0	0	0.20	GI194	S01
	SVJCR 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCR 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCR 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCR 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCR 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.35	GI017	SV10
	SVJCR 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.68	GI017	SV10
	SVJCR 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10
L	SVJBL 1212 F 11	12	12	12	16	80	20	0	0	0.09	GI194	S01
	SVJBL 1616 H 11	16	16	16	20	100	20	0	0	0.19	GI194	S01
	SVJCL 1212 N 13	12	12	12	16	160	27	0	0	0.19	GI211	SV21
	SVJCL 1616 H 13	16	16	16	20	100	30	0	0	0.20	GI211	SV21
	SVJCL 2020 K 13	20	20	20	25	125	30	0	0	0.37	GI211	SV22
	SVJCL 2525 M 13	25	25	25	32	150	30	0	0	0.67	GI211	SV22
	SVJCL 2020 K 16-M-A	20	20	20	25	125	28	0	0	0.40	GI017	SV10
	SVJCL 2525 M 16-M-A	25	25	25	32	150	32	0	0	0.70	GI017	SV10
	SVJCL 3225 P 16-M-A	32	25	32	32	170	32	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVJC(RL)-DC EXT

P M K N S H

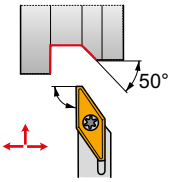
PRAMET

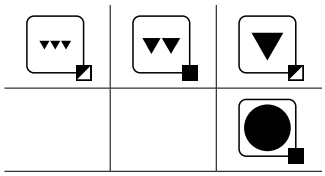
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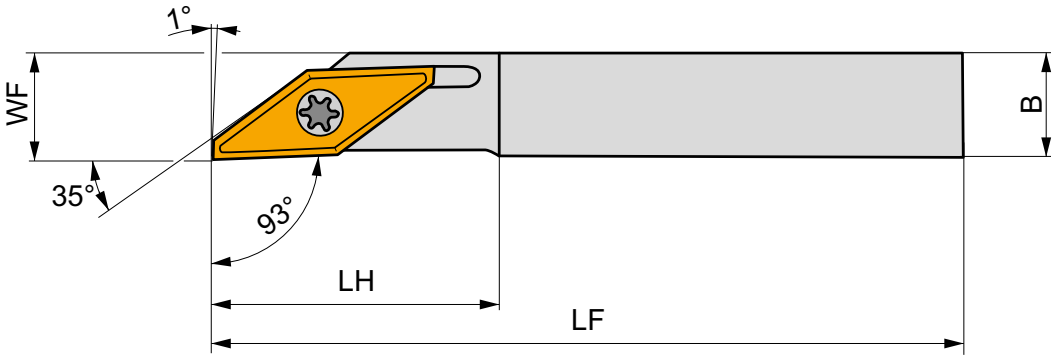
Porta-Ferramentas de Exterior p/ Décolletage, Fixação por Parafuso, Ângulo 93 ° p/ Pastilhas VCGX 13

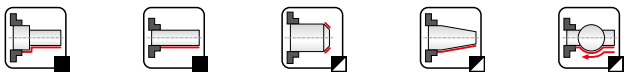
Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas para décolletage VCGX 13. Adequado para torneamento frontal e longitudinal com esquadria, torneamento cónico, de cópia até 50 ° e chanfrar. Disponível com hastes de 10x10 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SVJCR 1010 L 13-DC	10	10	10	0	140	25	0	0	0.12	GI222	SV20
	SVJCR 1212 L 13-DC	12	12	12	0	140	25	0	0	0.17	GI222	SV20
	SVJCR 1616 M 13-DC	16	16	16	0	150	25	0	0	0.29	GI222	SV20
	SVJCR 2020 M 13-DC	20	20	20	0	150	25	0	0	0.45	GI222	SV20
	SVJCR 2525 M 13-DC	25	25	25	0	150	25	0	0	0.68	GI222	SV20
L	SVJCL 1010 L 13-DC	10	10	10	0	140	25	0	0	0.12	GI222	SV20
	SVJCL 1212 L 13-DC	12	12	12	0	140	25	0	0	0.17	GI222	SV20
	SVJCL 1616 M 13-DC	16	16	16	0	150	25	0	0	0.30	GI222	SV20
	SVJCL 2020 M 13-DC	20	20	20	0	150	25	0	0	0.47	GI222	SV20
	SVJCL 2525 M 13-DC	25	25	25	0	150	25	0	0	0.69	GI222	SV20

GI222	VCGX 1303..

		Nm			
SV20	5513 020-24	1.5	M 3	8.5	PT-8002

SVPB(C)(RL) EXT

P M K N S H

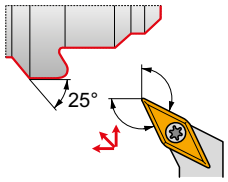
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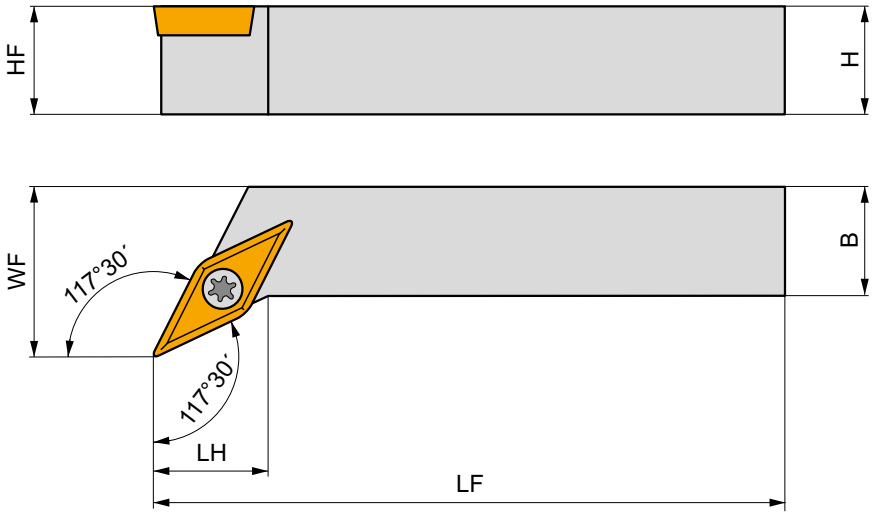
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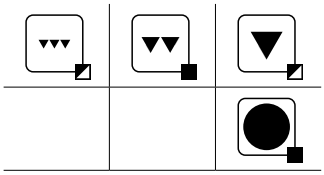


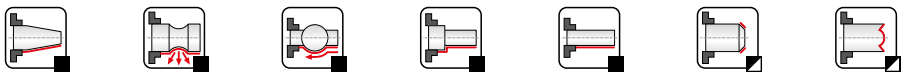
Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 117,5 °, para Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo VB .. 11 ou 16 e VC .. 11 ou 16. Adequado para torneamento exterior frontal e longitudinal com esquadria, torneamento cónico, de cópia de frontal até 25 ° e chanfrar. Disponível com hastes de tamanho 16x16 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**SVPBR 1616 H 11**	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBR 2020 K 11	20	20	20	25	125	12	0	0	0.41	GI194	S01
	SVPCR 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.40	GI017	SV10
	SVPCR 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.75	GI017	SV10
	SVPCR 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10
L	**SVPBL 1616 H 11**	16	16	16	20	100	12	0	0	0.20	GI194	S01
	SVPBL 2020 K 11	20	20	20	25	125	12	0	0	0.39	GI194	S01
	SVPCL 2020 K 16-M-A	20	20	20	25	125	20	0	0	0.70	GI017	SV10
	SVPCL 2525 M 16-M-A	25	25	25	32	150	25	0	0	0.70	GI017	SV10
	SVPCL 3225 P 16-M-A	32	25	32	32	170	25	0	0	1.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5

SVVB(C)N EXT

P M K N S H

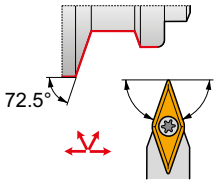
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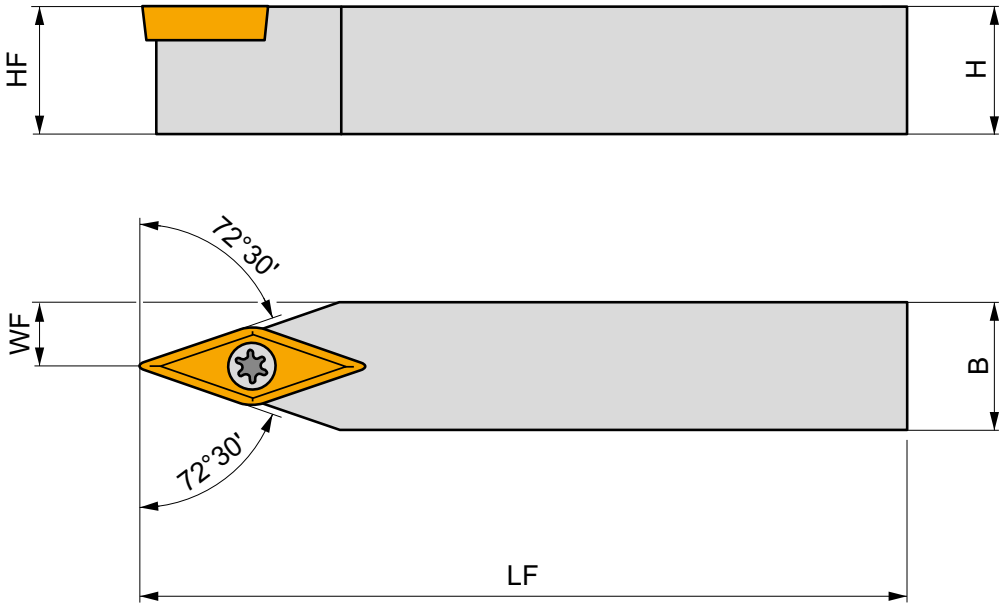
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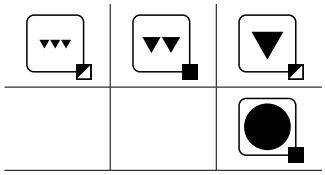


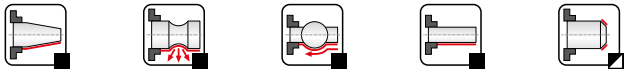
Porta-Ferramenta de Exterior, Fixação por Parafuso, Ângulo de 72,5 °, para Pastilhas VB / VC ...

Porta-ferramentas de exterior neutro com fixação por parafuso para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal exterior sem esquadria, torneamento cónico, de cópia até 72,5 ° e torneamento de chanfro. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
N	**SVVBN 1212 F 11**	12	12	12	6	80	–	0	0	0.11	GI194	S01
	SVVBN 1616 H 11	16	16	16	8	100	–	0	0	0.18	GI194	S01
	SVVBN 2020 K 11	20	20	20	10	125	–	0	0	0.38	GI194	S01
	SVVCN 1212 N 13	12	12	12	6	160	–	0	0	0.19	GI211	SV21
	SVVCN 1616 H 13	16	16	16	8	100	–	0	0	0.20	GI211	SV21
	SVVCN 2020 K 13	20	20	20	10	125	–	0	0	0.36	GI211	SV22
	SVVCN 2525 M 13	25	25	25	12.5	150	–	0	0	0.66	GI211	SV22
	SVVCN 2020 K 16-M-A	20	20	20	10	125	–	0	0	0.34	GI017	SV10
	SVVCN 2525 M 16-M-A	25	25	25	12.5	150	–	0	0	0.68	GI017	SV10
	SVVCN 3225 P 16-M-A	32	25	32	12.5	170	–	0	0	0.98	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVXB(C)(RL) EXT

P M K N S H

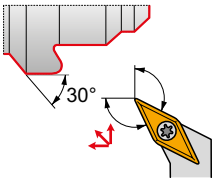
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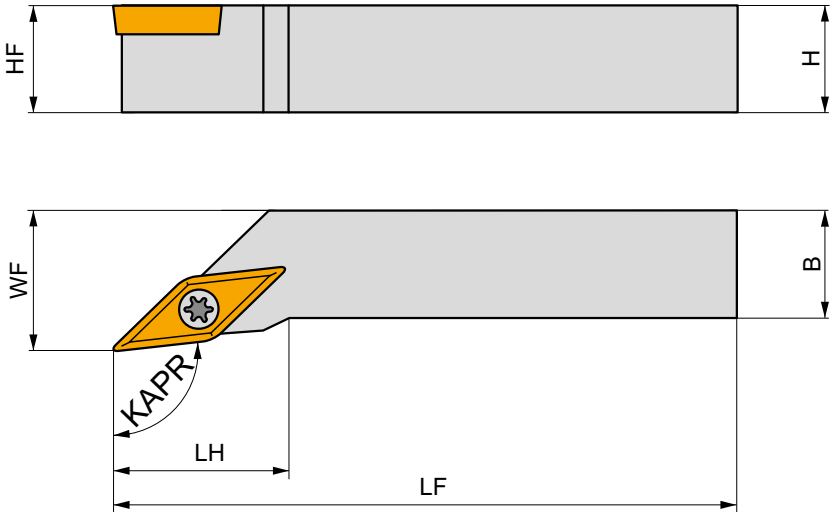
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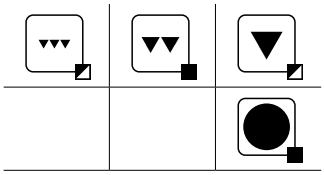


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 98/113 °, para Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal com esquadria, torneamento cónico, de cópia até 30 ° e chanfrar. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	KAPR (°)	LAMS (°)	GAMO (°)	kg		
R	**SVXBR 1212 F 11**	12	12	12	16	80	20	98	0	0	0.09	GI194	SO1
	SVXBR 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	SO1
	SVXCR 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCR 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.41	GI017	SV10
	SVXCR 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.68	GI017	SV10
	SVXCR 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	1.00	GI017	SV10
L	**SVXBL 1212 F 11**	12	12	12	16	80	20	98	0	0	0.09	GI194	SO1
	SVXBL 1616 H 11	16	16	16	20	100	14	98	0	0	0.19	GI194	SO1
	SVXCL 2020 K 13	20	20	20	25	125	12	113	0	0	0.38	GI211	SV22
	SVXCL 2020 K 16-M-A	20	20	20	25	125	28	98	0	0	0.38	GI017	SV10
	SVXCL 2525 M 16-M-A	25	25	25	32	150	32	98	0	0	0.69	GI017	SV10
	SVXCL 3225 P 16-M-A	32	25	32	32	170	32	98	0	0	0.99	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
SO1	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

NEW

C.-SVHB(RL) EXT

P M K N S H

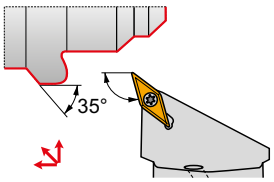
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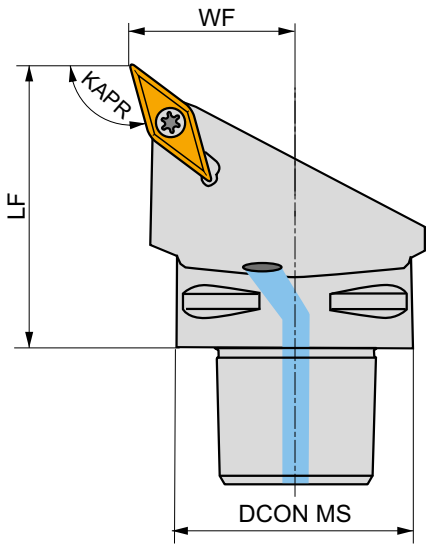
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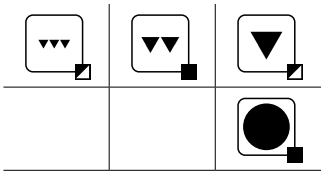


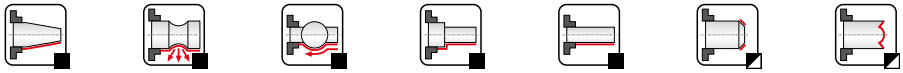
Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Âng. 107,5 °, Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e refrigeração interna, para pastilhas positivas VB .. 16 e VC .. 16. Adequado para torneamento longitudinal com esquadria, cónico, de cópia até 35 ° e chanfrar. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-SVHBR-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBR-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBR-45065-16	63	45	65	107.5	0	0	✓	1.13	GI017	C-SV16S-2
L	C4-SVHBL-27050-16	40	27	50	107.5	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVHBL-35060-16	50	35	60	107.5	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVHBL-45065-16	63	45	65	107.5	0	0	✓	1.12	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

NEW

C.-SVJB(RL) EXT

P M K N S H

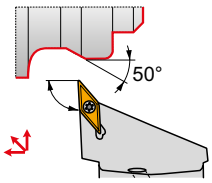
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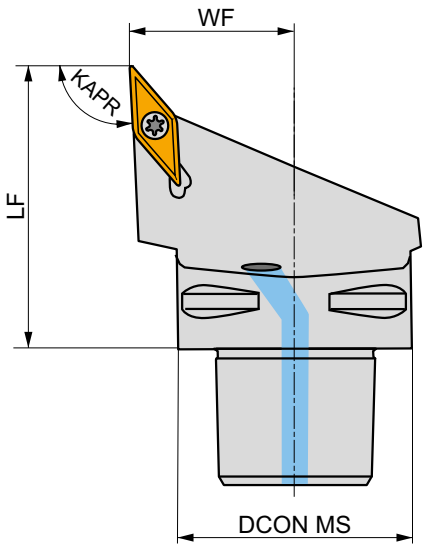
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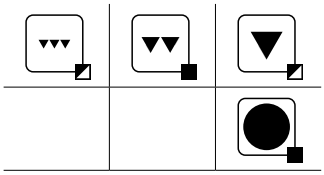


Porta-Ferramentas Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo 93 °, Pastilhas VB / VC ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso e refrigeração interna, para pastilhas positivas VB .. 11 ou 16 e VC .. 11 até 16. Adequado para torneamento longitudinal com esquadria, cónico, de cópia até 50 ° e chanfrar. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C3 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C3-SVJBR-22040-11-B1	32	22	40	93	0	0	✓	0.17	GI194	C-SV11
	C4-SVJBR-27050-11-B1	40	27	50	93	0	0	✓	0.34	GI194	C-SV11
	C4-SVJBR-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBR-35060-16	50	35	60	93	0	0	✓	0.63	GI017	C-SV16S-2
	C6-SVJBR-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2
L	C4-SVJBL-27050-16	40	27	50	93	0	0	✓	0.35	GI017	C-SV16S-1
	C5-SVJBL-35060-16	50	35	60	93	0	0	✓	0.64	GI017	C-SV16S-2
	C6-SVJBL-45065-16	63	45	65	93	0	0	✓	1.11	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..

		Nm						
C-SV11	US 2003-T07P	0.8	M 2.5	6.5	–	–	FLAG T07P	CN 034-01
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

NEW

C.-SVVBN EXT

P M K N S H

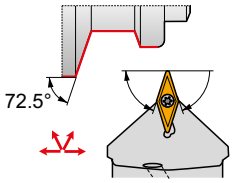
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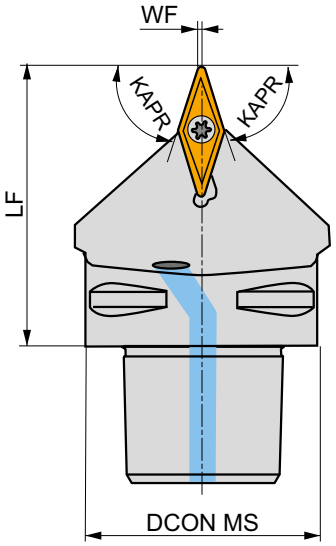
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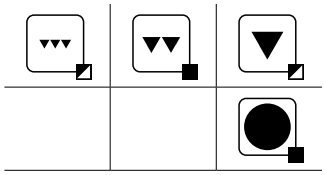


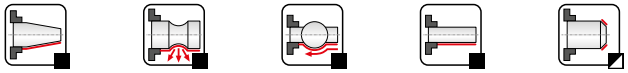
Ferramenta de Ext. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 72,5 °, p/ Pastilhas VB / VC ...

Porta-ferramentas de exterior neutro, com refrigeração interna, para pastilhas positivas VB .. 16 e VC .. 16. Adequado para torneamento longitudinal exterior sem esquadria, cónico, torneamento de cópia até 72,5 ° e torneamento de chanfro. Disponível com haste poligonal PSC (Polygon Shank Coupling) de tamanho C4 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
N	**C4-SVVBN-00050-16**	40	0.6	50	72.5	0	0	✓	0.32	GI017	C-SV16S-1
	C5-SVVBN-00060-16	50	0.6	60	72.5	0	0	✓	0.56	GI017	C-SV16S-2
	C6-SVVBN-00065-16	63	0.6	65	72.5	0	0	✓	0.99	GI017	C-SV16S-2

GI017	VB.. 1604..	VC.. 1604..

		Nm						
C-SV16S-1	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-01
C-SV16S-2	US 2001-T15P	3.0	M 3.5	12.1	SVS 270-01	MS 9001	FLAG T15P/3,5	CN 034-02

SVJB(RL) INT

P M K N S H

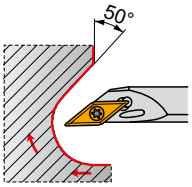
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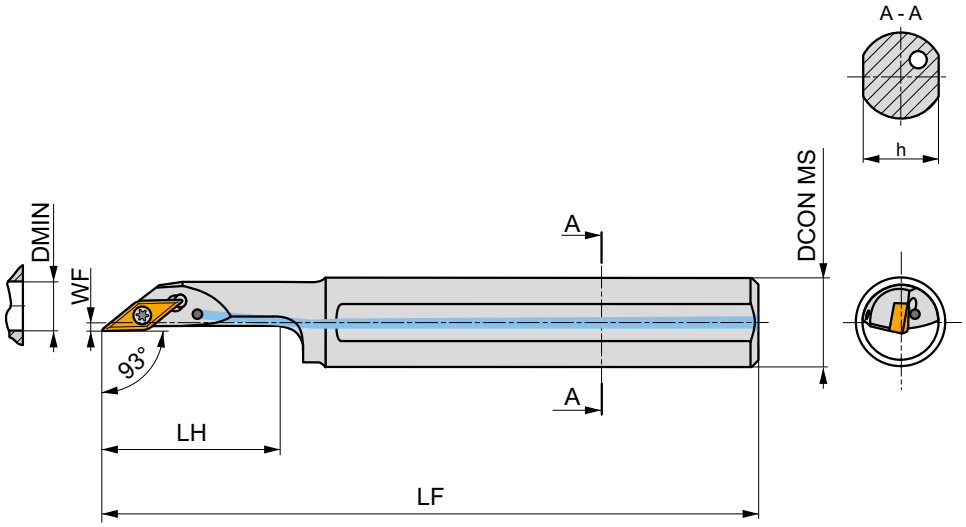
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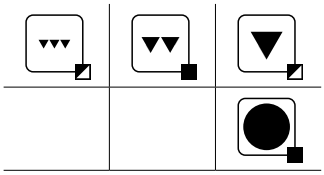


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 93 ° para Pastilhas VB/VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas VB .. 11 e VC .. 11. Diâmetro mínimo de torneamento Ø25 mm. Adequado para torneamento frontal de cópia abaixo de 50°. Disponível com hastes de Ø20 e Ø25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	A20R-SVJBR 11	20	25	2	18	200	40	-5	-5	✓	0.44	GI194	S07
	A25S-SVJBR 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07
L	A20R-SVJBL 11	20	25	2	18	200	40	-5	-5	✓	0.42	GI194	S07
	A25S-SVJBL 11	25	32	3.5	23	250	50	-5	-5	✓	0.82	GI194	S07

GI194	VB.. 1103..	VC.. 1103..

S07	US 2506-T07P	0.9 Nm	M 2.5	6.3	FLAG T07P

SVLC(RL) INT

P M K N S H

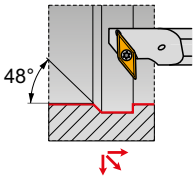
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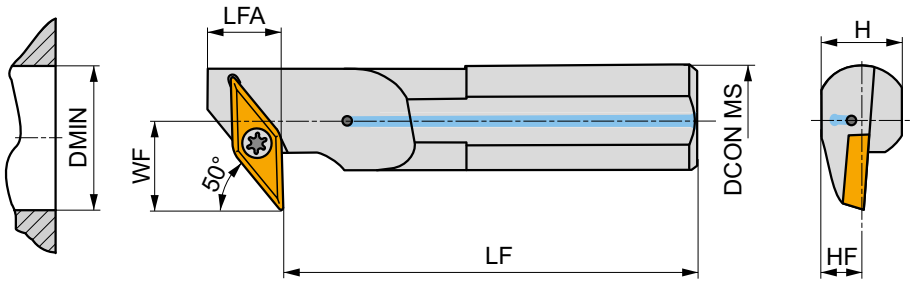
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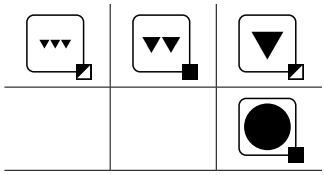


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 50 ° para Pastilhas VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 50° para pastilhas VC .. 13. Diâmetro mínimo de torneamento Ø27 mm. Adequado para uma ampla gama de operações de torneamento interior à tração, e de cópia abaixo de 48°. Disponível com hastes de Ø20 até Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	LF (mm)	HF (mm)	LFA (mm)	LAMS (°)	GAMO (°)		kg		
R	**A20S-SVLCR 13-X**	20	27	15	18	250	9	15	-4	-2	✓	0.57	GI211	SV21
	A25T-SVLCR 13-X	25	35	20	24	300	12	18	-2	-2	✓	1.01	GI211	SV22
	A32T-SVLCR 13-X	32	43	25	30	300	15	18	-1	-2	✓	1.75	GI211	SV22
L	**A20S-SVLCL 13-X**	20	27	15	18	250	9	15	-4	-2	✓	0.57	GI211	SV21
	A25T-SVLCL 13-X	25	35	20	24	300	12	18	-2	-2	✓	0.05	GI211	SV22
	A32T-SVLCL 13-X	32	43	25	30	300	15	18	-1	-2	✓	1.75	GI211	SV22

GI211	VC.. 1303..

		Nm						
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVQB(C)(RL) INT

P M K N S H

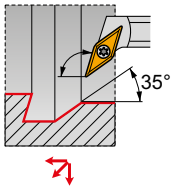
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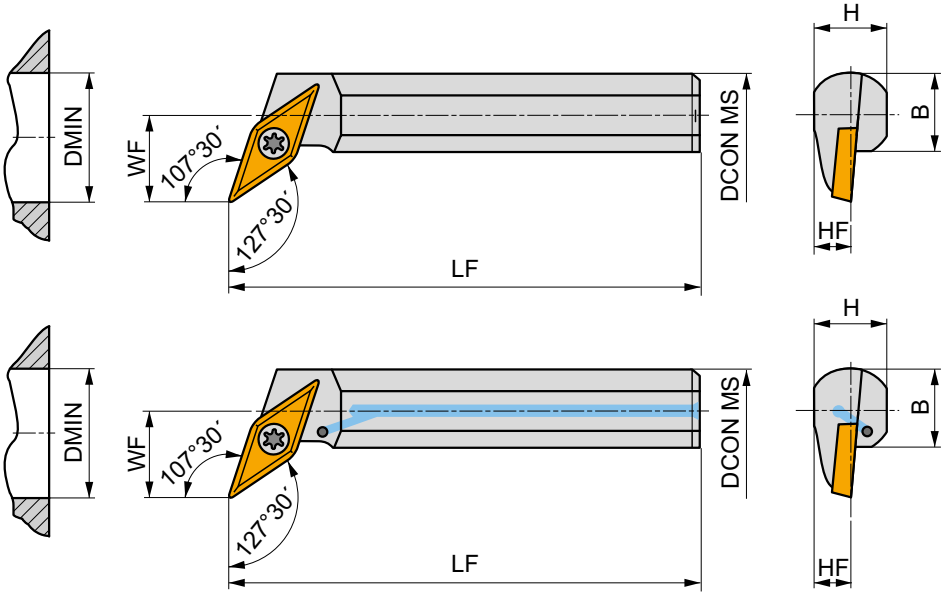
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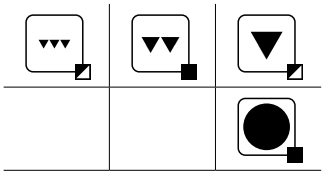


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 107,5 ° para Pastilhas VB/VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 107,5° para pastilhas VB ../ VC .. 11 e 16. Diâmetro mínimo de torneamento Ø20 mm. Adequado para uma ampla gama de operações de torneamento interno. Disponível com hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A16R-SVQBR 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBR 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCR 13	16	21	11	15	15	200	-6	0	✓	0.30	GI211	SV21
	A20S-SVQCR 13	20	25	13	18	18.5	250	-4	0	✓	0.12	GI211	SV21
	S25T-SVQCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVQCR 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCR 16-A	40	50	27	38	38	400	-5	0	–	3.80	GI017	SV10
L	A16R-SVQBL 11	16	20	11	14.5	15	200	-5	0	✓	0.33	GI194	S01
	A20S-SVQBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A16R-SVQCL 13	16	21	11	15	15	200	-6	0	✓	0.29	GI211	SV21
	A20S-SVQCL 13	20	25	13	18	18.5	250	-4	0	✓	0.54	GI211	SV21
	S25T-SVQCL 16	25	32	17	23	23	300	-7	0	–	1.09	GI017	S08
	S32U-SVQCL 16	32	40	22	30	30	350	-5	0	–	2.07	GI017	S08
	S40V-SVQCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–

SVUB(C)(RL) INT

P M K N S H

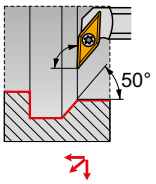
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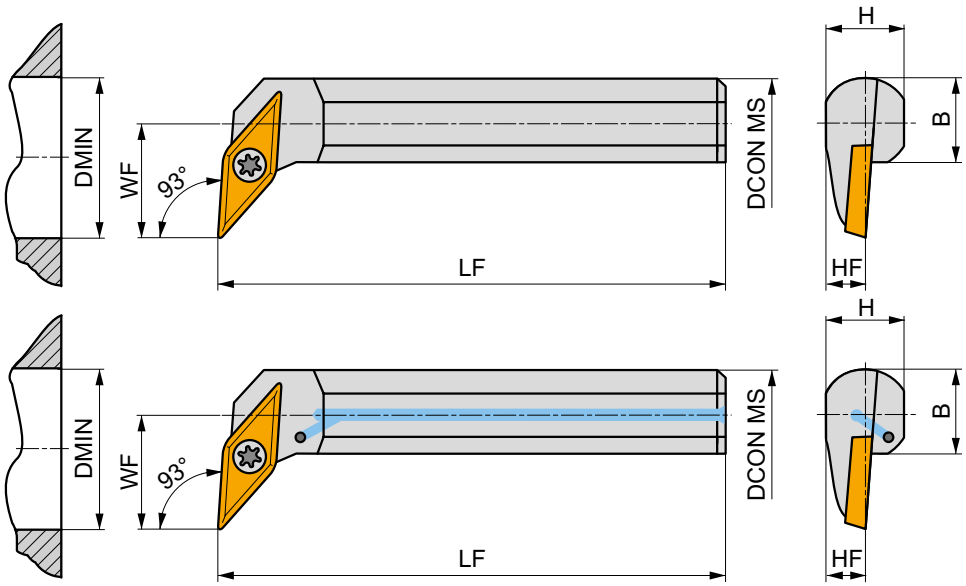
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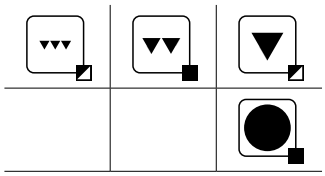


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 93 ° para Pastilhas VB/VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas VB ../ VC .. 11 e 16. Diâmetro mínimo de torneamento Ø20 mm. Para uma ampla gama de operações de torneamento interno e de cópia abaixo de 50°. Disponíveis hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A16R-SVUBR 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBR 11	20	25	13	18	18.8	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCR 13	20	25	13	19	18.5	250	-4	2	✓	0.40	GI211	SV21
	A25T-SVUCR 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCR 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCR 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCR 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCR 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10
L	A16R-SVUBL 11	16	20	11	14.5	15	200	-5	0	✓	0.34	GI194	S01
	A20S-SVUBL 11	20	25	13	18	18.5	250	-4	0	✓	0.58	GI194	S01
	A20S-SVUCL 13	20	25	13	19	18.5	250	-4	2	✓	0.32	GI211	SV21
	A25T-SVUCL 13	25	32	17	24	23	300	-2	2	✓	0.96	GI211	SV22
	A32T-SVUCL 13	32	40	22	30	30	300	-1	2	✓	1.70	GI211	SV22
	S25T-SVUCL 16	25	32	17	23	23	300	-7	0	–	1.10	GI017	S08
	S32U-SVUCL 16	32	40	22	30	30	350	-5	0	–	2.10	GI017	S08
	S40V-SVUCL 16-A	40	50	27	38	38	400	-5	0	–	4.10	GI017	SV10

GI017	VB.. 1604..	VC.. 1604..
GI194	VB.. 1103..	VC.. 1103..
GI211	–	VC.. 1303..

		Nm						
S01	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–
S08	US 3510-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–
SV10	US 3512-T15P	3.0	M 3.5	12.6	SVN 160304	MS 3510	FLAG T15P	HXK 3.5
SV21	5513 020-24	1.5	M 3	8.5	–	–	PT-8002	–
SV22	DVF 0573	1.5	M 3	10.3	DAP 0331	DVT 0332	PT-8002	174.1-870

SVXC(RL) INT

P M K N S H

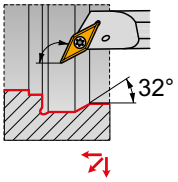
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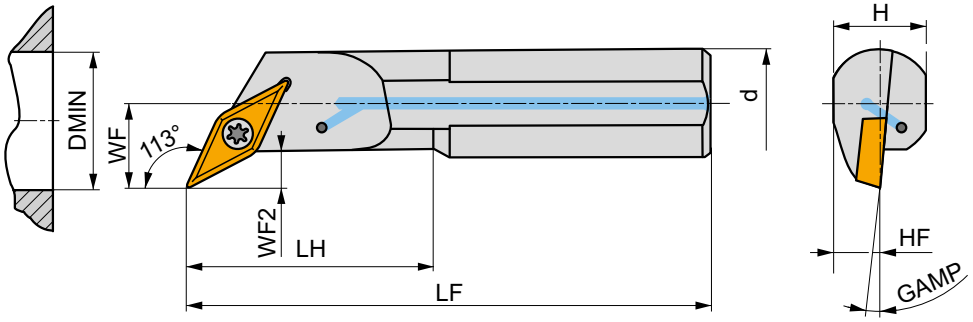
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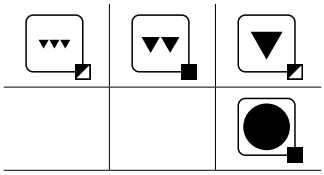


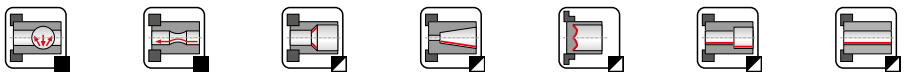
Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 113 ° para Pastilhas VC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 113° para pastilhas VC .. 07. Diâmetro mínimo de torneamento Ø12,5 mm. Adequado para uma ampla gama de operações de torneamento interno e de cópia abaixo de 32°. Disponível com hastes de Ø10 até Ø16 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	LF (mm)	HF (mm)	LH (mm)	WF2 (mm)	GAMP (°)		kg		
R	A10H-SVXCR 07	10	12.5	7	9	100	4.5	22	3	-10	✓	0.06	GI234	SV23
	A12K-SVXCR 07	12	15.5	9	11	125	5.5	28	3	-8	✓	0.11	GI234	SV23
	A16M-SVXCR 07	16	17.5	11	15	150	7.5	36	3	-6	✓	0.19	GI234	SV23
L	A10H-SVXCL 07	10	12.5	7	9	100	4.5	22	3	-10	✓	0.06	GI234	SV23
	A12K-SVXCL 07	12	15.5	9	11	125	5.5	28	3	-8	✓	0.11	GI234	SV23
	A16M-SVXCL 07	16	17.5	11	15	150	7.5	36	3	-6	✓	0.20	GI234	SV23

GI234	VC.. 0702..

SV23	DVF 3584	0.6	M 2	5.5	DMD 1650

SVXC(RL)-E INT

P M K N S H

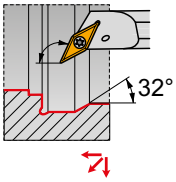
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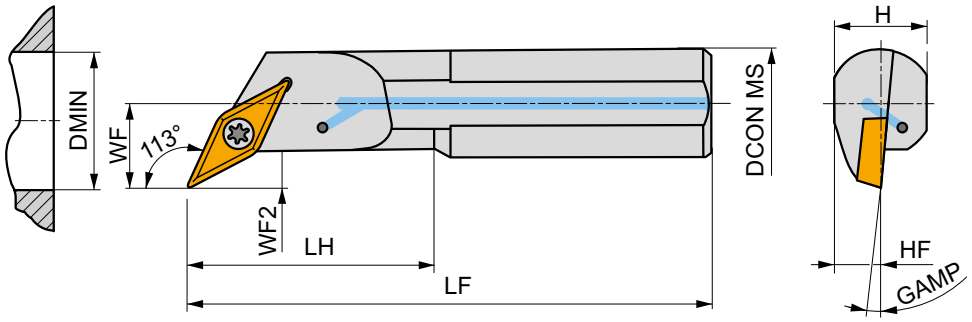
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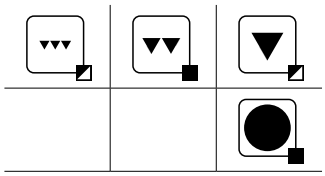


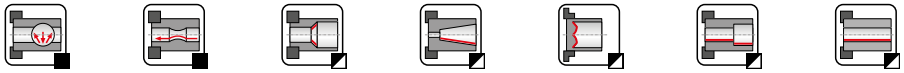
Porta-ferramentas de Interior em Metal Duro, Fixação por Parafuso, Ângulo de 113 °, para Pastilhas VC ..

Porta-ferramentas de interior à direita ou à esquerda em metal duro, com fixação por parafuso e refrigeração interna, com ângulo de corte de 113° para pastilhas VC .. 07. Diâmetro mínimo de torneamento Ø12,5 mm. Adequado para uma ampla gama de operações de torneamento interno e de cópia abaixo de 32°. Disponível com hastes de Ø10 até Ø16 mm. Para balanço > 3xD.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	WF2 (mm)	GAMP (°)		kg		
R	**E10H-SVXCR 07**	10	12.5	7	9	4.5	100	22	3	-10	✓	0.10	GI234	SV23
	E12K-SVXCR 07	12	15.5	9	11	5.5	125	28	3	-8	✓	0.19	GI234	SV23
	E16M-SVXCR 07	16	17.5	11	15	7.5	150	36	3	-6	✓	0.33	GI234	SV23
L	**E10H-SVXCL 07**	10	12.5	7	9	4.5	100	22	3	-10	✓	0.10	GI234	SV23
	E12K-SVXCL 07	12	15.5	9	11	5.5	125	28	3	-8	✓	0.19	GI234	SV23
	E16M-SVXCL 07	16	17.5	11	15	7.5	150	36	3	-6	✓	0.33	GI234	SV23

GI234	VC.. 0702..

		Nm			
SV23	DVF 3584	0.6	M 2	5.5	DMD 1650

NEW

C.-SVQB(RL) INT

P M K N S H

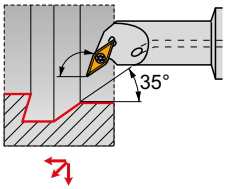
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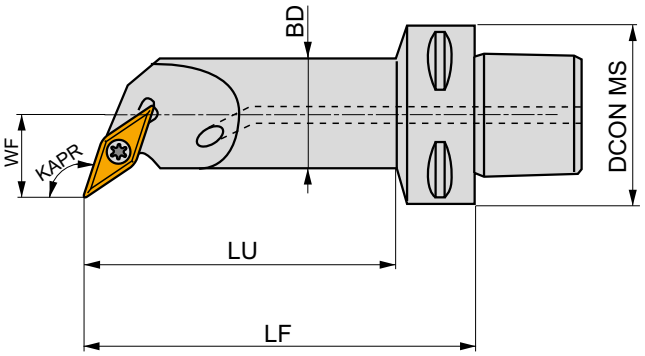
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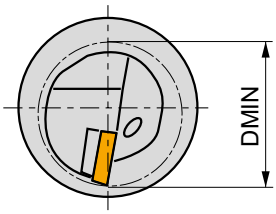


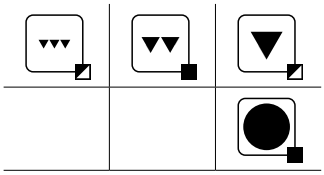
Ferramenta de Int. de Mudança Rápida PSC, Fixação por Parafuso, Ângulo de 107,5 °, Pastilhas VB / VC ..

Porta-ferramentas de interior à direita ou à esquerda, c/ fixação por parafuso e refrigeração interna, ângulo de corte de 107,5° para pastilhas VB .. 16 ou VC .. 16. Diâmetro mínimo de torneamento Ø33 mm. Adequado para uma ampla gama de operações de torneamento interno. Haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 e C5 com opção de comprimentos. Corpo tratado para maior vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-SVQBR-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
	C5-SVQBR-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.67	GI017	SV16
L	C4-SVQBL-18090-16	40	33	18	90	68	25	107.5	-7.2	0	✓	0.48	GI017	SV16
	C5-SVQBL-18090-16	50	33	18	90	67	25	107.5	-7.2	0	✓	0.68	GI017	SV16

GI017	VB.. 1604..	VC.. 1604..

SV16	US 2010-T15P	3.0 Nm	M 3.5	10.1	FLAG T15P/3,5

WC

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PASTILHAS DE METAL DURO

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WCGX



213

WCMT

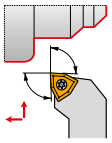


213

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
WCGT **02**0102E-FF2	A0508H-SWUCR 0**2**

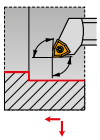
TORNEAMENTO ISO - EXTERIOR

SWLC(RL) EXT

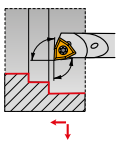
95°	WC..
	06 08
16×16 25×25	
215	212 – 214

TORNEAMENTO ISO - INTERIOR

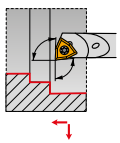
SWLC(RL) INT

95°	WC..
	06 08
ØDmin 25 / 40	
216	212 – 214

SWUC(RL) INT

93°	WC..
	02
ØDmin 5,8 / 7,8	
217	212 – 214

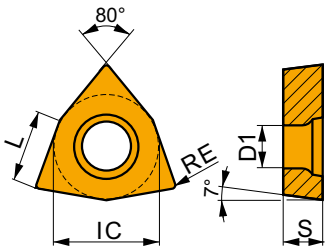
SWUC(RL)-E INT

93°	WC..
	02
ØDmin 5,8 / 7,8	
218	212 – 214

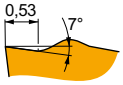
WCGT

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0201	3.970	2.20	2.70	1.59
06T3	9.525	4.40	6.50	3.97
0804	12.700	5.50	8.70	4.76



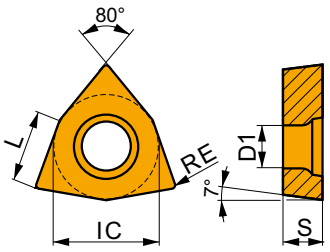
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			F																	
Geometria AL com desenho altamente positivo para operações de maquinação de acabamento fino a desbaste, e cortes contínuos a ligeiramente interrompidos.																				
WCGT 06T302F-AL	**HF7**	0.2	–	–	–	–	–	–	–	–	–	■ 450	0.12	1.0	–	–	–	–	–	–
WCGT 06T304F-AL	**HF7**	0.4	–	–	–	–	–	–	–	–	–	■ 360	0.24	1.0	–	–	–	–	–	–
	T0315	0.4	–	–	–	–	–	–	–	–	–	■ 525	0.24	1.0	–	–	–	–	–	–
WCGT 06T308F-AL	**HF7**	0.8	–	–	–	–	–	–	–	–	–	■ 315	0.48	1.5	–	–	–	–	–	–
WCGT 080412F-AL	**HF7**	1.2	–	–	–	–	–	–	–	–	–	■ 255	0.72	2.4	–	–	–	–	–	–
	T0315	1.2	–	–	–	–	–	–	–	–	–	■ 375	0.72	2.4	–	–	–	–	–	–
																				
			E																	
Geometria FF2 com desenho positivo para operações de acabamento a acabamento fino e cortes contínuos a ligeiramente interrompidos.																				
WCGT 020102E-FF2	**HF7**	0.2	–	–	–	–	–	–	■ 210	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.2	■ 205	0.05	0.8	–	–	–	■ 190	0.05	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.2	■ 280	0.05	0.8	–	–	–	◪ 230	0.05	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.2	■ 345	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WCGT 020104E-FF2	**HF7**	0.4	–	–	–	–	–	–	■ 155	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	■ 170	0.12	0.8	–	–	–	■ 160	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	■ 205	0.12	0.8	–	–	–	◪ 170	0.12	0.8	–	–	–	–	–	–	–	–	–
	TT010	0.4	■ 350	0.06	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

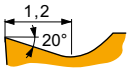
WCGX

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0201	3.970	2.20	2.70	1.59



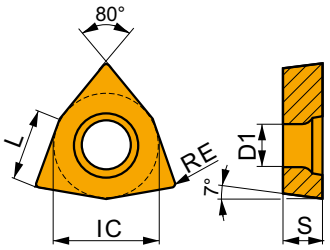
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			 Geometria JZ com desenho à esquerda para operações de maquinação de acabamento fino, e cortes contínuos.																	
WCGX 020102FL-JZ	**TT010**	0.2	330	0.06	0.5	195	0.05	0.5	–	–	–	–	–	–	–	–	–	–	–	–

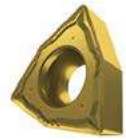
WCMT

PRAMET

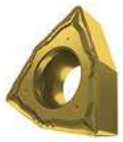
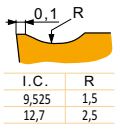
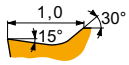
	IC (mm)	D1 (mm)	L (mm)	S (mm)
06T3	9.525	4.40	6.50	3.97
0804	12.700	5.50	8.70	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			 Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
WCMT 06T304E-FM	**T7325**	0.4	195	0.15	1.2	150	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.4	190	0.15	1.2	145	0.15	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	180	0.15	1.2	105	0.14	1.2	170	0.15	1.2	540	0.18	1.2	–	–	–	–	–	–
	T8330	0.4	170	0.15	1.2	100	0.14	1.2	160	0.15	1.2	510	0.18	1.2	–	–	–	–	–	–
	T8430	0.4	200	0.15	1.2	110	0.14	1.2	165	0.15	1.2	555	0.18	1.2	–	–	–	–	–	–
	T9315	0.4	275	0.15	1.2	–	–	–	260	0.15	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	245	0.15	1.2	145	0.15	1.2	230	0.15	1.2	–	–	–	–	–	–	–	–	–
WCMT 06T308E-FM	**T7325**	0.8	215	0.20	1.2	165	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	205	0.20	1.2	155	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	195	0.20	1.2	115	0.18	1.2	185	0.20	1.2	585	0.24	1.2	–	–	–	–	–	–
	T8330	0.8	185	0.20	1.2	110	0.18	1.2	175	0.20	1.2	555	0.24	1.2	–	–	–	–	–	–
	T8430	0.8	210	0.20	1.2	115	0.18	1.2	175	0.20	1.2	585	0.24	1.2	–	–	–	–	–	–
	T9315	0.8	290	0.20	1.2	–	–	–	275	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.20	1.2	155	0.18	1.2	245	0.20	1.2	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FM para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
WCMT 080404E-FM	**T7325**	0.4	◪ 190	0.15	1.7	■ 145	0.15	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 170	0.15	1.7	■ 100	0.14	1.7	◪ 160	0.15	1.7	◪ 510	0.18	1.7	–	–	–	–	–	–
	T8330	0.4	■ 165	0.15	1.7	■ 95	0.14	1.7	◪ 155	0.15	1.7	◪ 495	0.18	1.7	–	–	–	–	–	–
	T8430	0.4	■ 195	0.15	1.7	■ 105	0.14	1.7	◪ 160	0.15	1.7	◪ 540	0.18	1.7	–	–	–	–	–	–
	T9315	0.4	■ 265	0.15	1.7	–	–	–	◪ 250	0.15	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.15	1.7	■ 140	0.15	1.7	◪ 225	0.15	1.7	–	–	–	–	–	–	–	–	–
WCMT 080408E-FM	**T7325**	0.8	◪ 205	0.20	1.7	■ 155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 200	0.20	1.7	■ 155	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 190	0.20	1.7	■ 110	0.18	1.7	◪ 180	0.20	1.7	◪ 570	0.24	1.7	–	–	–	–	–	–
	T8330	0.8	■ 180	0.20	1.7	■ 105	0.18	1.7	◪ 170	0.20	1.7	◪ 540	0.24	1.7	–	–	–	–	–	–
	T8430	0.8	■ 205	0.20	1.7	■ 110	0.18	1.7	◪ 170	0.20	1.7	◪ 570	0.24	1.7	–	–	–	–	–	–
	T9315	0.8	■ 280	0.20	1.7	–	–	–	◪ 265	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 250	0.20	1.7	■ 150	0.18	1.7	◪ 235	0.20	1.7	–	–	–	–	–	–	–	–	–
WCMT 080412E-FM	**T8330**	1.2	■ 175	0.27	1.7	■ 105	0.24	1.7	◪ 165	0.27	1.7	◪ 525	0.32	1.7	–	–	–	–	–	–
	T8430	1.2	■ 190	0.27	1.7	■ 105	0.24	1.7	◪ 155	0.27	1.7	◪ 525	0.32	1.7	–	–	–	–	–	–
	T9325	1.2	■ 235	0.27	1.7	■ 140	0.24	1.7	◪ 220	0.27	1.7	–	–	–	–	–	–	–	–	–
	 I.C. 9,525 12,7 R 1,5 2,5																			
			Geometria RF para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
WCMT 06T308E-RF	**T7335**	0.8	◪ 165	0.20	1.5	◪ 125	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
WCMT 080412E-RF	**T7335**	1.2	◪ 160	0.22	2.2	◪ 120	0.22	2.2	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria UR para operações de maquinação de acabamento a acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
WCMT 06T308E-UR	**T7325**	0.8	◪ 185	0.20	1.2	◪ 140	0.18	1.2	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 250	0.20	1.2	–	–	–	◪ 235	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.20	1.2	◪ 135	0.18	1.2	◪ 210	0.20	1.2	–	–	–	–	–	–	–	–	–

SWLC(RL) EXT

P M K N S H

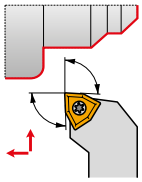
PRAMET

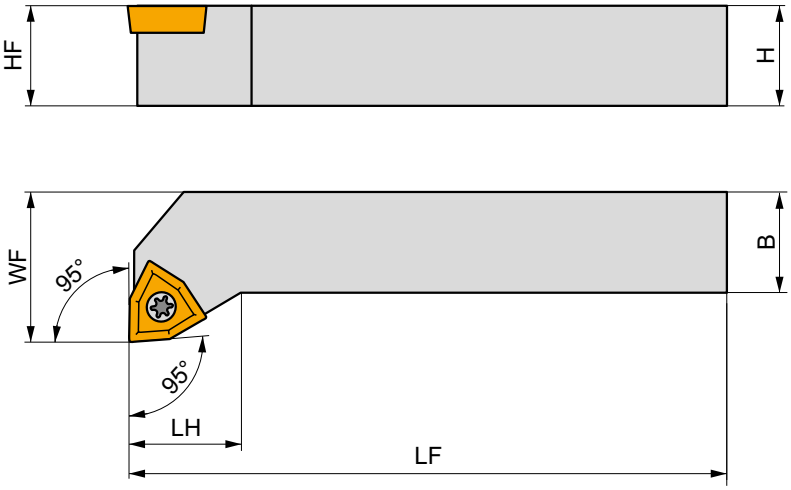
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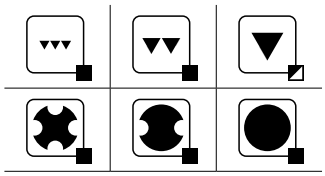


Porta-Ferramentas de Exterior, Fixação por Parafuso, Ângulo de 95 °, para Pastilhas WC…

Porta-ferramentas de exterior à direita ou à esquerda com fixação por parafuso, para pastilhas positivas tipo WC .. 06 ou 08. Adequado para torneamento frontal e longitudinal com esquadria, torneamento cónico e chanfrar. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	SWLCR 1616 H 06	16	16	16	20	100	15	0	0	0.24	GI055	S04
	SWLCR 2020 K 06	20	20	20	25	125	15	0	0	0.40	GI055	S04
	SWLCR 2525 M 08	25	25	25	32	150	20	0	0	0.77	GI049	S09
L	SWLCL 1616 H 06	16	16	16	20	100	15	0	0	0.23	GI055	S04
	SWLCL 2020 K 06	20	20	20	25	125	15	0	0	0.40	GI055	S04
	SWLCL 2525 M 08	25	25	25	32	150	20	0	0	0.75	GI049	S09

GI049	WC.. 0804..
GI055	WC.. 06T3..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S09	US 4512-T15P	5.0	M 4.5	12.2	FLAG T15P

SWLC(RL) INT

P M K N S H

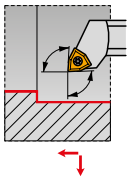
PRAMET

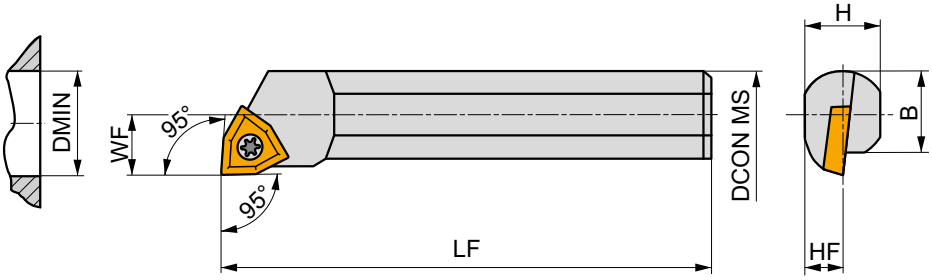
S

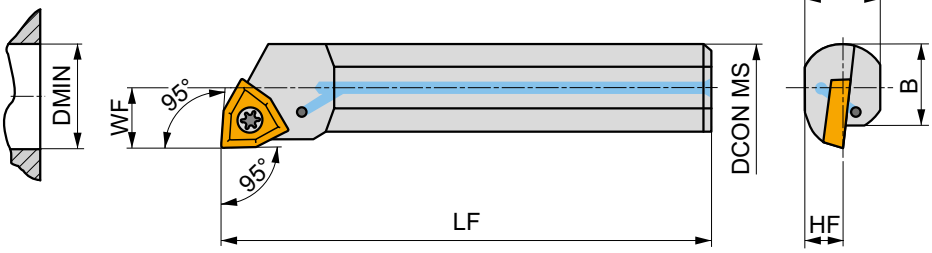


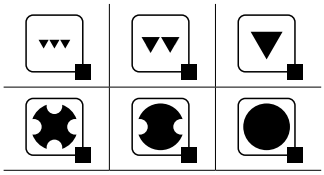
Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 95 ° para Pastilhas WC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 95° para pastilhas WC .. 06 e 08. Diâmetro mínimo de torneamento Ø25 mm. Para torneamento cónico e longitudinal com esquadria, e chanfrar. Disponível com hastes de Ø20 a Ø32mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A20Q-SWLCR 06	20	25	13	18	18.5	180	-7	0	✓	0.37	GI055	S04
	S20S-SWLCR 06	20	25	13	18	18.5	250	-7	0	–	0.62	GI055	S04
	A25R-SWLCR 06	25	32	17	23	23	200	-7	0	✓	0.70	GI055	S04
	S25T-SWLCR 06	25	32	17	23	23	300	-7	0	–	1.15	GI055	S04
	A25R-SWLCR 08	25	32	17	23	23	200	-7	0	✓	0.70	GI049	S04
	A32S-SWLCR 08	32	40	22	30	30	250	-5	0	✓	1.32	GI049	S09
	S32U-SWLCR 08	32	40	22	30	30	350	-5	0	–	2.05	GI049	S09
L	A20Q-SWLCL 06	20	25	13	18	18.5	180	-7	0	✓	0.00	GI055	S04
	S20S-SWLCL 06	20	25	13	18	18.5	250	-7	0	–	0.60	GI055	S04
	A25R-SWLCL 06	25	32	17	23	23	200	-7	0	✓	0.70	GI055	S04
	S25T-SWLCL 06	25	32	17	23	23	300	-7	0	–	1.15	GI055	S04
	A25R-SWLCL 08	25	32	17	23	23	200	-7	0	✓	0.70	GI049	S04
	A32S-SWLCL 08	32	40	22	30	30	250	-5	0	✓	1.32	GI049	S09
	S32U-SWLCL 08	32	40	22	30	30	350	-5	0	–	4.10	GI049	S09

GI049	WC.. 0804..
GI055	WC.. 06T3..

		Nm			
S04	US 3510-T15P	3.0	M 3.5	10.6	FLAG T15P
S09	US 4512-T15P	5.0	M 4.5	12.2	FLAG T15P

SWUC(RL) INT

P M K N S H

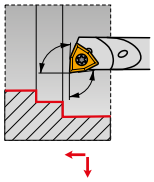
PRAMET

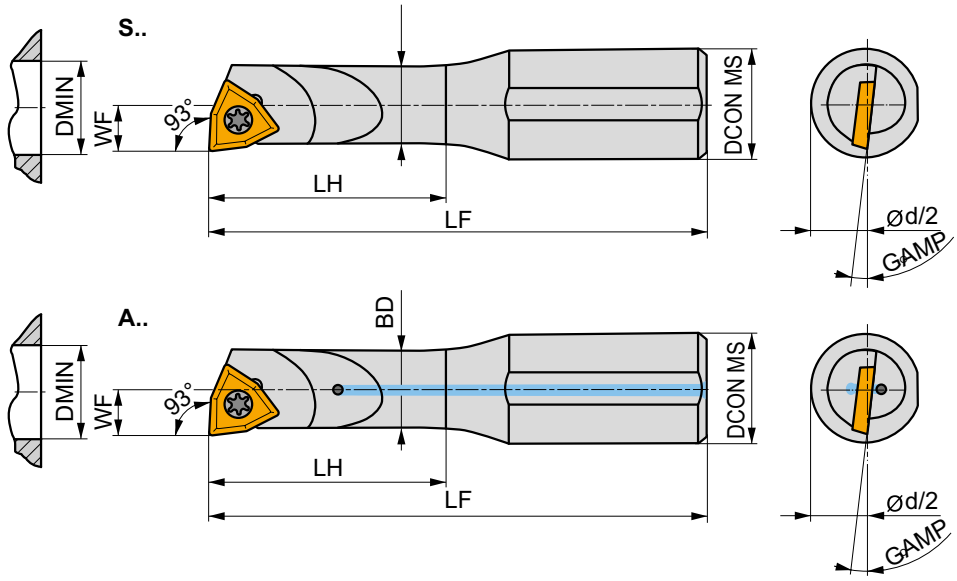
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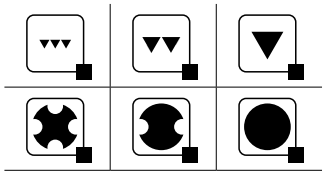


Porta-ferramentas de Interior com Fixação por Parafuso, Ângulo de 93 ° para Pastilhas WC ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por parafuso e refrigeração interna, e ângulo de corte de 93° para pastilhas WC .. 0201. Diâmetro mínimo de torneamento Ø5,8 mm. Adequado para torneamento cónico e longitudinal com esquadria e chanfrar. Disponível apenas com haste de Ø8 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	LF (mm)	LH (mm)	GAMP (°)		kg		
R	A0508H-SWUCR 02	8	5.8	5	2.9	100	18	-17	✓	0.09	GI221	SW21
	S0508H-SWUCR 02	8	5.8	5	2.9	100	18	-17	–	0.04	GI221	SW21
	A0608H-SWUCR 02	8	7.8	6	3.9	100	24	-12	✓	0.04	GI221	SW21
	S0608H-SWUCR 02	8	7.8	6	3.9	100	24	-12	–	0.04	GI221	SW21
L	A0508H-SWUCL 02	8	5.8	5	2.9	100	18	-17	✓	0.04	GI221	SW21
	S0508H-SWUCL 02	8	5.8	5	2.9	100	18	-17	–	0.04	GI221	SW21
	A0608H-SWUCL 02	8	7.8	6	3.9	100	24	-12	✓	0.04	GI221	SW21
	S0608H-SWUCL 02	8	7.8	6	3.9	100	24	-12	–	0.04	GI221	SW21

GI221	WC.. 0201..

SW21	T20.037	0.6	M 2	3.7	DMD 1650

SWUC(RL)-E INT

P M K N S H

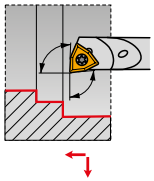
PRAMET

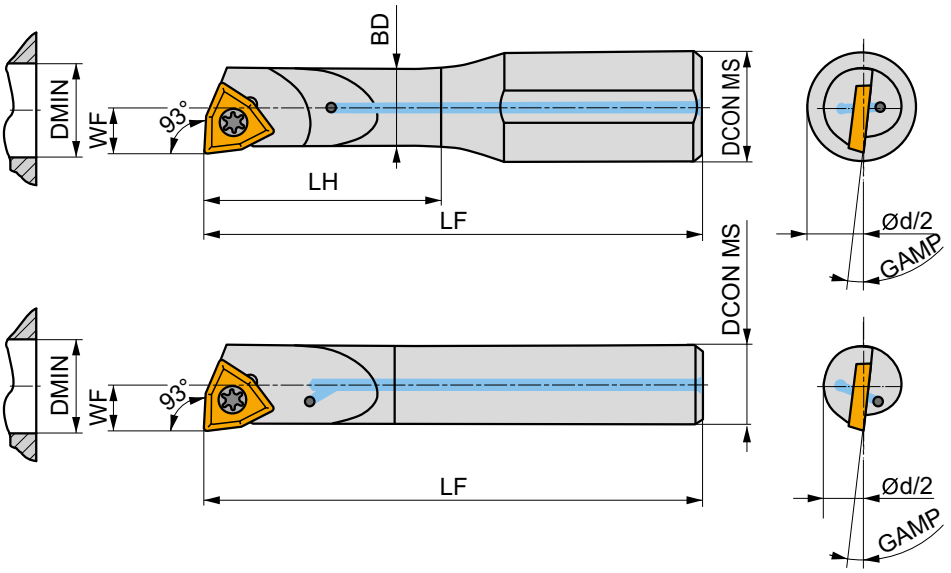
S

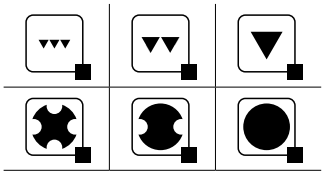


Porta-ferramentas de Interior em Metal Duro, Fixação por Parafuso, Ângulo de 93 °, para Pastilhas WC ..

Porta-ferramentas de interior à direita ou à esquerda em metal duro, com fixação por parafuso e refrigeração interna, com ângulo de corte de 93° para pastilhas WC .. 0201. Diâmetro mínimo de torneamento Ø5,8 mm. Adequado para torneamento cónico e longitudinal com esquadria e chanfrar. Disponível com hastes de Ø5 até Ø8 mm. Para balanço > 3xD.









	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	LF (mm)	LH (mm)	GAMP (°)		kg		
R	E0508H-SWUCR 02	8	5.8	5	2.9	100	24	-17	✓	0.06	GI221	SW21
	E05F-SWUCR 02	5	5.8	–	2.9	85	–	-17	✓	0.03	GI221	SW21
	E0608H-SWUCR 02	8	7.8	6	3.9	100	32	-12	✓	0.06	GI221	SW21
	E06G-SWUCR 02	6	7.8	–	3.9	95	–	-12	✓	0.04	GI221	SW21
L	E0508H-SWUCL 02	8	5.8	5	2.9	100	24	-17	✓	0.07	GI221	SW21
	E05F-SWUCL 02	5	5.8	–	2.9	85	–	-17	✓	0.03	GI221	SW21
	E0608H-SWUCL 02	8	7.8	6	3.9	100	32	-12	✓	0.06	GI221	SW21
	E06G-SWUCL 02	6	7.8	–	3.9	95	–	-12	✓	0.04	GI221	SW21

GI221	WC.. 0201..

		Nm			
SW21	T20.037	0.6	M 2	3.7	DMD 1650



PASTILHAS NEGATIVAS

CN

09/ 12/ 16/ 19/ 25

PASTILHAS DE METAL DURO

CNGG



222

CNMA



222

CNMG



223

CNMM



234

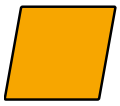
PASTILHAS CER E CBN

CNGA CER



238

CNGN CER



238

CNGA CBN



239

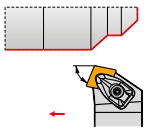
CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
CNMM 120412E-OR	DCBNR 2525 M 12

TORNEAMENTO ISO - EXTERIOR

DCBN(RL) EXT

75°



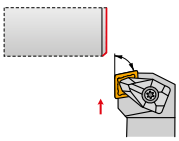
CN..: 12, 16, 19

20×20 / 40×40

240 | 222 – 239

DCKN(RL) EXT

75°



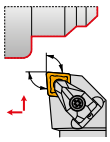
CN..: 12, 16

20×20 / 32×32

242 | 222 – 239

DCLN(RL) EXT

95°



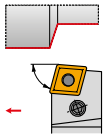
CN..: 09, 12, 16, 19

16×16 / 40×40

243 | 222 – 239

PCBN(RL) EXT

75°



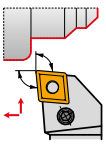
CN..: 12, 16, 19, 25

20×20 / 50×50

245 | 222 – 239

PCLN(RL) EXT

95°



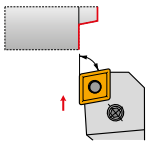
CN..: 12, 16, 19, 25

20×20 / 50×50

247 | 222 – 239

PCKN(RL) EXT

75°



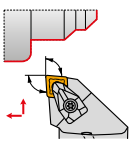
CN..: 12, 16, 19

20×20 / 40×40

246 | 222 – 239

C.-DCLN(RL) EXT NEW

95°



CN..: 12, 16, 19

C3 / C8

249 | 222 – 239

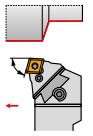
CN

09/ 12/ 16/ 19/ 25

TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

KHP-CBNR + DKH(RL)

75°



CN..

25

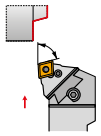
40×50
60×80

251, 253

222 – 239

KHP-CBNL + DKH(RL)

75°



CN..

25

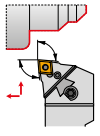
40×50
60×80

251, 253

222 – 239

KHP-CLNR/L + DKH(RL)

95°



CN..

19
25

40×50
60×80

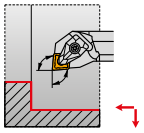
252, 253

222 – 239

TORNEAMENTO ISO - INTERIOR

DCLN(RL) INT

95°



CN..

09
12



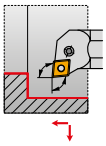
32
50

254

222 – 239

PCLN(RL) INT

95°



CN..

09
12
16
19



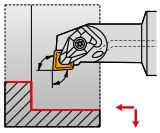
20
80

255

222 – 239

C.-DCLN(RL) INT NEW

95°



CN..

09
12
16



25
50

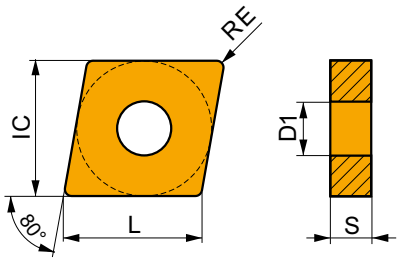
257

222 – 239

CNGG

PRAMET

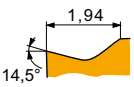
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.90	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
CNGG 120402E-SF	**H07**	0.2	–	–	–	105	0.09	1.0	165	0.10	1.0	525	0.12	1.0	50	0.08	0.8	–	–	–
	T6310	0.2	195	0.10	1.0	140	0.09	1.0	155	0.10	1.0	585	0.12	1.0	55	0.08	0.8	35	0.15	1.0
	T8315	0.2	205	0.10	1.0	120	0.09	1.0	190	0.10	1.0	615	0.12	1.0	50	0.08	0.8	40	0.15	1.0
	T8330	0.2	195	0.10	1.0	115	0.09	1.0	185	0.10	1.0	585	0.12	1.0	45	0.08	0.8	35	0.15	1.0
	T8430	0.2	240	0.10	1.0	130	0.09	1.0	195	0.10	1.0	660	0.12	1.0	50	0.08	0.8	40	0.15	1.0



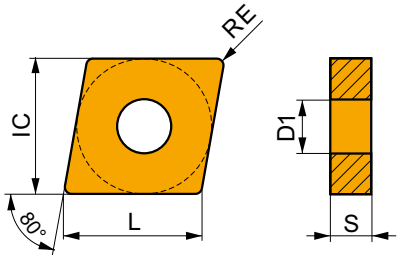


Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas em cortes contínuos.

CNMA

PRAMET

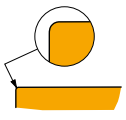
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.90	4.76
1606	15.875	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

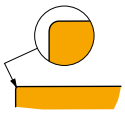
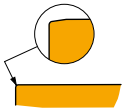
Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
CNMA 120404	**T5305**	0.4	–	–	–	–	–	–	235	0.10	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	200	0.10	4.0	–	–	–	–	–	–	40	0.15	1.0
CNMA 120408	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	190	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	25	0.15	1.0
CNMA 120412	**T5305**	1.2	–	–	–	–	–	–	195	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	180	0.30	4.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	95	0.30	4.0	–	–	–	–	–	–	20	0.15	1.0
CNMA 120416	**T5305**	1.6	–	–	–	–	–	–	190	0.40	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	170	0.40	4.0	–	–	–	–	–	–	35	0.15	1.0





Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.

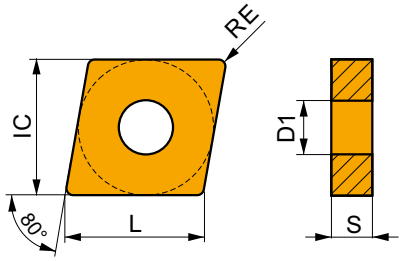
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			E																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a lligeiramente interrompidos.																				
CNMA 160612	**T5305**	1.2	–	–	–	–	–	–	■ 190	0.30	5.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	■ 175	0.30	5.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	■ 90	0.30	5.0	–	–	–	–	–	–	◪ 20	0.15	1.0
CNMA 160616	**T5305**	1.6	–	–	–	–	–	–	■ 185	0.40	5.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	■ 165	0.40	5.0	–	–	–	–	–	–	◪ 35	0.15	1.0
CNMA 190612	**T5305**	1.2	–	–	–	–	–	–	■ 190	0.30	6.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	■ 170	0.30	6.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	■ 85	0.30	6.0	–	–	–	–	–	–	◪ 20	0.15	1.0
CNMA 190616	**T5305**	1.6	–	–	–	–	–	–	■ 180	0.40	6.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	■ 160	0.40	6.0	–	–	–	–	–	–	◪ 30	0.15	1.0
			S																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
CNMA 120408S	**T5305**	0.8	–	–	–	–	–	–	■ 220	0.20	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
CNMA 120412S	**T5305**	1.2	–	–	–	–	–	–	■ 190	0.40	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
CNMA 160612S	**T5305**	1.2	–	–	–	–	–	–	■ 190	0.30	5.0	–	–	–	–	–	–	◪ 40	0.15	1.0
CNMA 190616S	**T5305**	1.6	–	–	–	–	–	–	■ 180	0.40	6.0	–	–	–	–	–	–	◪ 35	0.15	1.0

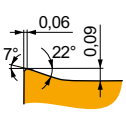
CNMG

PRAMET

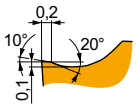
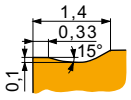
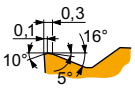
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0903	9.525	3.81	9.70	3.18
1204	12.700	5.16	12.90	4.76
1606	15.880	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35
2509	25.400	9.12	25.80	9.53



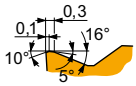
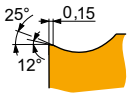
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			U	S																
Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
CNMG 120404E-FF	**T7325**	0.4	◪ 235	0.12	1.0	■ 180	0.11	1.0		–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 220	0.12	1.0	■ 130	0.11	1.0	◪ 205	0.12	1.0	–	–	–	–	–	–	–	–	–
CNMG 120408E-FF	**T7325**	0.8	◪ 265	0.15	1.0	■ 205	0.14	1.0		–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 245	0.15	1.0	■ 145	0.14	1.0	◪ 230	0.15	1.0	–	–	–	–	–	–	–	–	–

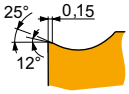
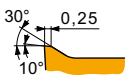
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
CNMG 090304E-FM	**T7325**	0.4	195	0.20	1.4	150	0.18	1.4	–	–	–	–	–	–	60	0.16	1.1	–	–	–
	T8330	0.4	175	0.20	1.4	105	0.18	1.4	165	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T8430	0.4	195	0.20	1.4	105	0.18	1.4	160	0.20	1.4	–	–	–	40	0.14	1.1	–	–	–
	T9315	0.4	265	0.20	1.4	–	–	–	250	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	1.4	140	0.18	1.4	225	0.20	1.4	–	–	–	50	0.16	1.1	–	–	–
CNMG 090308E-FM	**T7325**	0.8	235	0.20	1.4	180	0.18	1.4	–	–	–	–	–	–	75	0.16	1.1	–	–	–
	T8330	0.8	205	0.20	1.4	120	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T8430	0.8	235	0.20	1.4	125	0.18	1.4	190	0.20	1.4	–	–	–	50	0.14	1.1	–	–	–
	T9315	0.8	315	0.20	1.4	–	–	–	295	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.20	1.4	170	0.18	1.4	270	0.20	1.4	–	–	–	60	0.16	1.1	–	–	–
CNMG 120404E-FM	**T7325**	0.4	185	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	180	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	55	0.16	1.7	–	–	–
	T8315	0.4	175	0.20	2.1	105	0.18	2.1	165	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T8330	0.4	165	0.20	2.1	95	0.18	2.1	155	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T8430	0.4	190	0.20	2.1	105	0.18	2.1	155	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T9310	0.4	285	0.20	2.1	–	–	–	270	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9315	0.4	255	0.20	2.1	–	–	–	240	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	230	0.20	2.1	135	0.18	2.1	215	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	TT310	0.4	260	0.20	2.1	155	0.18	2.1	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120408E-FM	**T7325**	0.8	220	0.20	2.1	170	0.18	2.1	–	–	–	–	–	–	70	0.16	1.7	–	–	–
	T7335	0.8	215	0.20	2.1	165	0.18	2.1	–	–	–	–	–	–	65	0.16	1.7	–	–	–
	T8315	0.8	205	0.20	2.1	120	0.18	2.1	190	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	T8330	0.8	195	0.20	2.1	115	0.18	2.1	185	0.20	2.1	–	–	–	45	0.16	1.7	–	–	–
	T8430	0.8	225	0.20	2.1	120	0.18	2.1	185	0.20	2.1	–	–	–	45	0.16	1.7	–	–	–
	T9310	0.8	335	0.20	2.1	–	–	–	315	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9315	0.8	305	0.20	2.1	–	–	–	285	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	275	0.20	2.1	165	0.18	2.1	260	0.20	2.1	–	–	–	60	0.16	1.7	–	–	–
	TT310	0.8	310	0.20	2.1	185	0.18	2.1	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120412E-FM	**T7325**	1.2	210	0.27	2.1	160	0.24	2.1	–	–	–	–	–	–	65	0.19	1.7	–	–	–
	T9315	1.2	285	0.27	2.1	–	–	–	270	0.27	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.27	2.1	150	0.24	2.1	240	0.27	2.1	–	–	–	55	0.19	1.7	–	–	–
																				
			Geometria KR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMG 120408E-KR	**T5305**	0.8	255	0.35	4.0	–	–	–	240	0.35	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	225	0.35	4.0	–	–	–	210	0.35	4.0	–	–	–	–	–	–	45	0.15	1.0
CNMG 120412E-KR	**T5305**	1.2	255	0.40	4.0	–	–	–	240	0.40	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	1.2	230	0.40	4.0	–	–	–	215	0.40	4.0	–	–	–	–	–	–	45	0.15	1.0
																				
			Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
CNMG 090308E-M	**T9315**	0.8	230	0.32	1.8	–	–	–	215	0.32	1.8	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.32	1.8	–	–	–	190	0.32	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	180	0.32	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120404E-M	**T5315**	0.4	245	0.20	2.1	–	–	–	230	0.20	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9310	0.4	260	0.20	2.1	–	–	–	245	0.20	2.1	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.4	235	0.20	2.1	–	–	–	220	0.20	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	210	0.20	2.1	–	–	–	195	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.4	180	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

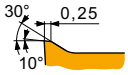
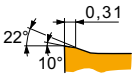
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
			Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
CNMG 120408E-M	**6640**	0.8	■	165	0.32	2.1	–	–	–	■	155	0.32	2.1	–	–	–	–	–	–	–	–	–
	T5305	0.8	◪	280	0.32	2.1	–	–	–	■	265	0.32	2.1	–	–	–	–	–	–	◪	55	0.15	1.0
	T5315	0.8	◪	250	0.32	2.1	–	–	–	■	235	0.32	2.1	–	–	–	–	–	–	◪	50	0.15	1.0
	T8330	0.8	■	155	0.32	2.1	–	–	–	■	145	0.32	2.1	–	–	–	–	–	–	◪	30	0.15	1.0
	T8430	0.8	■	170	0.32	2.1	–	–	–	◪	135	0.32	2.1	–	–	–	–	–	–	◪	25	0.15	1.0
	T9310	0.8	■	245	0.32	2.1	–	–	–	◪	230	0.32	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	0.8	■	225	0.32	2.1	–	–	–	◪	210	0.32	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9325	0.8	■	200	0.32	2.1	–	–	–	◪	190	0.32	2.1	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	180	0.32	2.1	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 120412E-M	**T5305**	1.2	◪	275	0.40	2.1	–	–	–	■	260	0.40	2.1	–	–	–	–	–	–	◪	55	0.15	1.0
	T5315	1.2	◪	245	0.40	2.1	–	–	–	■	230	0.40	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9310	1.2	■	235	0.40	2.1	–	–	–	◪	220	0.40	2.1	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	1.2	■	220	0.40	2.1	–	–	–	◪	205	0.40	2.1	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.2	■	195	0.40	2.1	–	–	–	◪	185	0.40	2.1	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	170	0.40	2.1	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 120416E-M	**T9325**	1.6	■	200	0.40	2.1	–	–	–	◪	190	0.40	2.1	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	175	0.40	2.1	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160608E-M	**T9310**	0.8	■	235	0.32	3.6	–	–	–	◪	220	0.32	3.6	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	0.8	■	215	0.32	3.6	–	–	–	◪	200	0.32	3.6	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	0.8	■	190	0.32	3.6	–	–	–	◪	180	0.32	3.6	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	170	0.32	3.6	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160612E-M	**T9315**	1.2	■	210	0.40	3.6	–	–	–	◪	195	0.40	3.6	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.2	■	185	0.40	3.6	–	–	–	◪	175	0.40	3.6	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	160	0.40	3.6	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 160616E-M	**T9325**	1.6	■	190	0.40	3.6	–	–	–	◪	180	0.40	3.6	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	165	0.40	3.6	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190608E-M	**T9315**	0.8	■	210	0.32	4.2	–	–	–	◪	195	0.32	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	0.8	■	190	0.32	4.2	–	–	–	◪	180	0.32	4.2	–	–	–	–	–	–		–	–	–
	T9335	0.8	■	165	0.32	4.2	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190612E-M	**6640**	1.2	■	145	0.40	4.2	–	–	–	■	135	0.40	4.2	–	–	–	–	–	–		–	–	–
	T9310	1.2	■	220	0.40	4.2	–	–	–	◪	205	0.40	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9315	1.2	■	205	0.40	4.2	–	–	–	◪	190	0.40	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.2	■	185	0.40	4.2	–	–	–	◪	175	0.40	4.2	–	–	–	–	–	–		–	–	–
	T9335	1.2	■	160	0.40	4.2	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
CNMG 190616E-M	**T9310**	1.6	■	230	0.40	4.2	–	–	–	◪	215	0.40	4.2	–	–	–	–	–	–	◪	45	0.15	1.0
	T9315	1.6	■	215	0.40	4.2	–	–	–	◪	200	0.40	4.2	–	–	–	–	–	–	◪	40	0.15	1.0
	T9325	1.6	■	190	0.40	4.2	–	–	–	◪	180	0.40	4.2	–	–	–	–	–	–		–	–	–
	T9335	1.6	■	165	0.40	4.2	–	–	–		–	–	–	–	–	–	–	–	–		–	–	–
																				
			Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																	
CNMG 090304E-NF	**T6310**	0.4	■	190	0.17	0.8	■	135	0.15	0.8	◪	150	0.17	0.8	◪	570	0.20	0.8	◪	55	0.12	0.6	–	–	–
	T7335	0.4	◪	210	0.18	0.8	■	160	0.16	0.8		–	–	–		–	–	–	◪	65	0.16	0.6	–	–	–
	T8315	0.4	◪	200	0.17	0.8	■	120	0.15	0.8	◪	190	0.17	0.8	◪	600	0.20	0.8	◪	50	0.12	0.6	–	–	–
	T8430	0.4	■	225	0.17	0.8	■	120	0.15	0.8	◪	185	0.17	0.8	◪	615	0.20	0.8	◪	45	0.12	0.6	–	–	–
	T9325	0.4	■	265	0.18	0.8	■	155	0.16	0.8	◪	250	0.18	0.8		–	–	–	◪	55	0.16	0.6	–	–	–
CNMG 090308E-NF	**T6310**	0.8	■	215	0.19	1.0	■	150	0.17	1.0	◪	170	0.19	1.0	◪	645	0.23	1.0	◪	60	0.15	0.8	–	–	–
	T7335	0.8	◪	240	0.19	1.0	■	185	0.17	1.0		–	–	–		–	–	–	◪	75	0.15	0.8	–	–	–
	T8330	0.8	■	215	0.19	1.0	■	125	0.17	1.0	◪	200	0.19	1.0	◪	645	0.23	1.0	◪	50	0.15	0.8	–	–	–
	T8430	0.8	■	245	0.19	1.0	■	135	0.17	1.0	◪	200	0.19	1.0	◪	675	0.23	1.0	◪	50	0.15	0.8	–	–	–
	T9325	0.8	■	300	0.19	1.0	■	180	0.17	1.0	◪	285	0.19	1.0		–	–	–	◪	65	0.15	0.8	–	–	–

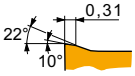
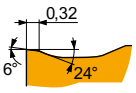
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																	
CNMG 120404E-NF	**HF7**	0.4	–	–	–	95	0.15	1.7	155	0.17	1.7	495	0.20	1.7	–	–	–	–	–	–
	T6310	0.4	180	0.17	1.7	125	0.15	1.7	145	0.17	1.7	540	0.20	1.7	50	0.14	1.4	–	–	–
	T7325	0.4	200	0.18	1.7	155	0.16	1.7	–	–	–	–	–	–	65	0.16	1.4	–	–	–
	T7335	0.4	195	0.18	1.7	150	0.16	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.4	185	0.17	1.7	110	0.15	1.7	175	0.17	1.7	555	0.20	1.7	45	0.14	1.4	–	–	–
	T8330	0.4	180	0.17	1.7	105	0.15	1.7	170	0.17	1.7	540	0.20	1.7	45	0.14	1.4	–	–	–
	T8430	0.4	200	0.17	1.7	110	0.15	1.7	165	0.17	1.7	555	0.20	1.7	40	0.14	1.4	–	–	–
	T9315	0.4	285	0.17	1.7	–	–	–	270	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.18	1.7	150	0.16	1.7	235	0.18	1.7	–	–	–	55	0.16	1.4	–	–	–
CNMG 120408E-NF	**HF7**	0.8	–	–	–	110	0.17	1.7	180	0.19	1.7	570	0.23	1.7	–	–	–	–	–	–
	T6310	0.8	200	0.19	1.7	140	0.17	1.7	160	0.19	1.7	600	0.23	1.7	60	0.15	1.4	–	–	–
	T7325	0.8	235	0.19	1.7	180	0.17	1.7	–	–	–	–	–	–	75	0.15	1.4	–	–	–
	T7335	0.8	225	0.19	1.7	175	0.17	1.7	–	–	–	–	–	–	70	0.15	1.4	–	–	–
	T8315	0.8	215	0.19	1.7	125	0.17	1.7	200	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T8330	0.8	200	0.19	1.7	120	0.17	1.7	190	0.19	1.7	600	0.23	1.7	50	0.15	1.4	–	–	–
	T8430	0.8	235	0.19	1.7	125	0.17	1.7	190	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T9315	0.8	320	0.19	1.7	–	–	–	300	0.19	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.19	1.7	170	0.17	1.7	270	0.19	1.7	–	–	–	60	0.15	1.4	–	–	–
CNMG 120412E-NF	**T6310**	1.2	185	0.30	2.1	130	0.27	2.1	145	0.30	2.1	555	0.36	2.1	55	0.21	1.7	–	–	–
	T7325	1.2	205	0.30	2.1	155	0.27	2.1	–	–	–	–	–	–	65	0.21	1.7	–	–	–
	T7335	1.2	200	0.30	2.1	155	0.27	2.1	–	–	–	–	–	–	65	0.21	1.7	–	–	–
	T8330	1.2	185	0.30	2.1	110	0.27	2.1	175	0.30	2.1	555	0.36	2.1	45	0.21	1.7	–	–	–
	T8430	1.2	200	0.30	2.1	110	0.27	2.1	165	0.30	2.1	555	0.36	2.1	40	0.21	1.7	–	–	–
	T9315	1.2	275	0.30	2.1	–	–	–	260	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	245	0.30	2.1	145	0.27	2.1	230	0.30	2.1	–	–	–	55	0.21	1.7	–	–	–
																				
			Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, com cortes contínuos.																	
CNMG 120404E-NM	**T7325**	0.4	195	0.20	2.1	150	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	190	0.20	2.1	145	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T8315	0.4	180	0.20	2.1	105	0.18	2.1	–	–	–	540	0.24	2.1	45	0.16	1.7	–	–	–
	T8330	0.4	170	0.20	2.1	100	0.18	2.1	–	–	–	510	0.24	2.1	40	0.16	1.7	–	–	–
	T8430	0.4	195	0.20	2.1	105	0.18	2.1	–	–	–	540	0.24	2.1	40	0.16	1.7	–	–	–
	T9315	0.4	270	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	50	0.16	1.7	–	–	–
CNMG 120408E-NM	**T7325**	0.8	215	0.25	2.1	165	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T7335	0.8	210	0.25	2.1	160	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T8315	0.8	205	0.25	2.1	120	0.23	2.1	–	–	–	615	0.30	2.1	50	0.20	1.7	–	–	–
	T8330	0.8	195	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T8430	0.8	210	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T9315	0.8	290	0.25	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.25	2.1	155	0.23	2.1	–	–	–	–	–	–	55	0.20	1.7	–	–	–
CNMG 120412E-NM	**T7325**	1.2	215	0.30	2.1	165	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T7335	1.2	210	0.30	2.1	160	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T8315	1.2	205	0.30	2.1	120	0.27	2.1	–	–	–	615	0.36	2.1	50	0.24	1.7	–	–	–
	T8330	1.2	195	0.30	2.1	115	0.27	2.1	–	–	–	585	0.36	2.1	45	0.24	1.7	–	–	–
	T8430	1.2	210	0.30	2.1	115	0.27	2.1	–	–	–	585	0.36	2.1	45	0.24	1.7	–	–	–
	T9315	1.2	285	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.30	2.1	150	0.27	2.1	–	–	–	–	–	–	55	0.24	1.7	–	–	–
CNMG 160608E-NM	**T7325**	0.8	195	0.30	3.6	150	0.27	3.6	–	–	–	–	–	–	60	0.27	2.9	–	–	–
	T7335	0.8	190	0.30	3.6	145	0.27	3.6	–	–	–	–	–	–	60	0.27	2.9	–	–	–
	T8315	0.8	185	0.30	3.6	110	0.27	3.6	–	–	–	555	0.36	3.6	45	0.27	2.9	–	–	–
	T8330	0.8	170	0.30	3.6	100	0.27	3.6	–	–	–	510	0.36	3.6	40	0.27	2.9	–	–	–
	T8430	0.8	185	0.30	3.6	100	0.27	3.6	–	–	–	510	0.36	3.6	40	0.27	2.9	–	–	–
	T9325	0.8	225	0.30	3.6	135	0.27	3.6	–	–	–	–	–	–	50	0.27	2.9	–	–	–

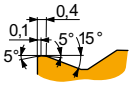
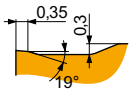
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, com cortes contínuos.																				
CNMG 160612E-NM	**T7325**	1.2	205	0.30	3.6	155	0.27	3.6	–	–	–	–	–	–	65	0.27	2.9	–	–	–
	T7335	1.2	200	0.30	3.6	155	0.27	3.6	–	–	–	–	–	–	65	0.27	2.9	–	–	–
	T8315	1.2	195	0.30	3.6	115	0.27	3.6	–	–	–	585	0.36	3.6	45	0.27	2.9	–	–	–
	T9325	1.2	240	0.30	3.6	140	0.27	3.6	–	–	–	–	–	–	50	0.27	2.9	–	–	–
CNMG 190612E-NM	**T7325**	1.2	195	0.35	4.2	150	0.32	4.2	–	–	–	–	–	–	60	0.32	3.4	–	–	–
	T7335	1.2	180	0.35	4.2	140	0.32	4.2	–	–	–	–	–	–	55	0.32	3.4	–	–	–
	T8315	1.2	180	0.35	4.2	105	0.32	4.2	–	–	–	540	0.42	4.2	45	0.32	3.4	–	–	–
	T8330	1.2	170	0.35	4.2	100	0.32	4.2	–	–	–	510	0.42	4.2	40	0.32	3.4	–	–	–
	T8430	1.2	180	0.35	4.2	95	0.32	4.2	–	–	–	495	0.42	4.2	35	0.32	3.4	–	–	–
	T9325	1.2	220	0.35	4.2	130	0.32	4.2	–	–	–	–	–	–	45	0.32	3.4	–	–	–
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
CNMG 090308E-NMR	**T7325**	0.8	175	0.35	1.6	135	0.32	1.6	–	–	–	–	–	–	55	0.25	1.3	–	–	–
	T7335	0.8	170	0.35	1.6	130	0.32	1.6	–	–	–	–	–	–	55	0.25	1.3	–	–	–
	T9325	0.8	200	0.35	1.6	120	0.32	1.6	–	–	–	–	–	–	45	0.25	1.3	–	–	–
CNMG 120404E-NMR	**T6310**	0.4	140	0.25	2.7	100	0.23	2.7	–	–	–	–	–	–	40	0.20	2.2	–	–	–
	T7325	0.4	155	0.25	2.7	120	0.23	2.7	–	–	–	–	–	–	50	0.20	2.2	–	–	–
	T7335	0.4	155	0.25	2.0	120	0.23	2.0	–	–	–	–	–	–	50	0.20	1.6	–	–	–
	T8330	0.4	140	0.25	2.0	80	0.23	2.0	–	–	–	–	–	–	35	0.20	1.6	–	–	–
	T8430	0.4	150	0.25	2.7	80	0.23	2.7	–	–	–	–	–	–	30	0.20	2.2	–	–	–
	T9315	0.4	215	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	190	0.25	2.0	110	0.23	2.0	–	–	–	–	–	–	40	0.20	1.6	–	–	–
CNMG 120408E-NMR	**T6310**	0.8	150	0.35	2.7	105	0.32	2.7	–	–	–	–	–	–	45	0.25	2.2	–	–	–
	T7325	0.8	170	0.35	2.7	130	0.32	2.7	–	–	–	–	–	–	55	0.25	2.2	–	–	–
	T7335	0.8	160	0.35	2.7	120	0.32	2.7	–	–	–	–	–	–	50	0.25	2.2	–	–	–
	T8330	0.8	150	0.35	2.7	90	0.32	2.7	–	–	–	–	–	–	35	0.25	2.2	–	–	–
	T8430	0.8	155	0.35	2.7	85	0.32	2.7	–	–	–	–	–	–	30	0.25	2.2	–	–	–
	T9315	0.8	210	0.35	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.35	2.7	110	0.32	2.7	–	–	–	–	–	–	40	0.25	2.2	–	–	–
CNMG 120412E-NMR	**T6310**	1.2	150	0.40	2.7	105	0.36	2.7	–	–	–	–	–	–	45	0.28	2.2	–	–	–
	T7325	1.2	170	0.40	2.7	130	0.36	2.7	–	–	–	–	–	–	55	0.28	2.2	–	–	–
	T7335	1.2	160	0.40	2.7	120	0.36	2.7	–	–	–	–	–	–	50	0.28	2.2	–	–	–
	T8330	1.2	150	0.40	2.7	90	0.36	2.7	–	–	–	–	–	–	35	0.28	2.2	–	–	–
	T8430	1.2	155	0.40	2.7	85	0.36	2.7	–	–	–	–	–	–	30	0.28	2.2	–	–	–
	T9315	1.2	215	0.40	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.40	2.7	110	0.36	2.7	–	–	–	–	–	–	40	0.28	2.2	–	–	–
CNMG 120416E-NMR	**T7325**	1.6	170	0.45	2.7	130	0.41	2.7	–	–	–	–	–	–	55	0.32	2.2	–	–	–
	T7335	1.6	160	0.45	2.7	120	0.41	2.7	–	–	–	–	–	–	50	0.32	2.2	–	–	–
	T9325	1.6	190	0.45	2.7	110	0.41	2.7	–	–	–	–	–	–	40	0.32	2.2	–	–	–
CNMG 160608E-NMR	**T7325**	0.8	160	0.35	4.0	120	0.32	4.0	–	–	–	–	–	–	50	0.25	3.2	–	–	–
	T7335	0.8	150	0.35	4.0	115	0.32	4.0	–	–	–	–	–	–	45	0.25	3.2	–	–	–
	T9315	0.8	205	0.35	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.35	4.0	110	0.32	4.0	–	–	–	–	–	–	40	0.25	3.2	–	–	–
CNMG 160612E-NMR	**T7325**	1.2	165	0.40	4.0	125	0.36	4.0	–	–	–	–	–	–	50	0.28	3.2	–	–	–
	T7335	1.2	155	0.40	4.0	120	0.36	4.0	–	–	–	–	–	–	50	0.28	3.2	–	–	–
	T8330	1.2	145	0.40	4.0	85	0.36	4.0	–	–	–	–	–	–	35	0.28	3.2	–	–	–
	T8430	1.2	150	0.40	4.0	80	0.36	4.0	–	–	–	–	–	–	30	0.28	3.2	–	–	–
	T9315	1.2	205	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.40	4.0	110	0.36	4.0	–	–	–	–	–	–	40	0.28	3.2	–	–	–

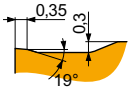
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
CNMG 160616E-NMR	**T7325**	1.6	◪ 165	0.45	4.0	■ 125	0.41	4.0	–	–	–	–	–	–	■ 50	0.32	3.2	–	–	–
	T7335	1.6	◪ 155	0.45	4.0	■ 120	0.41	4.0	–	–	–	–	–	–	■ 50	0.32	3.2	–	–	–
	T8330	1.6	■ 145	0.45	4.0	■ 85	0.41	4.0	–	–	–	–	–	–	◪ 35	0.32	3.2	–	–	–
	T8430	1.6	■ 150	0.45	4.0	■ 80	0.41	4.0	–	–	–	–	–	–	◪ 30	0.32	3.2	–	–	–
	T9315	1.6	■ 200	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 180	0.45	4.0	■ 105	0.41	4.0	–	–	–	–	–	–	◪ 40	0.32	3.2	–	–	–
CNMG 190608E-NMR	**T6310**	0.8	■ 140	0.35	5.2	■ 100	0.32	5.2	–	–	–	–	–	–	■ 40	0.25	4.2	–	–	–
	T7325	0.8	◪ 155	0.35	5.2	■ 120	0.32	5.2	–	–	–	–	–	–	■ 50	0.25	4.2	–	–	–
	T7335	0.8	◪ 150	0.35	5.2	■ 115	0.32	5.2	–	–	–	–	–	–	■ 45	0.25	4.2	–	–	–
	T9315	0.8	■ 195	0.35	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.35	5.2	■ 105	0.32	5.2	–	–	–	–	–	–	◪ 40	0.25	4.2	–	–	–
CNMG 190612E-NMR	**T6310**	1.2	■ 140	0.40	5.2	■ 100	0.36	5.2	–	–	–	–	–	–	■ 40	0.28	4.2	–	–	–
	T7325	1.2	◪ 160	0.40	5.2	■ 120	0.36	5.2	–	–	–	–	–	–	■ 50	0.28	4.2	–	–	–
	T7335	1.2	◪ 150	0.40	5.2	■ 115	0.36	5.2	–	–	–	–	–	–	■ 45	0.28	4.2	–	–	–
	T8330	1.2	■ 140	0.40	5.2	■ 80	0.36	5.2	–	–	–	–	–	–	◪ 35	0.28	4.2	–	–	–
	T8430	1.2	■ 145	0.40	5.2	■ 80	0.36	5.2	–	–	–	–	–	–	◪ 30	0.28	4.2	–	–	–
	T9315	1.2	■ 200	0.40	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 180	0.40	5.2	■ 105	0.36	5.2	–	–	–	–	–	–	◪ 40	0.28	4.2	–	–	–
CNMG 190616E-NMR	**T7325**	1.6	◪ 160	0.45	5.2	■ 120	0.41	5.2	–	–	–	–	–	–	■ 50	0.32	4.2	–	–	–
	T7335	1.6	◪ 150	0.45	5.2	■ 115	0.41	5.2	–	–	–	–	–	–	■ 45	0.32	4.2	–	–	–
	T9315	1.6	■ 195	0.45	5.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 175	0.45	5.2	■ 105	0.41	5.2	–	–	–	–	–	–	◪ 35	0.32	4.2	–	–	–
																				
Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																				
CNMG 120408-NRM	**T7325**	0.8	◪ 160	0.35	4.0	■ 120	0.32	4.0	–	–	–	–	–	–	■ 50	0.28	3.2	–	–	–
	T7335	0.8	◪ 150	0.35	4.0	■ 115	0.32	4.0	–	–	–	–	–	–	■ 45	0.28	3.2	–	–	–
	T9315	0.8	■ 205	0.35	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120412-NRM	**T7325**	1.2	◪ 165	0.40	4.0	■ 125	0.36	4.0	–	–	–	–	–	–	■ 50	0.28	3.2	–	–	–
	T7335	1.2	◪ 155	0.40	4.0	■ 120	0.36	4.0	–	–	–	–	–	–	■ 50	0.28	3.2	–	–	–
	T9315	1.2	■ 205	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120416-NRM	**T7325**	1.6	◪ 165	0.45	4.0	■ 125	0.41	4.0	–	–	–	–	–	–	■ 50	0.36	3.2	–	–	–
	T7335	1.6	◪ 155	0.45	4.0	■ 120	0.41	4.0	–	–	–	–	–	–	■ 50	0.36	3.2	–	–	–
	T9315	1.6	■ 200	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160608-NRM	**T7325**	0.8	◪ 155	0.35	6.0	■ 120	0.32	6.0	–	–	–	–	–	–	■ 50	0.28	4.8	–	–	–
	T7335	0.8	◪ 145	0.35	6.0	■ 110	0.32	6.0	–	–	–	–	–	–	■ 45	0.28	4.8	–	–	–
	T9315	0.8	■ 195	0.35	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160612-NRM	**T7325**	1.2	◪ 155	0.40	6.0	■ 120	0.36	6.0	–	–	–	–	–	–	■ 50	0.32	4.8	–	–	–
	T7335	1.2	◪ 150	0.40	6.0	■ 115	0.36	6.0	–	–	–	–	–	–	■ 45	0.32	4.8	–	–	–
	T9315	1.2	■ 200	0.40	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160616-NRM	**T7325**	1.6	◪ 155	0.45	6.0	■ 120	0.41	6.0	–	–	–	–	–	–	■ 50	0.36	4.8	–	–	–
	T7335	1.6	◪ 150	0.45	6.0	■ 115	0.41	6.0	–	–	–	–	–	–	■ 45	0.36	4.8	–	–	–
	T9315	1.6	■ 195	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190608-NRM	**T7325**	0.8	◪ 150	0.35	8.0	■ 115	0.32	8.0	–	–	–	–	–	–	■ 45	0.28	6.4	–	–	–
	T7335	0.8	◪ 140	0.35	8.0	■ 105	0.32	8.0	–	–	–	–	–	–	■ 45	0.28	6.4	–	–	–
	T9315	0.8	■ 190	0.35	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190612-NRM	**T7325**	1.2	◪ 155	0.40	8.0	■ 120	0.36	8.0	–	–	–	–	–	–	■ 50	0.32	6.4	–	–	–
	T7335	1.2	◪ 145	0.40	8.0	■ 110	0.36	8.0	–	–	–	–	–	–	■ 45	0.32	6.4	–	–	–
	T9315	1.2	■ 190	0.40	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190616-NRM	**T7325**	1.6	◪ 150	0.45	8.0	■ 115	0.41	8.0	–	–	–	–	–	–	■ 45	0.36	6.4	–	–	–
	T7335	1.6	◪ 145	0.45	8.0	■ 110	0.41	8.0	–	–	–	–	–	–	■ 45	0.36	6.4	–	–	–
	T9315	1.6	■ 190	0.45	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 250924-NRM	**T7325**	2.4	◪ 95	0.70	10.0	■ 70	0.63	10.0	–	–	–	–	–	–	■ 30	0.49	8.0	–	–	–
	T7335	2.4	◪ 90	0.70	10.0	■ 70	0.63	10.0	–	–	–	–	–	–	■ 25	0.49	8.0	–	–	–
	T9315	2.4	■ 115	0.70	10.0	–	–	–	◪ 105	0.70	10.0	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
			Geometria R para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMG 120408E-R	**6640**	0.8	■ 140	0.40	4.0	–	–	–	■ 130	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5305	0.8	◪ 240	0.40	4.0	–	–	–	■ 225	0.40	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	0.8	◪ 215	0.40	4.0	–	–	–	■ 200	0.40	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	0.8	■ 205	0.40	4.0	–	–	–	◪ 190	0.40	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 190	0.40	4.0	–	–	–	◪ 180	0.40	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 175	0.40	4.0	–	–	–	◪ 165	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 150	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120412E-R	**T5305**	1.2	◪ 245	0.45	4.0	–	–	–	■ 230	0.45	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	1.2	◪ 220	0.45	4.0	–	–	–	■ 205	0.45	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 195	0.45	4.0	–	–	–	◪ 185	0.45	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 175	0.45	4.0	–	–	–	◪ 165	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 155	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120416E-R	**T5315**	1.6	◪ 225	0.50	4.0	–	–	–	■ 210	0.50	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9335	1.6	■ 150	0.50	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160608E-R	**T5315**	0.8	◪ 210	0.40	5.5	–	–	–	■ 195	0.40	5.5	–	–	–	–	–	–	◪ 40	0.15	1.0
CNMG 160612E-R	**T5305**	1.2	◪ 235	0.45	5.5	–	–	–	■ 220	0.45	5.5	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	1.2	◪ 215	0.45	5.5	–	–	–	■ 200	0.45	5.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T7335	1.2	◪ 145	0.45	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 205	0.45	5.5	–	–	–	◪ 190	0.45	5.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 190	0.45	5.5	–	–	–	◪ 180	0.45	5.5	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 170	0.45	5.5	–	–	–	◪ 160	0.45	5.5	–	–	–	–	–	–	–	–	–
CNMG 160616E-R	**T5305**	1.6	◪ 240	0.50	5.5	–	–	–	■ 225	0.50	5.5	–	–	–	–	–	–	◪ 45	0.15	1.0
CNMG 190608E-R	**T5315**	0.8	◪ 205	0.40	7.0	–	–	–	■ 190	0.40	7.0	–	–	–	–	–	–	◪ 40	0.15	1.0
CNMG 190612E-R	**6640**	1.2	■ 135	0.45	7.0	–	–	–	■ 125	0.45	7.0	–	–	–	–	–	–	–	–	–
	T5305	1.2	◪ 230	0.45	7.0	–	–	–	■ 215	0.45	7.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	1.2	◪ 210	0.45	7.0	–	–	–	■ 195	0.45	7.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 185	0.45	7.0	–	–	–	◪ 175	0.45	7.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 165	0.45	7.0	–	–	–	◪ 155	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 145	0.45	7.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190616E-R	**6640**	1.6	■ 130	0.50	7.0	–	–	–	■ 120	0.50	7.0	–	–	–	–	–	–	–	–	–
	T5305	1.6	◪ 235	0.50	7.0	–	–	–	■ 220	0.50	7.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T5315	1.6	◪ 210	0.50	7.0	–	–	–	■ 195	0.50	7.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	1.6	■ 195	0.50	7.0	–	–	–	◪ 185	0.50	7.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	1.6	■ 180	0.50	7.0	–	–	–	◪ 170	0.50	7.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.6	■ 165	0.50	7.0	–	–	–	◪ 155	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 145	0.50	7.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMG 120408E-RM	**T5305**	0.8	◪ 275	0.40	4.0	–	–	–	◪ 260	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 250	0.40	4.0	–	–	–	◪ 235	0.40	4.0	–	–	–	–	–	–	–	–	–
	T6310	0.8	■ 155	0.40	4.0	◪ 110	0.36	4.0	◪ 125	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 180	0.40	4.0	◪ 140	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 165	0.40	4.0	◪ 125	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 165	0.40	4.0	◪ 95	0.36	4.0	◪ 155	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 155	0.40	4.0	◪ 90	0.36	4.0	◪ 145	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 165	0.40	4.0	◪ 90	0.36	4.0	◪ 135	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 240	0.40	4.0	–	–	–	◪ 225	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 220	0.40	4.0	–	–	–	◪ 205	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 200	0.40	4.0	◪ 120	0.36	4.0	◪ 190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 170	0.40	4.0	◪ 100	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–

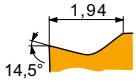
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			 Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMG 120412E-RM	**T5305**	1.2	280	0.45	4.0	–	–	–	265	0.45	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	250	0.45	4.0	–	–	–	235	0.45	4.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	160	0.45	4.0	115	0.41	4.0	125	0.45	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	180	0.45	4.0	140	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	170	0.45	4.0	130	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	1.2	170	0.45	4.0	100	0.41	4.0	160	0.45	4.0	–	–	–	–	–	–	–	–	–
	T8330	1.2	160	0.45	4.0	95	0.41	4.0	150	0.45	4.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	170	0.45	4.0	90	0.41	4.0	135	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	240	0.45	4.0	–	–	–	225	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	220	0.45	4.0	–	–	–	205	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	4.0	120	0.41	4.0	190	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	175	0.45	4.0	105	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 120416E-RM	**T5305**	1.6	280	0.50	4.0	–	–	–	265	0.50	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	255	0.50	4.0	–	–	–	240	0.50	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.6	185	0.50	4.0	140	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.6	175	0.50	4.0	135	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.6	160	0.50	4.0	95	0.45	4.0	150	0.50	4.0	–	–	–	–	–	–	–	–	–
	T8430	1.6	170	0.50	4.0	90	0.45	4.0	135	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.6	240	0.50	4.0	–	–	–	225	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	220	0.50	4.0	–	–	–	205	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	205	0.50	4.0	120	0.45	4.0	190	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	175	0.50	4.0	105	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160608E-RM	**T5305**	0.8	265	0.40	6.0	–	–	–	250	0.40	6.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	240	0.40	6.0	–	–	–	225	0.40	6.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	150	0.40	6.0	90	0.36	6.0	140	0.40	6.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	155	0.40	6.0	85	0.36	6.0	130	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	215	0.40	6.0	–	–	–	200	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.40	6.0	110	0.36	6.0	180	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	165	0.40	6.0	95	0.36	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160612E-RM	**T5305**	1.2	270	0.45	6.0	–	–	–	255	0.45	6.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	245	0.45	6.0	–	–	–	230	0.45	6.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	155	0.45	6.0	110	0.41	6.0	125	0.45	6.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	170	0.45	6.0	130	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	165	0.45	6.0	125	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	155	0.45	6.0	90	0.41	6.0	145	0.45	6.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	155	0.45	6.0	85	0.41	6.0	130	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	230	0.45	6.0	–	–	–	215	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	215	0.45	6.0	–	–	–	200	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.45	6.0	115	0.41	6.0	185	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	165	0.45	6.0	95	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 160616E-RM	**T5305**	1.6	270	0.50	6.0	–	–	–	255	0.50	6.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	245	0.50	6.0	–	–	–	230	0.50	6.0	–	–	–	–	–	–	–	–	–
	T7325	1.6	175	0.50	6.0	135	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.6	165	0.50	6.0	125	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.6	225	0.50	6.0	–	–	–	210	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	215	0.50	6.0	–	–	–	200	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	190	0.50	6.0	110	0.45	6.0	180	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	165	0.50	6.0	95	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMG 190608E-RM	**T5305**	0.8	260	0.40	7.5	–	–	–	245	0.40	7.5	–	–	–	–	–	–	–	–	–
	T5315	0.8	230	0.40	7.5	–	–	–	215	0.40	7.5	–	–	–	–	–	–	–	–	–
	T7335	0.8	155	0.40	7.5	120	0.36	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	210	0.40	7.5	–	–	–	195	0.40	7.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.40	7.5	110	0.36	7.5	180	0.40	7.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	160	0.40	7.5	95	0.36	7.5	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P				M				K				N				S				H		
			vc	f	ap		vc	f	ap		vc	f	ap		vc	f	ap		vc	f	ap		vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)		(m/min)	(mm/rev)	(mm)		(m/min)	(mm/rev)	(mm)		(m/min)	(mm/rev)	(mm)		(m/min)	(mm/rev)	(mm)		(m/min)	(mm/rev)	(mm)
CNMG 190612E-RM	**T5305**	1.2	260	0.45	7.5		–	–	–		245	0.45	7.5		–	–	–		–	–	–		–	–	–
	T5315	1.2	240	0.45	7.5		–	–	–		225	0.45	7.5		–	–	–		–	–	–		–	–	–
	T6310	1.2	155	0.45	7.5		110	0.41	7.5		125	0.45	7.5		–	–	–		–	–	–		–	–	–
	T7325	1.2	170	0.45	7.5		130	0.41	7.5		–	–	–		–	–	–		–	–	–		–	–	–
	T7335	1.2	160	0.45	7.5		120	0.41	7.5		–	–	–		–	–	–		–	–	–		–	–	–
	T8330	1.2	155	0.45	7.5		90	0.41	7.5		145	0.45	7.5		–	–	–		–	–	–		–	–	–
	T8430	1.2	150	0.45	7.5		80	0.41	7.5		125	0.45	7.5		–	–	–		–	–	–		–	–	–
	T9310	1.2	220	0.45	7.5		–	–	–		205	0.45	7.5		–	–	–		–	–	–		–	–	–
	T9315	1.2	210	0.45	7.5		–	–	–		195	0.45	7.5		–	–	–		–	–	–		–	–	–
	T9325	1.2	185	0.45	7.5		110	0.41	7.5		175	0.45	7.5		–	–	–		–	–	–		–	–	–
	T9335	1.2	165	0.45	7.5		95	0.41	7.5		–	–	–		–	–	–		–	–	–		–	–	–
CNMG 190616E-RM	**T5305**	1.6	265	0.50	7.5		–	–	–		250	0.50	7.5		–	–	–		–	–	–		–	–	–
	T5315	1.6	240	0.50	7.5		–	–	–		225	0.50	7.5		–	–	–		–	–	–		–	–	–
	T6310	1.6	155	0.50	7.5		110	0.45	7.5		125	0.50	7.5		–	–	–		–	–	–		–	–	–
	T7325	1.6	175	0.50	7.5		135	0.45	7.5		–	–	–		–	–	–		–	–	–		–	–	–
	T7335	1.6	160	0.50	7.5		120	0.45	7.5		–	–	–		–	–	–		–	–	–		–	–	–
	T9310	1.6	225	0.50	7.5		–	–	–		210	0.50	7.5		–	–	–		–	–	–		–	–	–
	T9315	1.6	210	0.50	7.5		–	–	–		195	0.50	7.5		–	–	–		–	–	–		–	–	–
	T9325	1.6	190	0.50	7.5		110	0.45	7.5		180	0.50	7.5		–	–	–		–	–	–		–	–	–
	T9335	1.6	160	0.50	7.5		95	0.45	7.5		–	–	–		–	–	–		–	–	–		–	–	–
CNMG 250924E-RM	**T7325**	2.4	105	0.80	12.0		80	0.72	12.0		–	–	–		–	–	–		–	–	–		–	–	–
	T7335	2.4	100	0.80	12.0		75	0.72	12.0		–	–	–		–	–	–		–	–	–		–	–	–
	T9226	2.4	90	0.80	12.0		50	0.72	12.0		85	0.80	12.0		–	–	–		–	–	–		–	–	–
	T9315	2.4	120	0.80	12.0		–	–	–		110	0.80	12.0		–	–	–		–	–	–		–	–	–
	T9325	2.4	105	0.80	12.0		60	0.72	12.0		95	0.80	12.0		–	–	–		–	–	–		–	–	–
	T9335	2.4	85	0.80	12.0		50	0.72	12.0		–	–	–		–	–	–		–	–	–		–	–	–

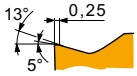
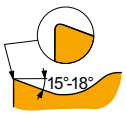




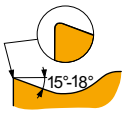
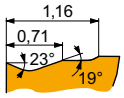
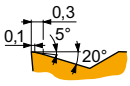
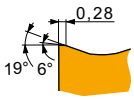
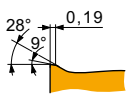
Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.

CNMG 120404E-SF	**H07**	0.4	–	–	–		90	0.14	1.0		145	0.15	1.0		470	0.18	1.0		45	0.12	0.8		–	–	–
	T6310	0.4	180	0.15	1.0		125	0.14	1.0		145	0.15	1.0		540	0.18	1.0		50	0.12	0.8		35	0.15	1.0
	T7325	0.4	205	0.17	1.0		155	0.15	1.0		–	–	–		–	–	–		65	0.15	0.8		–	–	–
	T7335	0.4	200	0.17	1.0		155	0.15	1.0		–	–	–		–	–	–		65	0.15	0.8		–	–	–
	T8315	0.4	195	0.15	1.0		115	0.14	1.0		185	0.15	1.0		585	0.18	1.0		45	0.12	0.8		35	0.15	1.0
	T8330	0.4	180	0.15	1.0		105	0.14	1.0		170	0.15	1.0		540	0.18	1.0		45	0.12	0.8		35	0.15	1.0
	T8430	0.4	220	0.15	1.0		120	0.14	1.0		180	0.15	1.0		600	0.18	1.0		45	0.12	0.8		35	0.15	1.0
	T9315	0.4	300	0.15	1.0		–	–	–		285	0.15	1.0		–	–	–		–	–	–		60	0.15	1.0
	T9325	0.4	255	0.17	1.0		150	0.15	1.0		240	0.17	1.0		–	–	–		55	0.15	0.8		–	–	–
CNMG 120408E-SF	**H07**	0.8	–	–	–		95	0.18	1.0		155	0.20	1.0		495	0.24	1.0		50	0.14	0.8		–	–	–
	T6310	0.8	200	0.20	1.0		140	0.18	1.0		160	0.20	1.0		600	0.24	1.0		60	0.14	0.8		40	0.15	1.0
	T7325	0.8	230	0.20	1.0		175	0.18	1.0		–	–	–		–	–	–		70	0.16	0.8		–	–	–
	T7335	0.8	220	0.20	1.0		170	0.18	1.0		–	–	–		–	–	–		70	0.16	0.8		–	–	–
	T8315	0.8	210	0.20	1.0		125	0.18	1.0		195	0.20	1.0		630	0.24	1.0		50	0.14	0.8		40	0.15	1.0
	T8330	0.8	200	0.20	1.0		120	0.18	1.0		190	0.20	1.0		600	0.24	1.0		50	0.14	0.8		40	0.15	1.0
	T8430	0.8	230	0.20	1.0		125	0.18	1.0		185	0.20	1.0		630	0.24	1.0		45	0.14	0.8		35	0.15	1.0
	T9315	0.8	315	0.20	1.0		–	–	–		295	0.20	1.0		–	–	–		–	–	–		60	0.15	1.0
	T9325	0.8	280	0.20	1.0		165	0.18	1.0		265	0.20	1.0		–	–	–		60	0.16	0.8		–	–	–
CNMG 120412E-SF	**T6310**	1.2	190	0.25	1.5		135	0.23	1.5		150	0.25	1.5		570	0.30	1.5		55	0.18	1.2		35	0.15	1.0
	T7325	1.2	220	0.25	1.5		170	0.23	1.5		–	–	–		–	–	–		70	0.18	1.2		–	–	–
	T8315	1.2	200	0.25	1.5		120	0.23	1.5		190	0.25	1.5		600	0.30	1.5		50	0.18	1.2		40	0.15	1.0
	T8430	1.2	210	0.25	1.5		115	0.23	1.5		175	0.25	1.5		585	0.30	1.5		45	0.18	1.2		35	0.15	1.0

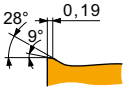
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
CNMG 120404E-SM	**T6310**	0.4	■ 155	0.22	2.0	■ 110	0.20	2.0	■ 125	0.22	2.0	◪ 465	0.26	2.0	■ 45	0.20	1.6	◪ 30	0.15	1.0
	T7325	0.4	◪ 175	0.22	2.0	■ 135	0.20	2.0	–	–	–	–	–	–	■ 55	0.20	1.6	–	–	–
	T7335	0.4	◪ 170	0.22	2.0	■ 130	0.20	2.0	–	–	–	–	–	–	■ 55	0.20	1.6	–	–	–
	T8330	0.4	■ 155	0.22	2.0	■ 90	0.20	2.0	■ 145	0.22	2.0	◪ 465	0.26	2.0	◪ 35	0.20	1.6	◪ 30	0.15	1.0
	T8430	0.4	■ 170	0.22	2.0	■ 90	0.20	2.0	◪ 135	0.22	2.0	◪ 465	0.26	2.0	◪ 35	0.20	1.6	◪ 25	0.15	1.0
	T9315	0.4	■ 245	0.20	2.0	–	–	–	◪ 230	0.20	2.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 210	0.22	2.0	■ 125	0.20	2.0	◪ 195	0.22	2.0	–	–	–	◪ 45	0.20	1.6	–	–	–
CNMG 120408E-SM	**T6310**	0.8	■ 175	0.25	2.0	■ 125	0.23	2.0	■ 140	0.25	2.0	◪ 525	0.30	2.0	■ 50	0.20	1.6	◪ 35	0.15	1.0
	T7325	0.8	◪ 200	0.25	2.0	■ 155	0.23	2.0	–	–	–	–	–	–	■ 65	0.20	1.6	–	–	–
	T7335	0.8	◪ 190	0.25	2.0	■ 145	0.23	2.0	–	–	–	–	–	–	■ 60	0.20	1.6	–	–	–
	T8330	0.8	■ 175	0.25	2.0	■ 105	0.23	2.0	■ 165	0.25	2.0	◪ 525	0.30	2.0	◪ 40	0.20	1.6	◪ 35	0.15	1.0
	T8430	0.8	■ 195	0.25	2.0	■ 105	0.23	2.0	◪ 160	0.25	2.0	◪ 540	0.30	2.0	◪ 40	0.20	1.6	◪ 30	0.15	1.0
	T9315	0.8	■ 265	0.25	2.0	–	–	–	◪ 250	0.25	2.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9325	0.8	■ 235	0.25	2.0	■ 140	0.23	2.0	◪ 220	0.25	2.0	–	–	–	◪ 50	0.20	1.6	–	–	–
CNMG 120412E-SM	**T6310**	1.2	■ 175	0.30	2.0	■ 125	0.27	2.0	■ 140	0.30	2.0	◪ 525	0.36	2.0	■ 50	0.24	1.6	◪ 35	0.15	1.0
	T7325	1.2	◪ 195	0.30	2.0	■ 150	0.27	2.0	–	–	–	–	–	–	■ 60	0.24	1.6	–	–	–
	T7335	1.2	◪ 190	0.30	2.0	■ 145	0.27	2.0	–	–	–	–	–	–	■ 60	0.24	1.6	–	–	–
	T8330	1.2	■ 175	0.30	2.0	■ 105	0.27	2.0	■ 165	0.30	2.0	◪ 525	0.36	2.0	◪ 40	0.24	1.6	◪ 35	0.15	1.0
	T8430	1.2	■ 190	0.30	2.0	■ 105	0.27	2.0	◪ 155	0.30	2.0	◪ 525	0.36	2.0	◪ 40	0.24	1.6	◪ 30	0.15	1.0
	T9315	1.2	■ 260	0.30	2.0	–	–	–	◪ 245	0.30	2.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9325	1.2	■ 235	0.30	2.0	■ 140	0.27	2.0	◪ 220	0.30	2.0	–	–	–	◪ 50	0.24	1.6	–	–	–
CNMG 160608E-SM	**T7325**	0.8	◪ 185	0.26	3.0	■ 140	0.23	3.0	–	–	–	–	–	–	■ 60	0.23	2.4	–	–	–
	T7335	0.8	◪ 180	0.26	3.0	■ 140	0.23	3.0	–	–	–	–	–	–	■ 55	0.23	2.4	–	–	–
	T8330	0.8	■ 165	0.26	3.0	■ 95	0.23	3.0	■ 155	0.26	3.0	◪ 495	0.31	3.0	◪ 40	0.23	2.4	◪ 30	0.15	1.0
	T8430	0.8	■ 180	0.26	3.0	■ 95	0.23	3.0	◪ 145	0.26	3.0	◪ 495	0.31	3.0	◪ 35	0.23	2.4	◪ 30	0.15	1.0
	T9325	0.8	■ 225	0.26	3.0	■ 135	0.23	3.0	◪ 210	0.26	3.0	–	–	–	◪ 50	0.23	2.4	–	–	–
CNMG 160612E-SM	**T6310**	1.2	■ 170	0.30	3.0	■ 120	0.27	3.0	■ 135	0.30	3.0	◪ 510	0.36	3.0	■ 50	0.27	2.4	◪ 30	0.15	1.0
	T7325	1.2	◪ 190	0.30	3.0	■ 145	0.27	3.0	–	–	–	–	–	–	■ 60	0.27	2.4	–	–	–
	T7335	1.2	◪ 180	0.30	3.0	■ 140	0.27	3.0	–	–	–	–	–	–	■ 55	0.27	2.4	–	–	–
	T9315	1.2	■ 250	0.30	3.0	–	–	–	◪ 235	0.30	3.0	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9325	1.2	■ 225	0.30	3.0	■ 135	0.27	3.0	◪ 210	0.30	3.0	–	–	–	◪ 50	0.27	2.4	–	–	–
CNMG 190612E-SM	**T6310**	1.2	■ 165	0.30	4.0	■ 115	0.27	4.0	■ 130	0.30	4.0	◪ 495	0.36	4.0	■ 45	0.27	3.2	◪ 30	0.15	1.0
	T7325	1.2	◪ 185	0.30	4.0	■ 140	0.27	4.0	–	–	–	–	–	–	■ 60	0.27	3.2	–	–	–
	T7335	1.2	◪ 175	0.30	4.0	■ 135	0.27	4.0	–	–	–	–	–	–	■ 55	0.27	3.2	–	–	–
	T9315	1.2	■ 245	0.30	4.0	–	–	–	◪ 230	0.30	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 220	0.30	4.0	■ 130	0.27	4.0	◪ 205	0.30	4.0	–	–	–	◪ 45	0.27	3.2	–	–	–
																				
			Geometria ER-SI com desenho positivo à direita para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																	
CNMG 120404ER-SI	**T7325**	0.4	◪ 220	0.20	1.7	■ 170	0.18	1.7	–	–	–	–	–	–	◪ 70	0.18	1.4	–	–	–
	T7335	0.4	◪ 215	0.20	1.7	■ 165	0.18	1.7	–	–	–	–	–	–	◪ 65	0.18	1.4	–	–	–
	T8330	0.4	■ 195	0.20	1.7	■ 115	0.18	1.7	–	–	–	◪ 585	0.24	1.7	◪ 45	0.18	1.4	–	–	–
	T8430	0.4	■ 225	0.20	1.7	■ 120	0.18	1.7	–	–	–	◪ 615	0.24	1.7	◪ 45	0.18	1.4	–	–	–
	T9325	0.4	■ 270	0.20	1.7	■ 160	0.18	1.7	–	–	–	–	–	–	◪ 60	0.18	1.4	–	–	–
CNMG 120408ER-SI	**T7325**	0.8	◪ 215	0.35	1.7	■ 165	0.32	1.7	–	–	–	–	–	–	◪ 65	0.25	1.4	–	–	–
	T7335	0.8	◪ 205	0.35	1.7	■ 155	0.32	1.7	–	–	–	–	–	–	◪ 65	0.25	1.4	–	–	–
	T8315	0.8	◪ 205	0.35	1.7	■ 120	0.32	1.7	–	–	–	◪ 615	0.42	1.7	◪ 50	0.25	1.4	–	–	–
	T8330	0.8	■ 195	0.35	1.7	■ 115	0.32	1.7	–	–	–	◪ 585	0.42	1.7	◪ 45	0.25	1.4	–	–	–
	T8430	0.8	■ 210	0.35	1.7	■ 115	0.32	1.7	–	–	–	◪ 585	0.42	1.7	◪ 45	0.25	1.4	–	–	–
	T9325	0.8	■ 255	0.35	1.7	■ 150	0.32	1.7	–	–	–	–	–	–	◪ 55	0.25	1.4	–	–	–
CNMG 120412ER-SI	**T8430**	1.2	■ 225	0.35	1.7	■ 120	0.32	1.7	–	–	–	◪ 615	0.42	1.7	◪ 45	0.25	1.4	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			E																	
Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos.																				
CNMG 120404EL-SI	**T7325**	0.4	220	0.20	1.7	170	0.18	1.7	–	–	–	–	–	–	70	0.18	1.4	–	–	–
	T7335	0.4	215	0.20	1.7	165	0.18	1.7	–	–	–	–	–	–	65	0.18	1.4	–	–	–
	T8330	0.4	195	0.20	1.7	115	0.18	1.7	–	–	–	585	0.24	1.7	45	0.18	1.4	–	–	–
	T8430	0.4	225	0.20	1.7	120	0.18	1.7	–	–	–	615	0.24	1.7	45	0.18	1.4	–	–	–
	T9325	0.4	270	0.20	1.7	160	0.18	1.7	–	–	–	–	–	–	60	0.18	1.4	–	–	–
CNMG 120408EL-SI	**T7325**	0.8	215	0.35	1.7	165	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T7335	0.8	205	0.35	1.7	155	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T8315	0.8	205	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	50	0.25	1.4	–	–	–
	T8330	0.8	195	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T8430	0.8	210	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T9325	0.8	255	0.35	1.7	150	0.32	1.7	–	–	–	–	–	–	55	0.25	1.4	–	–	–
CNMG 120412EL-SI	**T8430**	1.2	225	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	45	0.25	1.4	–	–	–
			W	E																
Geometria W-F Wiper para operações de maquinação de acabamento a acabamento fino com taxas de avanço maiores e acabamento superficial aprimorado.																				
CNMG 120408W-F	**T9315**	0.8	215	0.45	0.8	–	–	–	200	0.45	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	0.8	–	–	–	180	0.45	0.8	–	–	–	–	–	–	–	–	–
			W	S																
Geometria W-M Wiper para operações de maquinação de semi-desbaste a desbaste com taxas de avanço amaiores e acabamento superficial aprimorado.																				
CNMG 120408W-M	**T5315**	0.8	230	0.45	1.5	–	–	–	215	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	200	0.45	1.5	–	–	–	190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.45	1.5	–	–	–	175	0.45	1.5	–	–	–	–	–	–	–	–	–
CNMG 120412W-M	**T5315**	1.2	230	0.55	1.5	–	–	–	215	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	200	0.55	1.5	–	–	–	190	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.55	1.5	–	–	–	170	0.55	1.5	–	–	–	–	–	–	–	–	–
			W	S																
Geometria W-MR Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
CNMG 120404W-MR	**T9315**	0.4	200	0.30	1.5	–	–	–	190	0.30	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	180	0.30	1.5	105	0.27	1.5	170	0.30	1.5	–	–	–	–	–	–	–	–	–
CNMG 120408W-MR	**T5315**	0.8	230	0.45	1.5	–	–	–	215	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9310	0.8	215	0.45	1.5	–	–	–	200	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	200	0.45	1.5	–	–	–	190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.45	1.5	110	0.41	1.5	175	0.45	1.5	–	–	–	–	–	–	–	–	–
CNMG 120412W-MR	**T5315**	1.2	230	0.55	1.5	–	–	–	215	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9310	1.2	210	0.55	1.5	–	–	–	195	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	200	0.55	1.5	–	–	–	190	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.55	1.5	105	0.50	1.5	170	0.55	1.5	–	–	–	–	–	–	–	–	–
			W	1	U	S														
Geometria W-NM Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
CNMG 120404W-NM	**T7325**	0.4	195	0.20	2.1	150	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	190	0.20	2.1	145	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T9315	0.4	270	0.20	2.1	–	–	–	255	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	2.1	140	0.18	2.1	225	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–

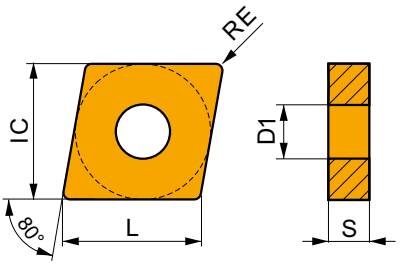
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria W-NM Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
CNMG 120408W-NM	**T7325**	0.8	215	0.25	2.1	165	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T7335	0.8	210	0.25	2.1	160	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T9315	0.8	290	0.25	2.1	–	–	–	275	0.25	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.25	2.1	155	0.23	2.1	245	0.25	2.1	–	–	–	55	0.20	1.7	–	–	–
CNMG 120412W-NM	**T7325**	1.2	215	0.30	2.1	165	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T7335	1.2	210	0.30	2.1	160	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T9315	1.2	285	0.30	2.1	–	–	–	270	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.30	2.1	150	0.27	2.1	240	0.30	2.1	–	–	–	55	0.24	1.7	–	–	–

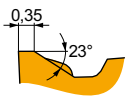
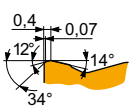
CNMM

PRAMET

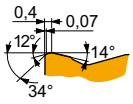
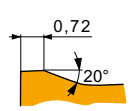
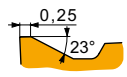
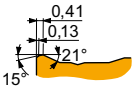
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.90	4.76
1606	15.875	6.35	16.10	6.35
1906	19.050	7.94	19.30	6.35
2509	25.400	9.12	25.80	9.53



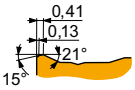
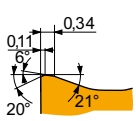
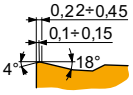
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria DR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
CNMM 160612E-DR	**T9315**	1.2	225	0.45	6.0	–	–	–	210	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	6.0	120	0.41	6.0	190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	6.0	100	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190608E-DR	**T9315**	0.8	215	0.40	8.0	–	–	–	200	0.40	8.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.40	8.0	110	0.36	8.0	180	0.40	8.0	–	–	–	–	–	–	–	–	–
CNMM 190612E-DR	**T9315**	1.2	220	0.45	8.0	–	–	–	205	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.45	8.0	115	0.41	8.0	185	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.45	8.0	100	0.41	8.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190616E-DR	**T9325**	1.6	195	0.50	9.0	115	0.45	9.0	185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	170	0.50	9.0	100	0.45	9.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria HR para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																				
CNMM 190616E-HR	**6640**	1.6	75	0.60	10.0	45	0.54	10.0	70	0.60	10.0	–	–	–	–	–	–	–	–	–
	T8345	1.6	55	0.60	10.0	30	0.54	10.0	50	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	105	0.60	10.0	60	0.54	10.0	95	0.60	10.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	80	0.60	10.0	45	0.54	10.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190624E-HR	**T8345**	2.4	60	0.65	10.0	35	0.59	10.0	55	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	115	0.65	10.0	–	–	–	105	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	0.65	10.0	60	0.59	10.0	95	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.65	10.0	50	0.59	10.0	–	–	–	–	–	–	–	–	–	–	–	–

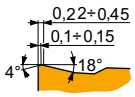
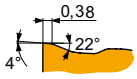
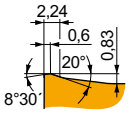
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria HR para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
CNMM 250924E-HR	**6640**	2.4	■ 75	0.65	14.0	◪ 45	0.59	14.0	■ 70	0.65	14.0	–	–	–	–	–	–	–	–	–
	T8345	2.4	■ 55	0.65	14.0	◪ 30	0.59	14.0	◪ 50	0.65	14.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 110	0.65	14.0	–	–	–	◪ 100	0.65	14.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	■ 100	0.65	14.0	◪ 60	0.59	14.0	◪ 95	0.65	14.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 80	0.65	14.0	◪ 45	0.59	14.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria HR2 para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
CNMM 190616-HR2	**T9226**	1.6	■ 85	0.65	10.0	◪ 50	0.59	10.0	◪ 80	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 110	0.65	10.0	–	–	–	◪ 100	0.65	10.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 80	0.65	10.0	◪ 45	0.59	10.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 190624-HR2	**T9226**	2.4	■ 80	0.85	10.0	◪ 45	0.77	10.0	◪ 75	0.85	10.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	■ 100	0.85	10.0	–	–	–	◪ 95	0.85	10.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 75	0.85	10.0	◪ 45	0.77	10.0	–	–	–	–	–	–	–	–	–	–	–	–
CNMM 250924-HR2	**T9315**	2.4	■ 100	0.85	12.0	–	–	–	◪ 95	0.85	12.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 75	0.85	12.0	◪ 45	0.77	12.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria NR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMM 120408E-NR	**6640**	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T7335	0.8	◪ 165	0.40	3.0	■ 125	0.36	3.0	–	–	–	–	–	–	◪ 50	0.28	2.4	–	–	–
	T8330	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T8430	0.8	■ 165	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9315	0.8	■ 215	0.40	3.0	–	–	–	◪ 200	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 195	0.40	3.0	■ 115	0.36	3.0	◪ 185	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
CNMM 120412E-NR	**T7325**	1.2	◪ 185	0.40	3.0	■ 140	0.36	3.0	–	–	–	–	–	–	◪ 60	0.28	2.4	–	–	–
	T7335	1.2	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T8330	1.2	■ 165	0.40	3.0	■ 95	0.36	3.0	◪ 155	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
	T8430	1.2	■ 170	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9325	1.2	■ 205	0.40	3.0	■ 120	0.36	3.0	◪ 190	0.40	3.0	–	–	–	◪ 45	0.28	2.4	–	–	–
																				
			Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMM 120408E-NR2	**T7325**	0.8	◪ 165	0.40	5.0	■ 125	0.36	5.0	–	–	–	–	–	–	◪ 50	0.28	4.0	–	–	–
	T7335	0.8	◪ 155	0.40	5.0	■ 120	0.36	5.0	–	–	–	–	–	–	◪ 50	0.28	4.0	–	–	–
	T8330	0.8	■ 150	0.40	5.0	■ 90	0.36	5.0	◪ 140	0.40	5.0	–	–	–	◪ 35	0.28	4.0	–	–	–
	T8430	0.8	■ 150	0.40	5.0	■ 80	0.36	5.0	◪ 125	0.40	5.0	–	–	–	◪ 30	0.28	4.0	–	–	–
	T9315	0.8	■ 205	0.40	5.0	–	–	–	◪ 190	0.40	5.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 185	0.40	5.0	■ 110	0.36	5.0	◪ 175	0.40	5.0	–	–	–	◪ 40	0.28	4.0	–	–	–
CNMM 120412E-NR2	**T7335**	1.2	◪ 155	0.45	5.0	■ 120	0.41	5.0	–	–	–	–	–	–	◪ 50	0.32	4.0	–	–	–
	T8330	1.2	■ 150	0.45	5.0	■ 90	0.41	5.0	◪ 140	0.45	5.0	–	–	–	◪ 35	0.32	4.0	–	–	–
	T8430	1.2	■ 150	0.45	5.0	■ 80	0.41	5.0	◪ 125	0.45	5.0	–	–	–	◪ 30	0.32	4.0	–	–	–
	T9315	1.2	■ 205	0.45	5.0	–	–	–	◪ 190	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 185	0.45	5.0	■ 110	0.41	5.0	◪ 175	0.45	5.0	–	–	–	◪ 40	0.32	4.0	–	–	–
CNMM 160608E-NR2	**T8330**	0.8	■ 145	0.40	6.0	■ 85	0.36	6.0	◪ 135	0.40	6.0	–	–	–	◪ 35	0.32	4.8	–	–	–
	T8430	0.8	■ 150	0.40	6.0	■ 80	0.36	6.0	◪ 125	0.40	6.0	–	–	–	◪ 30	0.32	4.8	–	–	–
	T9325	0.8	■ 180	0.40	6.0	■ 105	0.36	6.0	◪ 170	0.40	6.0	–	–	–	◪ 40	0.32	4.8	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
CNMM 160612E-NR2	**T7325**	1.2	165	0.45	6.0	125	0.41	6.0	–	–	–	–	–	–	50	0.36	4.8	–	–	–
	T7335	1.2	155	0.45	6.0	120	0.41	6.0	–	–	–	–	–	–	50	0.36	4.8	–	–	–
	T8330	1.2	145	0.45	6.0	85	0.41	6.0	135	0.45	6.0	–	–	–	35	0.36	4.8	–	–	–
	T8430	1.2	150	0.45	6.0	80	0.41	6.0	125	0.45	6.0	–	–	–	30	0.36	4.8	–	–	–
	T9315	1.2	205	0.45	6.0	–	–	–	190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
CNMM 160616E-NR2	**T7325**	1.6	165	0.50	6.0	125	0.45	6.0	–	–	–	–	–	–	50	0.40	4.8	–	–	–
	T7335	1.6	160	0.50	6.0	120	0.45	6.0	–	–	–	–	–	–	50	0.40	4.8	–	–	–
	T9325	1.6	180	0.50	6.0	105	0.45	6.0	170	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–
CNMM 190612E-NR2	**T7325**	1.2	155	0.45	9.0	120	0.41	9.0	–	–	–	–	–	–	50	0.36	7.2	–	–	–
	T7335	1.2	145	0.45	9.0	110	0.41	9.0	–	–	–	–	–	–	45	0.36	7.2	–	–	–
	T8330	1.2	140	0.45	9.0	80	0.41	9.0	130	0.45	9.0	–	–	–	35	0.36	7.2	–	–	–
	T8430	1.2	140	0.45	9.0	75	0.41	9.0	115	0.45	9.0	–	–	–	30	0.36	7.2	–	–	–
	T9325	1.2	175	0.45	9.0	105	0.41	9.0	165	0.45	9.0	–	–	–	35	0.36	7.2	–	–	–
CNMM 190616E-NR2	**T7325**	1.6	160	0.50	9.0	120	0.45	9.0	–	–	–	–	–	–	50	0.40	7.2	–	–	–
	T7335	1.6	150	0.50	9.0	115	0.45	9.0	–	–	–	–	–	–	45	0.40	7.2	–	–	–
	T8330	1.6	140	0.50	9.0	80	0.45	9.0	130	0.50	9.0	–	–	–	35	0.40	7.2	–	–	–
	T8430	1.6	140	0.50	9.0	75	0.45	9.0	115	0.50	9.0	–	–	–	30	0.40	7.2	–	–	–
	T9315	1.6	195	0.50	9.0	–	–	–	185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	175	0.50	9.0	105	0.45	9.0	165	0.50	9.0	–	–	–	35	0.40	7.2	–	–	–
CNMM 190624E-NR2	**T7335**	2.4	130	0.80	9.0	100	0.72	9.0	–	–	–	–	–	–	40	0.56	7.2	–	–	–
	T9325	2.4	150	0.80	9.0	90	0.72	9.0	140	0.80	9.0	–	–	–	30	0.56	7.2	–	–	–
CNMM 250924E-NR2	**T7325**	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T7335	2.4	95	0.80	12.0	70	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T8430	2.4	80	0.80	12.0	45	0.72	12.0	65	0.80	12.0	–	–	–	15	0.56	9.6	–	–	–
	T9315	2.4	110	0.80	12.0	–	–	–	100	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
																				
Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
CNMM 250924-NRM	**T7325**	2.4	95	0.70	10.0	70	0.63	10.0	–	–	–	–	–	–	30	0.49	8.0	–	–	–
	T7335	2.4	90	0.70	10.0	70	0.63	10.0	–	–	–	–	–	–	25	0.49	8.0	–	–	–
	T9315	2.4	115	0.70	10.0	–	–	–	105	0.70	10.0	–	–	–	–	–	–	–	–	–
																				
Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
CNMM 120408E-OR	**T8330**	0.8	150	0.40	5.0	90	0.36	5.0	140	0.40	5.0	–	–	–	35	0.28	4.0	–	–	–
	T8430	0.8	150	0.40	5.0	80	0.36	5.0	125	0.40	5.0	–	–	–	30	0.28	4.0	–	–	–
	T9315	0.8	205	0.40	5.0	–	–	–	190	0.40	5.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.40	5.0	110	0.36	5.0	175	0.40	5.0	–	–	–	40	0.28	4.0	–	–	–
	T9335	0.8	160	0.40	5.0	95	0.36	5.0	–	–	–	–	–	–	35	0.28	4.0	–	–	–
CNMM 120412E-OR	**T9315**	1.2	205	0.45	5.0	–	–	–	190	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	5.0	110	0.41	5.0	175	0.45	5.0	–	–	–	40	0.36	4.0	–	–	–
	T9335	1.2	165	0.45	5.0	95	0.41	5.0	–	–	–	–	–	–	35	0.36	4.0	–	–	–
CNMM 120416E-OR	**T9325**	1.6	190	0.50	5.0	110	0.45	5.0	180	0.50	5.0	–	–	–	40	0.40	4.0	–	–	–
	T9335	1.6	165	0.50	5.0	95	0.45	5.0	–	–	–	–	–	–	35	0.40	4.0	–	–	–
CNMM 160608E-OR	**T9315**	0.8	205	0.40	6.0	–	–	–	190	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	180	0.40	6.0	105	0.36	6.0	170	0.40	6.0	–	–	–	40	0.32	4.8	–	–	–
	T9335	0.8	160	0.40	6.0	95	0.36	6.0	–	–	–	–	–	–	35	0.32	4.8	–	–	–
CNMM 160612E-OR	**T8430**	1.2	150	0.45	6.0	80	0.41	6.0	125	0.45	6.0	–	–	–	30	0.36	4.8	–	–	–
	T9315	1.2	205	0.45	6.0	–	–	–	190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–

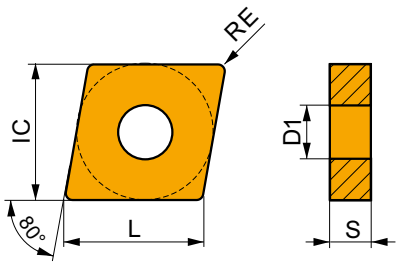
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
CNMM 160616E-OR	**T9315**	1.6	■ 205	0.50	6.0	–	–	–	◪ 190	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 180	0.50	6.0	◪ 105	0.45	6.0	◪ 170	0.50	6.0	–	–	–	◪ 40	0.40	4.8	–	–	–
CNMM 190612E-OR	**T8330**	1.2	■ 140	0.45	9.0	◪ 80	0.41	9.0	■ 130	0.45	9.0	–	–	–	◪ 35	0.36	7.2	–	–	–
	T8430	1.2	■ 140	0.45	9.0	◪ 75	0.41	9.0	◪ 115	0.45	9.0	–	–	–	◪ 30	0.36	7.2	–	–	–
	T9315	1.2	■ 195	0.45	9.0	–	–	–	◪ 185	0.45	9.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 175	0.45	9.0	◪ 105	0.41	9.0	◪ 165	0.45	9.0	–	–	–	◪ 35	0.36	7.2	–	–	–
	T9335	1.2	■ 150	0.45	9.0	◪ 90	0.41	9.0	–	–	–	–	–	–	◪ 30	0.36	7.2	–	–	–
CNMM 190616E-OR	**T8330**	1.6	■ 140	0.50	9.0	◪ 80	0.45	9.0	■ 130	0.50	9.0	–	–	–	◪ 35	0.40	7.2	–	–	–
	T8345	1.6	■ 120	0.50	9.0	◪ 70	0.45	9.0	◪ 110	0.50	9.0	–	–	–	◪ 30	0.40	7.2	–	–	–
	T8430	1.6	■ 140	0.50	9.0	◪ 75	0.45	9.0	◪ 115	0.50	9.0	–	–	–	◪ 30	0.40	7.2	–	–	–
	T9315	1.6	■ 195	0.50	9.0	–	–	–	◪ 185	0.50	9.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 175	0.50	9.0	◪ 105	0.45	9.0	◪ 165	0.50	9.0	–	–	–	◪ 35	0.40	7.2	–	–	–
	T9335	1.6	■ 155	0.50	9.0	◪ 90	0.45	9.0	–	–	–	–	–	–	◪ 30	0.40	7.2	–	–	–
CNMM 190624E-OR	**T9315**	2.4	■ 165	0.80	9.0	–	–	–	◪ 155	0.80	9.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	■ 150	0.80	9.0	◪ 90	0.72	9.0	◪ 140	0.80	9.0	–	–	–	◪ 30	0.56	7.2	–	–	–
CNMM 250924E-OR	**T8330**	2.4	■ 75	1.00	12.0	◪ 45	0.90	12.0	■ 70	1.00	12.0	–	–	–	◪ 15	0.70	9.6	–	–	–
	T8430	2.4	■ 75	1.00	12.0	◪ 40	0.90	12.0	◪ 60	1.00	12.0	–	–	–	◪ 15	0.70	9.6	–	–	–
	T9315	2.4	■ 100	1.00	12.0	–	–	–	◪ 95	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	■ 95	1.00	12.0	◪ 55	0.90	12.0	◪ 90	1.00	12.0	–	–	–	◪ 20	0.70	9.6	–	–	–
	T9335	2.4	■ 75	1.00	12.0	◪ 45	0.90	12.0	–	–	–	–	–	–	◪ 15	0.70	9.6	–	–	–
																				
			Geometria OR1 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
CNMM 190616E-OR1	**T9325**	1.6	■ 175	0.50	9.0	◪ 105	0.45	9.0	◪ 165	0.50	9.0	–	–	–	◪ 35	0.35	7.2	–	–	–
	T9335	1.6	■ 155	0.50	9.0	◪ 90	0.45	9.0	–	–	–	–	–	–	◪ 30	0.35	7.2	–	–	–
																				
			Geometria 923 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos pesados.																	
CNMM 250924S-923	**T8330**	2.4	■ 75	0.85	12.0	■ 45	0.77	12.0	◪ 70	0.85	12.0	–	–	–	◪ 15	0.60	9.6	–	–	–
	T8430	2.4	■ 75	0.85	12.0	■ 40	0.77	12.0	◪ 60	0.85	12.0	–	–	–	◪ 15	0.60	9.6	–	–	–
	T9335	2.4	■ 75	0.85	12.0	■ 45	0.77	12.0	–	–	–	–	–	–	◪ 15	0.60	9.6	–	–	–

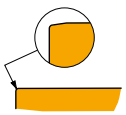
CNGA CER

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.90	4.76



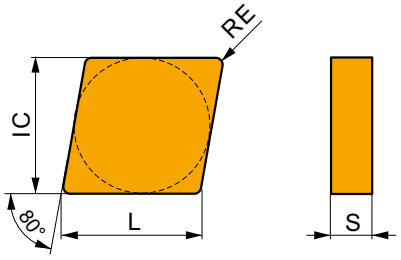
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
  HSC T																				
Para operações de maquinação com altas velocidades e cortes contínuos.																				
CNGA 120404 T02020	**TC100**	0.4	–	–	–	–	–	–	590	0.10	2.0	–	–	–	–	–	–	–	–	–
CNGA 120408 T01020	**TC100**	0.8	–	–	–	–	–	–	550	0.20	2.0	–	–	–	–	–	–	–	–	–
CNGA 120412 T01020	**TC100**	1.2	–	–	–	–	–	–	540	0.25	2.0	–	–	–	–	–	–	–	–	–

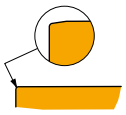
CNGN CER

PRAMET

	IC (mm)	L (mm)	S (mm)
1204	12.700	12.90	4.76
1207	12.700	12.90	7.94



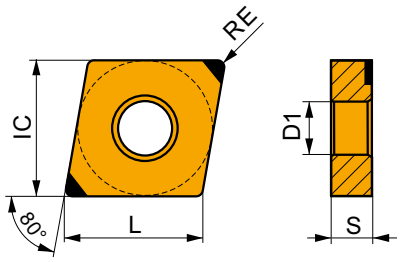
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
  HSC T																				
Para operações de maquinação com altas velocidades e cortes contínuos.																				
CNGN 120408 T01020	**TC100**	0.8	–	–	–	–	–	–	550	0.20	2.0	–	–	–	–	–	–	–	–	–
CNGN 120708 T01020	**TC100**	0.8	–	–	–	–	–	–	550	0.20	2.0	–	–	–	–	–	–	–	–	–
CNGN 120712 T01020	**TC100**	1.2	–	–	–	–	–	–	540	0.25	2.0	–	–	–	–	–	–	–	–	–

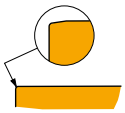
CNGA CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.90	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		S															
			Para operações de maquinação de acabamento, e cortes contínuos.																	
CNGA 120404S01020B	**TB310**	0.4	–	–	–	–	–	–	◪ 510	0.10	0.4	–	–	–	◪ 135	0.07	0.3	■ 105	0.15	1.0
CNGA 120408S01020B	**TB310**	0.8	–	–	–	–	–	–	◪ 530	0.15	0.6	–	–	–	◪ 140	0.11	0.5	■ 110	0.15	1.0

DCBN(RL) EXT

P M K N S H

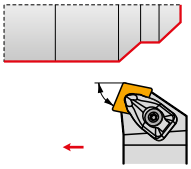
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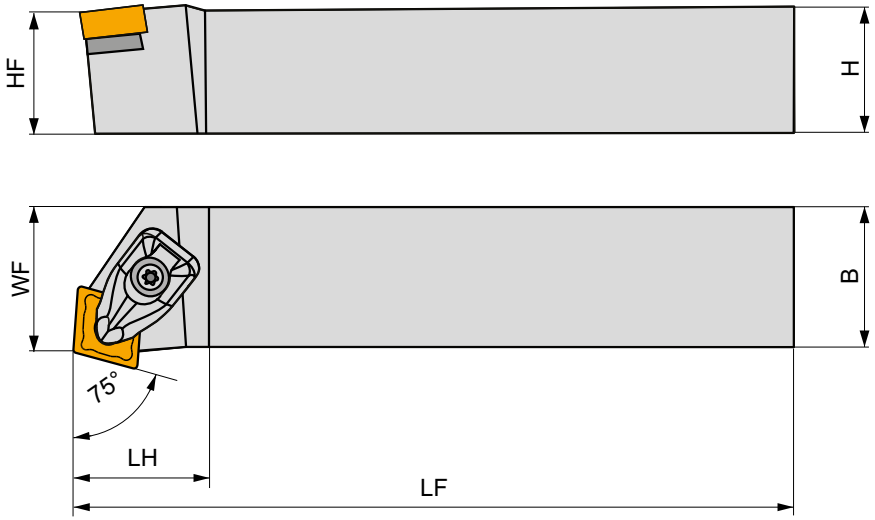
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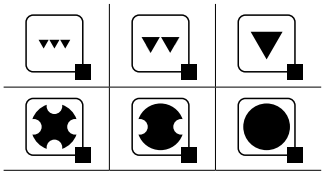


Porta-Ferramentas de Exterior, Fixação Dupla, Ângulo de 75 °, para Pastilhas CN . . .

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de 75 °. Adequado para torneamento longitudinal e frontal sem esquadria e chanfrar com pastilhas negativas CN .. tamanho 12 a 19. Disponível com hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg			
R	DCBNR 2020 K 12	20	20	20	17	125	34.2	-6	-6	0.43	GI043	DC12	AT001
	DCBNR 2525 M 12	25	25	25	22	150	34.6	-6	-6	0.76	GI043	DC12	AT001
	DCBNR 3225 P 12	32	25	32	22	170	34.6	-6	-6	1.09	GI043	DC12	AT001
	DCBNR 2525 M 16	25	25	25	22	150	41.5	-6	-6	0.80	GI050	DC16	AT005
	DCBNR 3225 P 16	32	25	32	22	170	32	-6	-6	1.11	GI050	DC16	AT005
	DCBNR 3232 P 19	32	32	32	27	170	46.1	-6	-6	1.39	GI042	DC19	–
	DCBNR 4040 S 19	40	40	40	35	250	46.7	-6	-6	3.16	GI042	DC19	–
L	DCBNL 2020 K 12	20	20	20	17	125	34.2	-6	-6	0.43	GI043	DC12	AT001
	DCBNL 2525 M 12	25	25	25	22	150	34.6	-6	-6	0.76	GI043	DC12	AT001
	DCBNL 3225 P 12	32	25	32	22	170	34.6	-6	-6	1.09	GI043	DC12	AT001
	DCBNL 2525 M 16	25	25	25	22	150	41.5	-6	-6	0.79	GI050	DC16	AT005
	DCBNL 3225 P 16	32	25	32	22	170	32	-6	-6	1.11	GI050	DC16	AT005
	DCBNL 3232 P 19	32	32	32	27	170	46.1	-6	-6	1.39	GI042	DC19	–

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..

		Nm				
DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P
DC19	DCS 19	6.4	DCS 236-01	US 2007-T20P	–	LK T20P

			
AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

DCKN(RL) EXT

P M K N S H

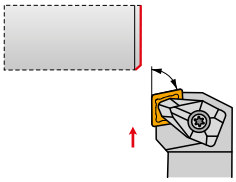
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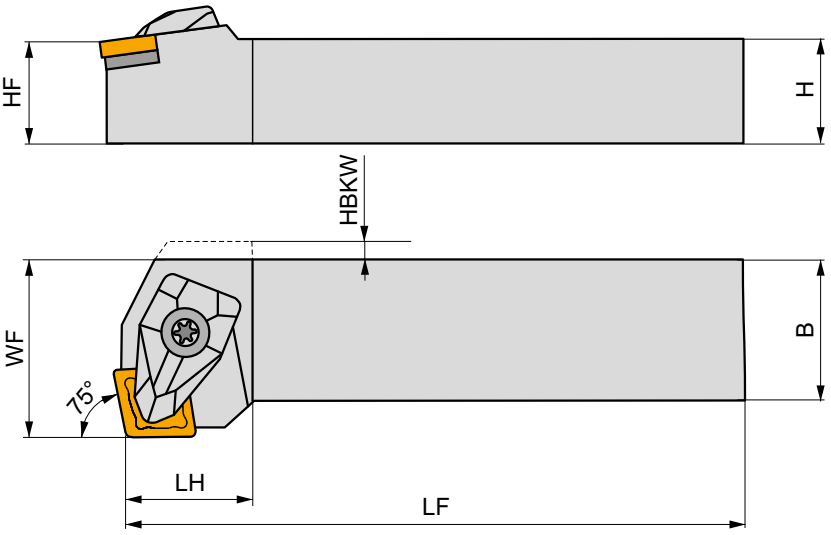
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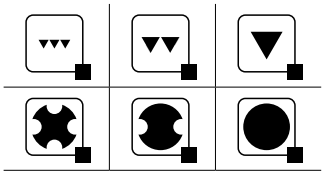


Porta-Ferramenta de Exterior, Fixação Dupla, Ângulo de 75 ° (Frontal), para Pastilhas CN …

Porta-ferramentas de de exterior à direita ou à esquerda com fixação dupla e ângulo de 75°. Adequado para torneamento frontal e ocasionalmente, chanfrar com pastilhas negativas CN .. 12 ou 16. Disponível com hastes de 20x20 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	HBKW (mm)	LAMS (°)	GAMO (°)	kg			
R	**DCKNR 2020 K 12**	20	20	20	25	125	21.2	4.5	-6	-6	0.46	GI043	DC12	AT001
	DCKNR 2525 M 12	25	25	25	32	150	21.1	–	-6	-6	0.80	GI043	DC12	AT001
	DCKNR 3225 P 12	32	25	32	32	170	21.1	–	-6	-6	1.14	GI043	DC12	AT001
	DCKNR 3232 P 16	32	32	32	40	170	26	–	-6	-6	1.46	GI050	DC16	AT005
L	**DCKNL 2020 K 12**	20	20	20	25	125	21.2	4.5	-6	-6	0.46	GI043	DC12	AT001
	DCKNL 2525 M 12	25	25	25	32	150	21.1	–	-6	-6	0.80	GI043	DC12	AT001
	DCKNL 3225 P 12	32	25	32	32	170	21.1	–	-6	-6	1.13	GI043	DC12	AT001
	DCKNL 3232 P 16	32	32	32	40	170	26	–	-6	-6	1.46	GI050	DC16	AT005

GI043	CN.. 1204..
GI050	CN.. 1606..

DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P

AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

DCLN(RL) EXT

P M K N S H

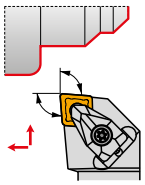
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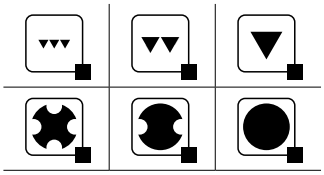
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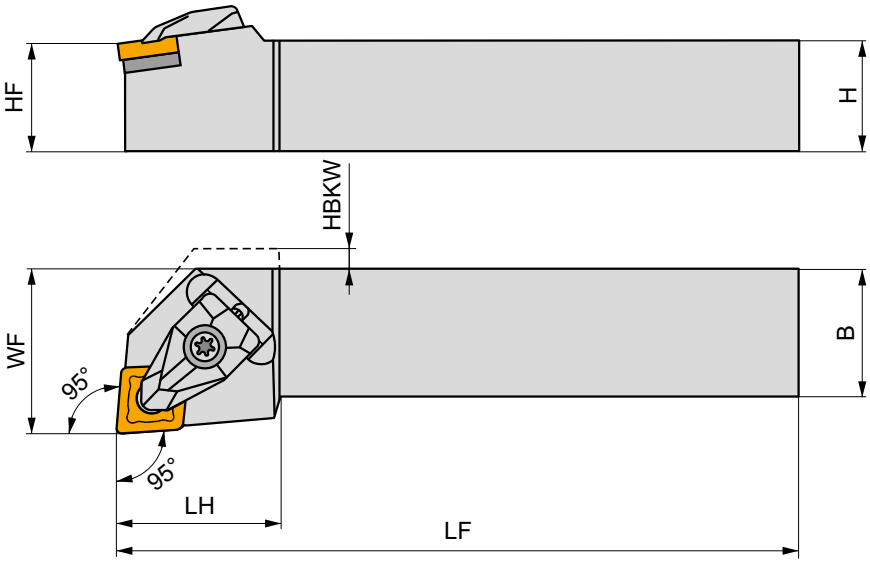


Porta-Ferramentas de Torneamento Exterior, Fixação Dupla, Ângulo de 95 °, para Pastilhas CN ...

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de 95 °. Adequado para torneamento longitudinal, chanfrar e torneamento frontal com esquadria, utilizando pastilhas negativas CN .. tamanho 09 até 19. Disponível em hastes 16x16 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	HBKW (mm)	LAMS (°)	GAMO (°)	kg			
R	DCLNR 1616 H 09	16	16	16	20	100	25	–	-6	-6	0.27	GI133	DC09	–
	DCLNR 2020 K 09	20	20	20	25	125	25	–	-6	-6	0.44	GI133	DC09	–
	DCLNR 2525 M 09	25	25	25	32	150	25	–	-6	-6	0.78	GI133	DC09	–
	DCLNR 1616 H 12	16	16	16	20	100	32.3	4.5	-6	-6	0.26	GI043	DCI12	AT001
	DCLNR 2020 K 12	20	20	20	25	125	30	–	-6	-6	0.44	GI043	DC12	AT001
	DCLNR 2525 M 12	25	25	25	32	150	30	–	-6	-6	0.78	GI043	DC12	AT001
	DCLNR 3225 P 12	32	25	32	32	170	30	–	-6	-6	1.10	GI043	DC12	AT001
	DCLNR 2525 M 16	25	25	25	32	150	39	–	-6	-6	0.81	GI050	DC16	AT005
	DCLNR 3225 P 16	32	25	32	32	170	35	–	-6	-6	1.20	GI050	DC16	AT005
	DCLNR 3232 P 19	32	32	32	40	170	40	–	-6	-6	1.55	GI042	DC19	–
	DCLNR 4040 S 19	40	40	40	50	250	43.4	–	-6	-6	3.26	GI042	DC19	–
L	DCLNL 1616 H 09	16	16	16	20	100	24.8	–	-6	-6	0.22	GI133	DC09	–
	DCLNL 2020 K 09	20	20	20	25	125	24.8	–	-6	-6	0.42	GI133	DC09	–
	DCLNL 2525 M 09	25	25	25	32	150	24.8	–	-6	-6	0.76	GI133	DC09	–
	DCLNL 1616 H 12	16	16	16	20	100	32.2	4.5	-6	-6	0.26	GI043	DCI12	AT001
	DCLNL 2020 K 12	20	20	20	25	125	32	–	-6	-6	0.44	GI043	DC12	AT001
	DCLNL 2525 M 12	25	25	25	32	150	32	–	-6	-6	0.78	GI043	DC12	AT001
	DCLNL 3225 P 12	32	25	32	32	170	32	–	-6	-6	1.10	GI043	DC12	AT001
	DCLNL 2525 M 16	25	25	25	32	150	39	–	-6	-6	0.81	GI050	DC16	AT005
	DCLNL 3225 P 16	32	25	32	32	170	39	–	-6	-6	1.20	GI050	DC16	AT005
	DCLNL 3232 P 19	32	32	32	40	170	43.2	–	-6	-6	1.51	GI042	DC19	–
	DCLNL 4040 S 19	40	40	40	50	250	43.4	–	-6	-6	3.26	GI042	DC19	–

GI042	CN.. 1906..
GI043	CN.. 1204..

GI050	CN.. 1606..
GI133	CN.. 0903..

		Nm				
DC09	DCS 09	1.7	DCS 236-04	US 2004-T09P	FLAG T09P	–
DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P
DC19	DCS 19	6.4	DCS 236-01	US 2007-T20P	–	LK T20P
DCI12	DCS 12	3.9	DCS 236-03	US 2002-T15P	FLAG T15P/3,5	–

AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

PCBN(RL) EXT

P M K N S H

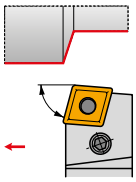
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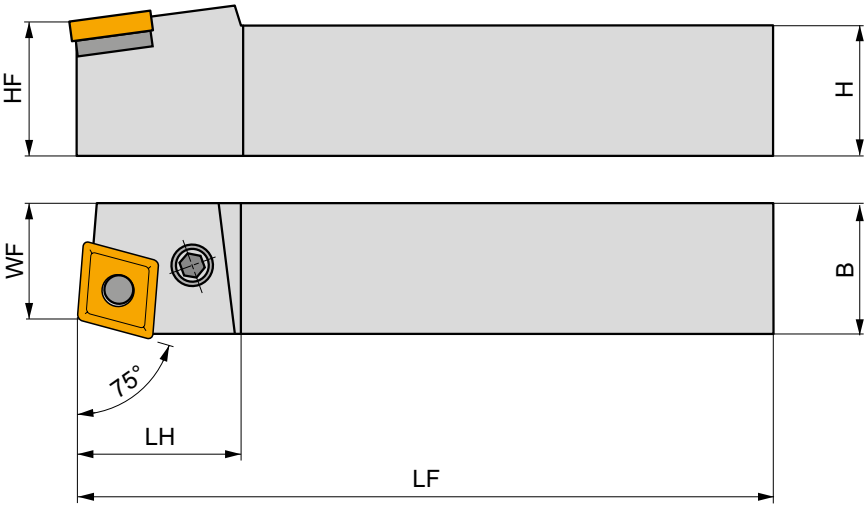
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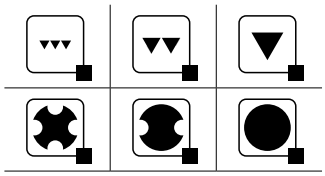


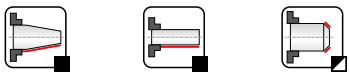
Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 75 °, para Pastilhas CN …

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de 75 °. Adequado para chanfrar, torneamento cónico e longitudinal sem esquadria, utilizando pastilhas negativas CN... de tamanho 12, 16, 19 ou 25. Disponível em hastes de 20x20 até 50x50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PCBNR 2020 K 12	20	20	20	17	125	36	-6	-6	0.43	GI043	PC22
	PCBNR 2525 M 12	25	25	25	22	150	36	-6	-6	0.63	GI043	PC20
	PCBNR 3225 P 12	32	25	32	22	170	36	-6	-6	0.70	GI043	PC20
	PCBNR 3232 P 16	32	32	32	27	170	40	-6	-6	1.36	GI050	PC40
	PCBNR 3232 P 19	32	32	32	27	170	45	-6	-6	1.10	GI042	PC50
	PCBNR 4040 S 19	40	40	40	35	250	45	-6	-6	3.15	GI042	PC50
	PCBNR 4040 S 25	40	40	40	35	250	45	-6	-6	3.10	GI062	PC60
	PCBNR 5050 T 25	50	50	50	43	300	50	-6	-6	5.80	GI062	PC60
L	PCBNL 2020 K 12	20	20	20	17	125	36	-6	-6	0.38	GI043	PC22
	PCBNL 2525 M 12	25	25	25	22	150	36	-6	-6	0.73	GI043	PC20
	PCBNL 3225 P 12	32	25	32	22	170	36	-6	-6	0.70	GI043	PC20
	PCBNL 3232 P 16	32	32	32	27	170	40	-6	-6	1.25	GI050	PC40
	PCBNL 3232 P 19	32	32	32	27	170	45	-6	-6	1.10	GI042	PC50
	PCBNL 4040 S 19	40	40	40	35	250	45	-6	-6	3.15	GI042	PC50
	PCBNL 4040 S 25	40	40	40	35	250	45	-6	-6	3.15	GI062	PC60
	PCBNL 5050 T 25	50	50	50	43	300	50	-6	-6	5.80	GI062	PC60

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..
GI062	CN.. 2509..

				Nm					
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC22	CNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PC60	CNU 250620	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

PCKN(RL) EXT

P M K N S H

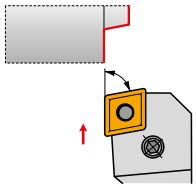
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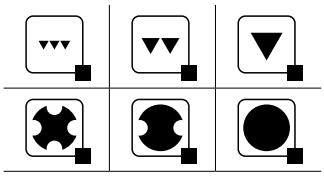
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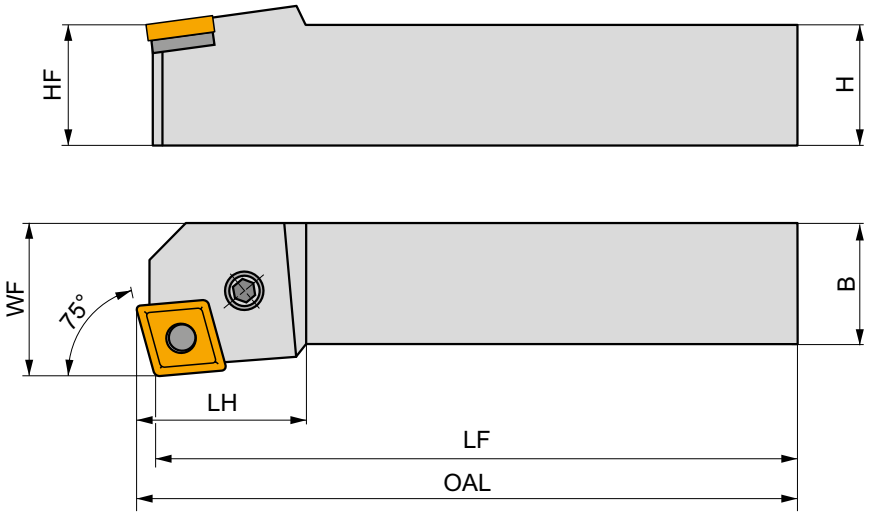


Porta-Ferramentas de Ext., Fixação por Alavanca, Ângulo de 75 ° (Frontal), para Pastilhas CN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de 75 °. Adequado para chanfrar e torneamento frontal com esquadria usando pastilhas negativas CN... de tamanho 12, 16 ou 19. Disponível em hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PCKNR 2020 K 12**	20	20	20	25	125	36	-6	-6	0.42	GI043	PC22
	PCKNR 2525 M 12	25	25	25	32	150	36	-6	-6	0.79	GI043	PC20
	PCKNR 3225 P 12	32	25	32	32	170	36	-6	-6	0.85	GI043	PC20
	PCKNR 3232 P 16	32	32	32	40	170	40	-6	-6	1.43	GI050	PC40
	PCKNR 3232 P 19	32	32	32	40	170	45	-6	-6	1.40	GI042	PC50
	PCKNR 4040 S 19	40	40	40	50	250	45	-6	-6	3.25	GI042	PC50
L	**PCKNL 2020 K 12**	20	20	20	25	125	36	-6	-6	0.42	GI043	PC22
	PCKNL 2525 M 12	25	25	25	32	150	36	-6	-6	0.78	GI043	PC20
	PCKNL 3225 P 12	32	25	32	32	170	36	-6	-6	1.15	GI043	PC20
	PCKNL 3232 P 16	32	32	32	40	170	40	-6	-6	1.40	GI050	PC40
	PCKNL 3232 P 19	32	32	32	40	170	45	-6	-6	1.40	GI042	PC50
	PCKNL 4040 S 19	40	40	40	50	250	45	-6	-6	3.27	GI042	PC50

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..

				Nm					
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC22	CNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

PCLN(RL) EXT

P M K N S H

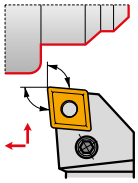
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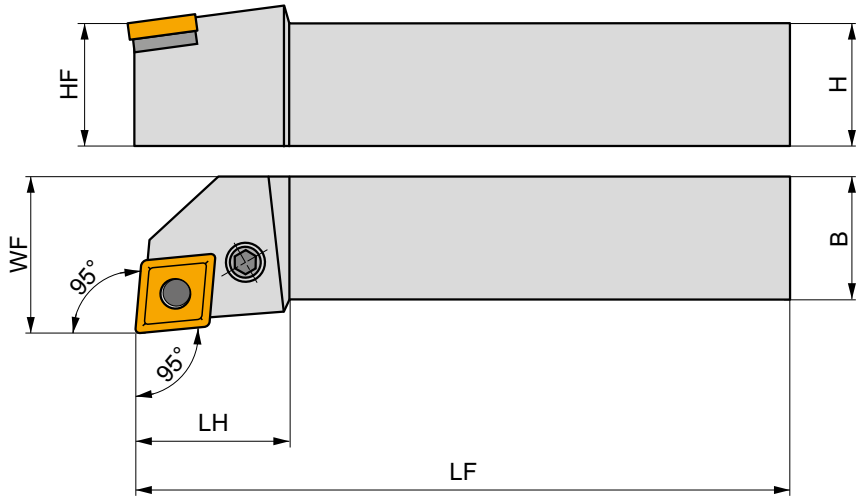
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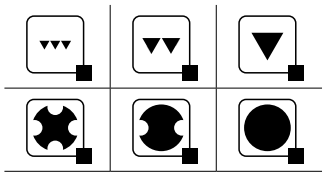


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 95 °, para Pastilhas CN . . .

Porta-ferramentas de exterior à direita ou à esquerda fixação por alavanca e ângulo de 95 °. Adequado para torneamento cónico, frontal, torneamento longitudinal com esquadria e chanfrar com pastilhas negativas CN .. 12, 16, 19 ou 25. Disponível em hastes de 20x20 até 50x50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PCLNR 2020 K 12	20	20	20	25	125	36	-6	-6	0.44	GI043	PC22
	PCLNR 2525 M 12	25	25	25	32	150	36	-6	-6	0.68	GI043	PC20
	PCLNR 3225 P 12	32	25	32	32	170	36	-6	-6	0.98	GI043	PC20
	PCLNR 3225 P 16	32	25	32	32	170	40	-6	-6	1.10	GI050	PC40
	PCLNR 3232 P 19	32	32	32	40	170	45	-6	-6	1.40	GI042	PC50
	PCLNR 4040 R 19	40	40	40	50	200	45	-6	-6	2.50	GI042	PC50
	PCLNR 4040 S 19	40	40	40	50	250	45	-6	-6	3.19	GI042	PC50
	PCLNR 4040 S 25	40	40	40	50	250	45	-6	-6	3.15	GI062	PC60
	PCLNR 5050 T 25	50	50	50	60	300	50	-6	-6	5.90	GI062	PC60
L	PCLNL 2020 K 12	20	20	20	25	125	36	-6	-6	0.42	GI043	PC22
	PCLNL 2525 M 12	25	25	25	32	150	36	-6	-6	0.75	GI043	PC20
	PCLNL 3225 P 12	32	25	32	32	170	36	-6	-6	1.10	GI043	PC20
	PCLNL 3225 P 16	32	25	32	32	170	40	-6	-6	1.10	GI050	PC40
	PCLNL 3232 P 19	32	32	32	40	170	45	-6	-6	1.42	GI042	PC50
	PCLNL 4040 R 19	40	40	40	50	200	45	-6	-6	2.60	GI042	PC50
	PCLNL 4040 S 19	40	40	40	50	250	45	-6	-6	3.19	GI042	PC50
	PCLNL 4040 S 25	40	40	40	50	250	45	-6	-6	2.45	GI062	PC60
	PCLNL 5050 T 25	50	50	50	60	300	50	-6	-6	5.90	GI062	PC60

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..
GI062	CN.. 2509..

									
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC22	CNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PC60	CNU 250620	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

NEW

C.-DCLN(RL) EXT

P M K N S H

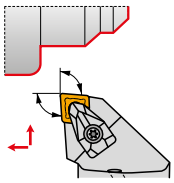
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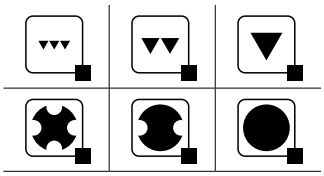
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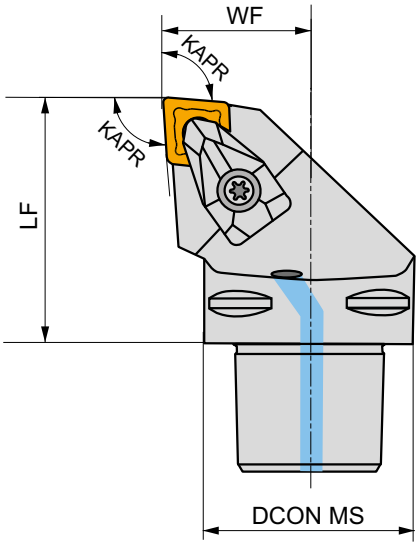


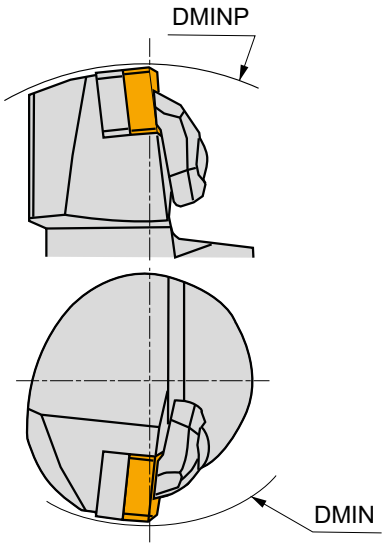
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 95 °, para Pastilhas CN . . .

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla, com refrigeração interna e ângulo de corte de 95°, para torneamento longitudinal, chanfrar e torneamento frontal com esquadria, utilizando pastilhas negativas CN... 12 a 19. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C3 até C8. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	C3-DCLNR-22045-12	32	60	121	22	45	95	-6	-6	✓	0.25	GI043	C-DC12	AT001
	C4-DCLNR-27050-12	40	110	140	27	50	95	-6	-6	✓	0.44	GI043	C-DC12	AT001
	C4-DCLNR-27055-16	40	125	145	27	55	95	-6	-6	✓	0.47	GI050	C-DC16	AT005
	C5-DCLNR-35060-12	50	110	165	35	60	95	-6	-6	✓	0.79	GI043	C-DC12	AT001
	C5-DCLNR-35060-16	50	125	165	35	60	95	-6	-6	✓	0.80	GI050	C-DC16	AT005
	C6-DCLNR-45065-12	63	110	190	45	65	95	-6	-6	✓	1.32	GI043	C-DC12	AT001
	C6-DCLNR-45065-16	63	125	190	45	65	95	-6	-6	✓	1.34	GI050	C-DC16	AT005
	C6-DCLNR-45065-19	63	81	190	45	65	95	-6	-6	✓	1.34	GI042	C-DC19	–
	C8-DCLNR-55080-19	80	100	250	55	80	95	-6	-6	✓	2.58	GI042	C-DC19	–
L	C4-DCLNL-27050-12	40	110	140	27	50	95	-6	-6	✓	0.44	GI043	C-DC12	AT001
	C4-DCLNL-27055-16	40	125	145	27	55	95	-6	-6	✓	0.48	GI050	C-DC16	AT005
	C5-DCLNL-35060-12	50	110	165	35	60	95	-6	-6	✓	0.79	GI043	C-DC12	AT001
	C5-DCLNL-35060-16	50	125	165	35	60	95	-6	-6	✓	0.80	GI050	C-DC16	AT005
	C6-DCLNL-45065-12	63	110	190	45	65	95	-6	-6	✓	1.32	GI043	C-DC12	AT001
	C6-DCLNL-45065-16	63	125	190	45	65	95	-6	-6	✓	1.34	GI050	C-DC16	AT005
	C6-DCLNL-45065-19	63	81	190	45	65	95	-6	-6	✓	1.34	GI042	C-DC19	–
	C8-DCLNL-55080-16	80	125	250	55	80	95	-6	-6	✓	2.58	GI050	C-DC16	AT005
	C8-DCLNL-55080-19	80	100	250	55	80	95	-6	-6	✓	2.58	GI042	C-DC19	–

GI042	CN.. 1906..
GI043	CN.. 1204..
GI050	CN.. 1606..

							
C-DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5	–	CN 045-01
C-DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P	CN 045-01
C-DC19	DCS 19	6.4	DCS 236-01	US 2007-T20P	–	LK T20P	CN 045-01

			
AT001a	CN.. 1207..	–	DCS 234-02
AT005a	CN.. 1607..	–	DCS 234-04
AT001b	CER CN.N 1204..	DCS 12C4	–
AT001c	CER CN.A 1204..	DCS 12C2	–
AT005b	CER CN.N 1606..	DCS 16C4	–
AT005c	CER CN.A 1606..	DCS 16C2	–

KHP-CBN(RL)

P M K

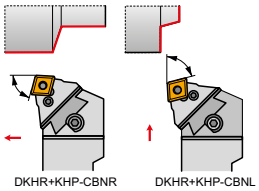
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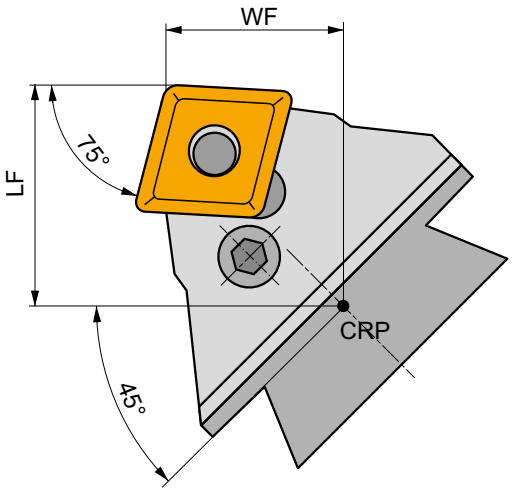
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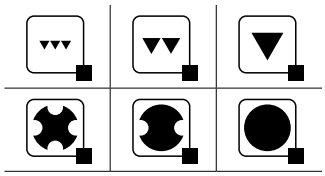


Cartucho Modular p/ Torneamento KHP, Fixação por Alavanca, Ângulo de Corte de 75º, para Pastilhas CN...

Cartucho de torneamento de fixação por alavanca à direita ou à esquerda com cauda de andorinha, ângulo de corte de 75 °, para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado sem esquadria, torneamento frontal, torneamento cónico e de chanfro com pastilhas negativas CN .. 25. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.









	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	KHP-CBNR 25	32	47	-6	-6	1.54	GI062	PC60
L	KHP-CBNL 25	32	47	-6	-6	1.56	GI062	PC60

GI062	CN.. 2509..

PC60	CNU 250620	PU 06	US 39	8.0 Nm	M 10x1	33	NT 08	MT 08	HXK 5

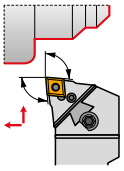
KHP-CLN(RL)

P M K

PRAMET

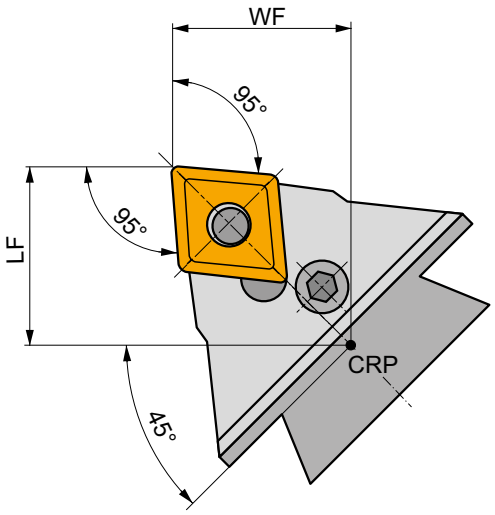
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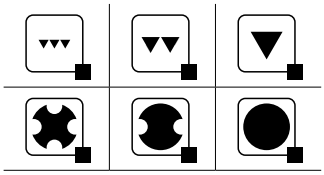




Cartucho Modular para Torneamento KHP, Fixação por Alavanca, Ângulo de 95º, para Pastilhas CN…

Cartucho de torneamento de fixação por alavanca à direita ou à esquerda com cauda de andorinha, ângulo de corte de 95 °, para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado com esquadria, torneamento frontal com esquadria, torneamento cónico e de chanfro com pastilha negativa CN .. 19 ou 25. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.







	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	**KHP-CLNR 19**	35	45	-6	-6	1.30	GI042	PC50
	KHP-CLNR 25	35	45	-6	-6	1.25	GI062	PC60
L	**KHP-CLNL 19**	35	45	-6	-6	1.30	GI042	PC50
	KHP-CLNL 25	35	45	-6	-6	1.25	GI062	PC60

GI042	CN.. 1906..
GI062	CN.. 2509..

				Nm					
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PC60	CNU 250620	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

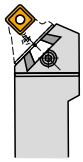
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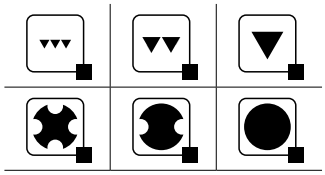
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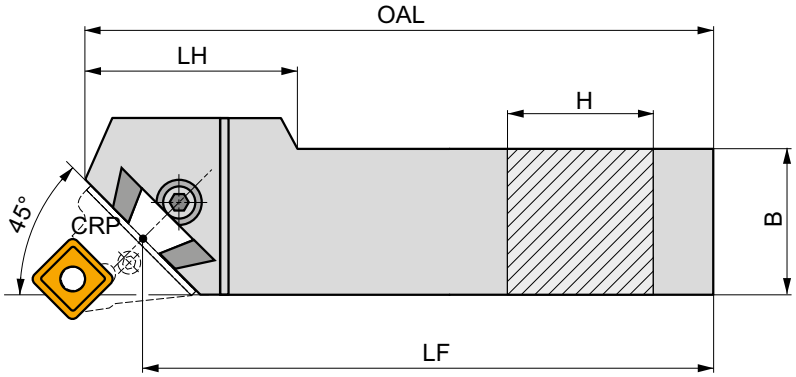


Porta-Ferramentas de Exterior para Cartuchos de Torneamento Pesado KHP/KHS

Porta-ferramentas modular à direita ou à esquerda com cauda de andorinha para cartuchos KHP / KHS. Adequado para aplicações de torneamento pesado. Disponível com hastes de 40x50 até 60x80 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	H (mm)	B (mm)	LF (mm)	OAL (mm)	LH (mm)	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

DCLN(RL) INT

P M K N S H

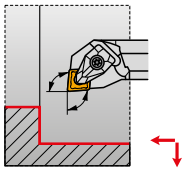
PRAMET

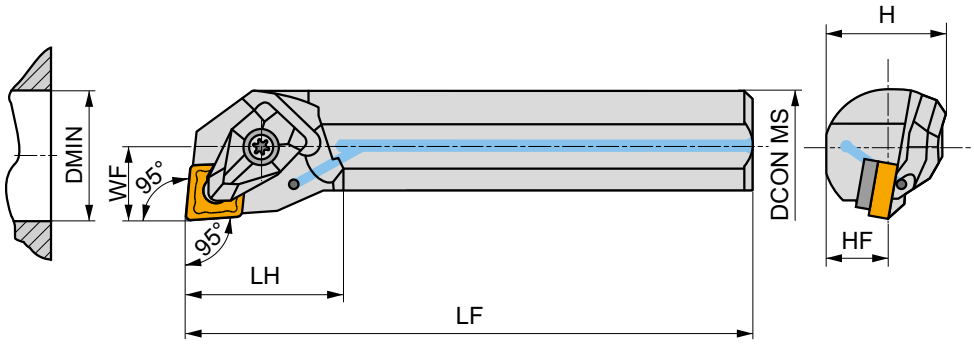
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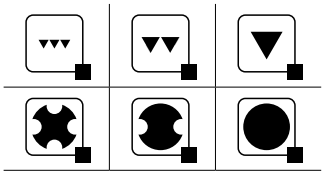


Porta-ferramentas de Interior, Fixação Dupla, Ângulo de 95 °, para Pastilhas CN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação dupla e refrigeração interna, ângulo de corte de 95° para pastilhas CN .. 09 e 12. Diâmetro mínimo de torneamento Ø32 mm. Para torneamento cónico e longitudinal com esquadria, e chanfrar. Disponível com hastes de Ø25 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	**A25T-DCLNR 09**	25	32	17	23	11.5	300	31	-11	-6	✓	1.13	GI133	DC09
	A25T-DCLNR 12	25	32	17	23	11.5	300	31	-12	-6	✓	1.12	GI043	DCI12
	A32T-DCLNR 12	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI043	DCI12
	A40T-DCLNR 12	40	50	27	37	18.5	300	32	-15	-6	✓	2.56	GI043	DC12
L	**A25T-DCLNL 09**	25	32	17	23	11.5	300	31	-11	-6	✓	1.12	GI133	DC09
	A25T-DCLNL 12	25	32	17	23	11.5	300	31	-12	-6	✓	1.11	GI043	DCI12
	A32T-DCLNL 12	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI043	DCI12
	A40T-DCLNL 12	40	50	27	37	18.5	300	32	-15	-6	✓	2.56	GI043	DC12

GI043	CN.. 1204..
GI133	CN.. 0903..

		Nm			
DC09	DCS 09	1.7	DCS 236-04	US 2004-T09P	FLAG T09P
DC12	DCS 12	3.9	DCS 234-01	US 2002-T15P	FLAG T15P/3,5
DCI12	DCS 12	3.9	DCS 236-03	US 2002-T15P	FLAG T15P/3,5

PCLN(RL) INT

P M K N S H

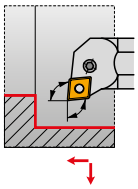
PRAMET

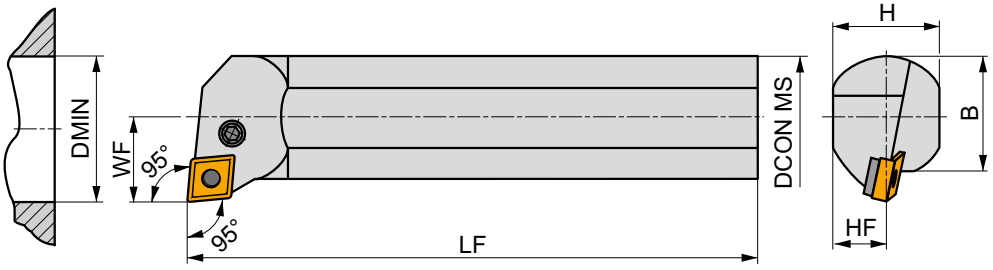
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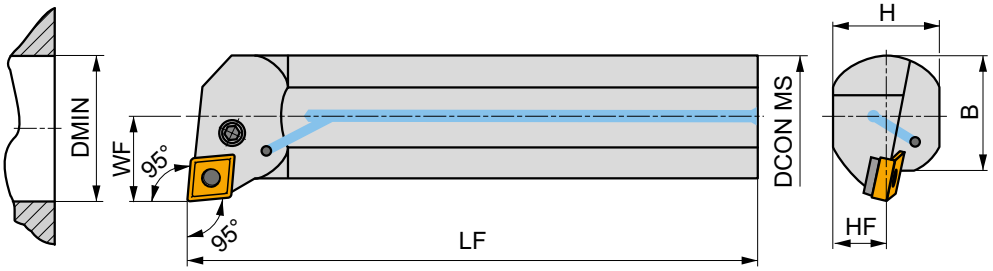


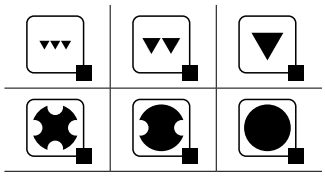
Porta-Ferramentas de Interior, Fixação por Alavanca, Ângulo de 95 °, para Pastilhas CN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por alavanca e refrigeração interna, e ângulo de corte de 95° para pastilhas CN .. 09, 12, 16 e 19. Diâmetro interno mínimo de torneamento Ø20 mm. Para torneamento cónico interno e longitudinal com esquadria, e chanfrar. Hastes de Ø16 a Ø60 mm disponíveis. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A16M-PCLNR 09	16	20	11	15	15	150	-13.5	-5	✓	0.22	GI133	PC09
	A20Q-PCLNR 09	20	25	13	18	18	180	-13.5	-5	✓	0.36	GI133	PC09
	A25R-PCLNR 12	25	32	17	23	23	200	-13	-7	✓	0.65	GI043	PC25
	S25T-PCLNR 12	25	32	17	23	23	300	-13	-7	–	1.10	GI043	PC25
	A32S-PCLNR 12	32	40	22	30	30	250	-12	-6	✓	1.48	GI043	PC21
	A40T-PCLNR 12	40	50	27	38	38	300	-12	-6	✓	2.40	GI043	PC20
	A40T-PCLNR 16	40	50	27	38	38	300	-12	-6	✓	2.90	GI050	PC41
	A50U-PCLNR 16	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI050	PC40
	A60V-PCLNR 16	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI050	PC40
	A50U-PCLNR 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI042	PC50
	A60V-PCLNR 19	60	80	43	57	58.5	400	-12	-6	✓	8.22	GI042	PC50
L	A16M-PCLNL 09	16	20	11	15	15	150	-13.5	-5	✓	0.20	GI133	PC09
	A20Q-PCLNL 09	20	25	13	18	18	180	-13.5	-5	✓	0.34	GI133	PC09
	A25R-PCLNL 12	25	32	17	23	23	200	-13	-7	✓	0.65	GI043	PC25
	S25T-PCLNL 12	25	32	17	23	23	300	-13	-7	–	1.15	GI043	PC25
	A32S-PCLNL 12	32	40	22	30	30	250	-12	-6	✓	1.48	GI043	PC21
	A40T-PCLNL 12	40	50	27	38	38	300	-12	-6	✓	2.58	GI043	PC20
	A40T-PCLNL 16	40	50	27	38	38	300	-12	-6	✓	2.58	GI050	PC41
	A50U-PCLNL 16	50	63	35	47	48.5	350	-12	-6	✓	4.95	GI050	PC40
	A60V-PCLNL 16	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI050	PC40
	A50U-PCLNL 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI042	PC50
	A60V-PCLNL 19	60	80	43	57	58.5	400	-12	-6	✓	8.40	GI042	PC50

GI042	CN.. 1906..
GI043	CN.. 1204..

GI050	CN.. 1606..
GI133	CN.. 0903..

				Nm					
PC09	–	PU 8451	PS 8290	2.0	M 5	12	–	–	HXK 2
PC20	CNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PC21	CNU 120312	PU 02	US 41	6.0	M 8x1	17	NT 05	MT 05	HXK 4
PC25	–	PU 32	US 46	5.0	M 6x0.75	13.2	–	–	HXK 3
PC40	CNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PC41	CNU 150312	PU 04	US 40	6.0	M 8x1	20.5	NT 07	MT 07	HXK 4
PC50	CNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

NEW

C.-DCLN(RL) INT

P M K N S H

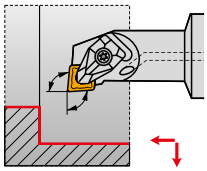
PRAMET

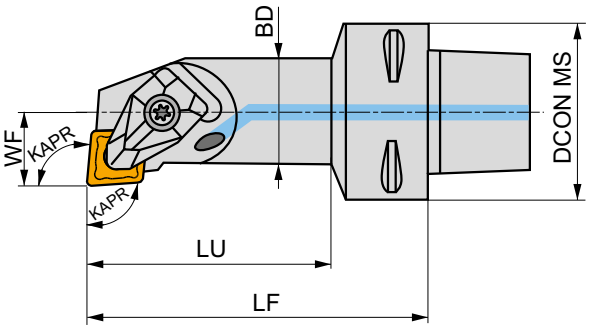
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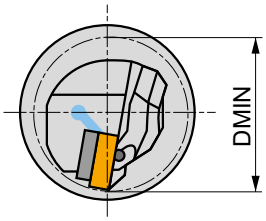


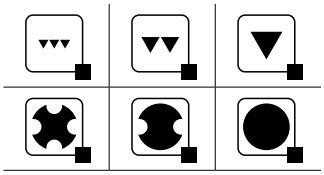
Ferramenta de Interior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 95 °, para Pastilhas CN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação dupla e refrigeração interna, e ângulo de corte de 95° para pastilhas CN .. 09 até 16. Adequado para uma ampla gama de aplicações de torneamento interno, diâmetro mínimo de Ø25mm. Haste poligonal PSC (Polygon Shank Coupling) de tamanho C4 a C6 com opções de comprimentos. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-DCLNR-13080-09	40	25	13	80	57	20	95	-14	-6	✓	0.43	GI133	DC09
	C4-DCLNR-17090-12	40	32	17	90	68	25	95	-12	-6	✓	0.53	GI043	DCI12
	C5-DCLNR-17090-12	50	32	17	90	66	25	95	-12	-6	✓	0.72	GI043	DCI12
	C6-DCLNR-17100-12	63	32	17	100	72	25	95	-12	-6	✓	1.15	GI043	DCI12
	C6-DCLNR-27140-16	63	50	27	140	114	40	95	-16	-6	✓	1.81	GI050	DC16
L	C4-DCLNL-17090-12	40	32	17	90	68	25	95	-12	-6	✓	0.53	GI043	DCI12
	C5-DCLNL-17090-12	50	32	17	90	66	25	95	-12	-6	✓	0.72	GI043	DCI12

GI043	CN.. 1204..
GI050	CN.. 1606..
GI133	CN.. 0903..

		Nm				
DC09	DCS 09	1.7	DCS 236-04	US 2004-T09P	FLAG T09P	–
DC16	DCS 16	6.4	DCS 234-03	US 2007-T20P	–	LK T20P
DCI12	DCS 12	3.9	DCS 236-03	US 2002-T15P	FLAG T15P/3,5	–

DN

PASTILHAS DE METAL DURO

DNMA



260

DNMG



260

DNMM



270

PASTILHAS CER E CBN

DNGA CER



271

DNGN CER



271

DNGA CBN



272

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
DNMG 150404E-SF	DDJNL 2020 K 15

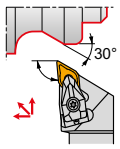
TORNEAMENTO ISO - EXTERIOR

DDJN(RL) EXT

93°

DN..

11
15



20×20
32×32

273

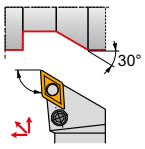
260 – 272

PDJN(RL) EXT

93°

DN..

11
15



20×20
32×32

274

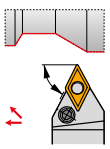
260 – 272

PDNN(RL) EXT

62°30´

DN..

11
15



20×20
32×25

275

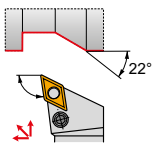
260 – 272

PDXN(RL) EXT

98°

DN..

15



20×20
32×25

276

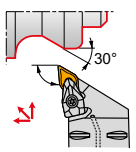
260 – 272

C.-DDJN(RL) EXT NEW

93°

DN..

11
15



C4
C6

277

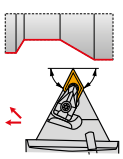
260 – 272

C.-DDNNN EXT NEW

62,5°

DN..

15



C5
C6

278

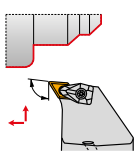
260 – 272

C.-DDUN(RL) EXT NEW

93°

DN..

15



C5
C6

279

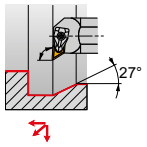
260 – 272

DN

TORNEAMENTO ISO - INTERIOR

DDUN(RL) INT

93°





25 / 50

280

DN..

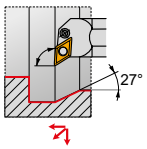


11
15

260 – 272

PDUN(RL) INT

93°





25 / 60

281

DN..

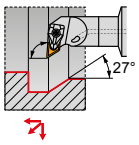


11
15

260 – 272

C.-DDUN(RL) INT NEW

93°





12

282

DN..



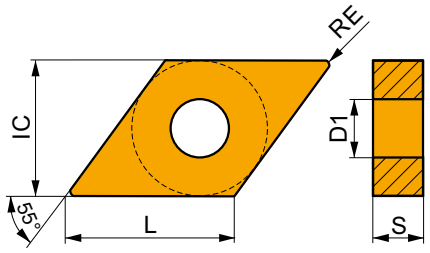
11

260 – 272

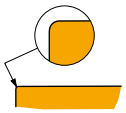
DNMA

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1504	12.700	5.16	15.50	4.76
1506	12.700	5.16	15.50	6.35



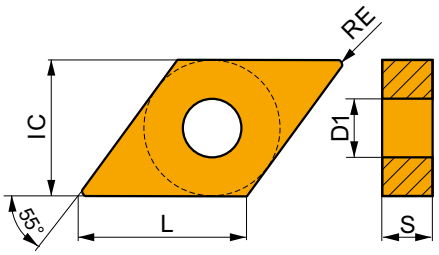
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			E																	
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
DNMA 150404	**T5305**	0.4	–	–	–	–	–	–	205	0.10	1.7	–	–	–	–	–	–	40	0.15	1.0
DNMA 150408	**T5305**	0.8	–	–	–	–	–	–	190	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	165	0.20	1.7	–	–	–	–	–	–	35	0.15	1.0
DNMA 150604	**T5305**	0.4	–	–	–	–	–	–	205	0.10	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	180	0.10	1.7	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.4	–	–	–	–	–	–	85	0.10	1.7	–	–	–	–	–	–	20	0.15	1.0
DNMA 150608	**T5305**	0.8	–	–	–	–	–	–	190	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	165	0.20	1.7	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	85	0.20	1.7	–	–	–	–	–	–	20	0.15	1.0
DNMA 150612	**T5305**	1.2	–	–	–	–	–	–	200	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	175	0.20	1.7	–	–	–	–	–	–	35	0.15	1.0

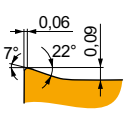
DNMG

PRAMET

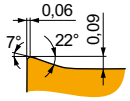
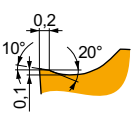
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1104	9.525	3.81	11.60	4.76
1504	12.700	5.16	15.50	4.76
1506	12.700	5.16	15.50	6.35



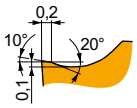
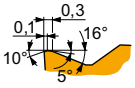
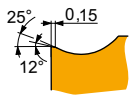
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			U	S																
			Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
DNMG 110402E-FF	**T8315**	0.2	175	0.10	0.8	105	0.09	0.8	165	0.10	0.8	–	–	–	–	–	–	–	–	–
DNMG 110404E-FF	**T8315**	0.4	175	0.12	0.8	105	0.11	0.8	165	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8330	0.4	165	0.12	0.8	95	0.11	0.8	155	0.12	0.8	–	–	–	–	–	–	–	–	–
	T8430	0.4	205	0.12	0.8	110	0.11	0.8	170	0.12	0.8	–	–	–	–	–	–	–	–	–
DNMG 110408E-FF	**T8315**	0.8	200	0.15	0.8	120	0.14	0.8	190	0.15	0.8	–	–	–	–	–	–	–	–	–

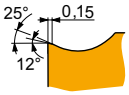
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			U S																	
Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
DNMG 150404E-FF	**T8315**	0.4	◪ 175	0.12	1.0	■ 105	0.11	1.0	◪ 165	0.12	1.0	–	–	–	–	–	–	–	–	–
DNMG 150604E-FF	**T7325**	0.4	◪ 190	0.12	1.0	■ 145	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 175	0.12	1.0	■ 105	0.11	1.0	◪ 165	0.12	1.0	–	–	–	–	–	–	–	–	–
DNMG 150608E-FF	**T7325**	0.8	◪ 210	0.15	1.0	■ 160	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 195	0.15	1.0	■ 115	0.14	1.0	◪ 185	0.15	1.0	–	–	–	–	–	–	–	–	–
			1 S																	
Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																				
DNMG 110404E-FM	**T7325**	0.4	◪ 165	0.20	0.8	◪ 125	0.18	0.8	–	–	–	–	–	–	◪ 50	0.20	0.6	–	–	–
	T8315	0.4	◪ 150	0.20	0.8	◪ 90	0.18	0.8	■ 140	0.20	0.8	–	–	–	◪ 35	0.14	0.6	–	–	–
	T8330	0.4	■ 145	0.20	0.8	◪ 85	0.18	0.8	■ 135	0.20	0.8	–	–	–	◪ 35	0.14	0.6	–	–	–
	T8430	0.4	■ 165	0.20	0.8	◪ 90	0.18	0.8	◪ 135	0.20	0.8	–	–	–	◪ 35	0.14	0.6	–	–	–
	T9310	0.4	■ 245	0.20	0.8	–	–	–	◪ 230	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 225	0.20	0.8	–	–	–	◪ 210	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 200	0.20	0.8	◪ 120	0.18	0.8	◪ 190	0.20	0.8	–	–	–	◪ 45	0.20	0.6	–	–	–
DNMG 110408E-FM	**T7325**	0.8	◪ 200	0.20	0.8	◪ 155	0.18	0.8	–	–	–	–	–	–	◪ 65	0.16	0.6	–	–	–
	T8315	0.8	◪ 180	0.20	0.8	◪ 105	0.18	0.8	■ 170	0.20	0.8	–	–	–	◪ 45	0.14	0.6	–	–	–
	T8330	0.8	■ 175	0.20	0.8	◪ 105	0.18	0.8	■ 165	0.20	0.8	–	–	–	◪ 40	0.14	0.6	–	–	–
	T8430	0.8	■ 195	0.20	0.8	◪ 105	0.18	0.8	◪ 160	0.20	0.8	–	–	–	◪ 40	0.14	0.6	–	–	–
	T9310	0.8	■ 295	0.20	0.8	–	–	–	◪ 280	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 270	0.20	0.8	–	–	–	◪ 255	0.20	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 240	0.20	0.8	◪ 140	0.18	0.8	◪ 225	0.20	0.8	–	–	–	◪ 50	0.16	0.6	–	–	–
DNMG 150404E-FM	**T7325**	0.4	◪ 150	0.20	1.7	◪ 115	0.18	1.7	–	–	–	–	–	–	◪ 45	0.20	1.4	–	–	–
	T8330	0.4	■ 135	0.20	1.7	◪ 80	0.18	1.7	■ 125	0.20	1.7	–	–	–	◪ 30	0.14	1.4	–	–	–
	T8430	0.4	■ 150	0.20	1.7	◪ 80	0.18	1.7	◪ 125	0.20	1.7	–	–	–	◪ 30	0.14	1.4	–	–	–
	T9315	0.4	■ 210	0.20	1.7	–	–	–	◪ 195	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 190	0.20	1.7	◪ 110	0.18	1.7	◪ 180	0.20	1.7	–	–	–	◪ 40	0.20	1.4	–	–	–
DNMG 150408E-FM	**T7325**	0.8	◪ 180	0.20	1.7	◪ 140	0.18	1.7	–	–	–	–	–	–	◪ 55	0.16	1.4	–	–	–
	T8330	0.8	■ 160	0.20	1.7	◪ 95	0.18	1.7	■ 150	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T8430	0.8	■ 185	0.20	1.7	◪ 100	0.18	1.7	◪ 150	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T9315	0.8	■ 250	0.20	1.7	–	–	–	◪ 235	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.20	1.7	◪ 135	0.18	1.7	◪ 210	0.20	1.7	–	–	–	◪ 50	0.16	1.4	–	–	–
DNMG 150604E-FM	**T7325**	0.4	◪ 150	0.20	1.7	◪ 115	0.18	1.7	–	–	–	–	–	–	◪ 45	0.20	1.4	–	–	–
	T7335	0.4	◪ 150	0.20	1.7	◪ 115	0.18	1.7	–	–	–	–	–	–	◪ 45	0.20	1.4	–	–	–
	T8315	0.4	◪ 140	0.20	1.7	◪ 80	0.18	1.7	■ 130	0.20	1.7	–	–	–	◪ 35	0.14	1.4	–	–	–
	T8330	0.4	■ 135	0.20	1.7	◪ 80	0.18	1.7	■ 125	0.20	1.7	–	–	–	◪ 30	0.14	1.4	–	–	–
	T8430	0.4	■ 150	0.20	1.7	◪ 80	0.18	1.7	◪ 125	0.20	1.7	–	–	–	◪ 30	0.14	1.4	–	–	–
	T9310	0.4	■ 230	0.20	1.7	–	–	–	◪ 215	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 210	0.20	1.7	–	–	–	◪ 195	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 190	0.20	1.7	◪ 110	0.18	1.7	◪ 180	0.20	1.7	–	–	–	◪ 40	0.20	1.4	–	–	–
	TT310	0.4	■ 210	0.20	1.7	◪ 125	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608E-FM	**T7325**	0.8	◪ 180	0.20	1.7	◪ 140	0.18	1.7	–	–	–	–	–	–	◪ 55	0.16	1.4	–	–	–
	T7335	0.8	◪ 175	0.20	1.7	◪ 135	0.18	1.7	–	–	–	–	–	–	◪ 55	0.16	1.4	–	–	–
	T8315	0.8	◪ 170	0.20	1.7	◪ 100	0.18	1.7	■ 160	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T8330	0.8	■ 160	0.20	1.7	◪ 95	0.18	1.7	■ 150	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T8430	0.8	■ 185	0.20	1.7	◪ 100	0.18	1.7	◪ 150	0.20	1.7	–	–	–	◪ 40	0.16	1.4	–	–	–
	T9310	0.8	■ 275	0.20	1.7	–	–	–	◪ 260	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 250	0.20	1.7	–	–	–	◪ 235	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 225	0.20	1.7	◪ 135	0.18	1.7	◪ 210	0.20	1.7	–	–	–	◪ 50	0.16	1.4	–	–	–
	TT310	0.8	■ 250	0.20	1.7	◪ 150	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612E-FM	**T7325**	1.2	◪ 180	0.25	1.7	◪ 140	0.23	1.7	–	–	–	–	–	–	◪ 55	0.18	1.4	–	–	–
	T8430	1.2	■ 175	0.25	1.7	◪ 95	0.23	1.7	◪ 140	0.25	1.7	–	–	–	◪ 35	0.18	1.4	–	–	–
	T9310	1.2	■ 260	0.25	1.7	–	–	–	◪ 245	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 240	0.25	1.7	–	–	–	◪ 225	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 215	0.25	1.7	◪ 125	0.23	1.7	◪ 200	0.25	1.7	–	–	–	◪ 45	0.18	1.4	–	–	–

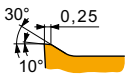
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																				
DNMG 150616E-FM	**T9315**	1.6	■ 235	0.30	1.7	–	–	–	◪ 220	0.30	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 210	0.30	1.7	◪ 125	0.27	1.7	◪ 195	0.30	1.7	–	–	–	◪ 45	0.21	1.4	–	–	–
																				
Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																				
DNMG 110404E-M	**T5315**	0.4	◪ 210	0.20	1.2	–	–	–	■ 195	0.20	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 195	0.20	1.2	–	–	–	◪ 185	0.20	1.2	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 175	0.20	1.2	–	–	–	◪ 165	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 150	0.20	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 110408E-M	**T5315**	0.8	◪ 215	0.30	1.2	–	–	–	■ 200	0.30	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 200	0.30	1.2	–	–	–	◪ 190	0.30	1.2	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 175	0.30	1.2	–	–	–	◪ 165	0.30	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 155	0.30	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 110412E-M	**T9315**	1.2	■ 185	0.40	1.2	–	–	–	◪ 175	0.40	1.2	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 165	0.40	1.2	–	–	–	◪ 155	0.40	1.2	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 140	0.40	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150404E-M	**T5315**	0.4	◪ 200	0.20	1.9	–	–	–	■ 190	0.20	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 190	0.20	1.9	–	–	–	◪ 180	0.20	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 170	0.20	1.9	–	–	–	◪ 160	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 145	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150408E-M	**T5315**	0.8	◪ 205	0.30	1.9	–	–	–	■ 190	0.30	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 190	0.30	1.9	–	–	–	◪ 180	0.30	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 170	0.30	1.9	–	–	–	◪ 160	0.30	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150412E-M	**T5315**	1.2	◪ 200	0.40	1.9	–	–	–	■ 190	0.40	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 175	0.40	1.9	–	–	–	◪ 165	0.40	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 160	0.40	1.9	–	–	–	◪ 150	0.40	1.9	–	–	–	–	–	–	–	–	–
DNMG 150604E-M	**T5315**	0.4	◪ 200	0.20	1.9	–	–	–	■ 190	0.20	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.4	■ 190	0.20	1.9	–	–	–	◪ 180	0.20	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.4	■ 170	0.20	1.9	–	–	–	◪ 160	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.4	■ 145	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608E-M	**T5315**	0.8	◪ 205	0.30	1.9	–	–	–	■ 190	0.30	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	0.8	■ 205	0.30	1.9	–	–	–	◪ 190	0.30	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	0.8	■ 190	0.30	1.9	–	–	–	◪ 180	0.30	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 170	0.30	1.9	–	–	–	◪ 160	0.30	1.9	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612E-M	**T5315**	1.2	◪ 200	0.40	1.9	–	–	–	■ 190	0.40	1.9	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9310	1.2	■ 190	0.40	1.9	–	–	–	◪ 180	0.40	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	1.2	■ 175	0.40	1.9	–	–	–	◪ 165	0.40	1.9	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 160	0.40	1.9	–	–	–	◪ 150	0.40	1.9	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 140	0.40	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																				
DNMG 110404E-NF	**T6310**	0.4	■ 155	0.15	0.8	■ 110	0.14	0.8	◪ 125	0.15	0.8	◪ 465	0.18	0.8	◪ 45	0.12	0.6	–	–	–
	T7325	0.4	◪ 170	0.18	0.8	■ 130	0.16	0.8	–	–	–	–	–	–	◪ 55	0.16	0.6	–	–	–
	T7335	0.4	◪ 165	0.18	0.8	■ 125	0.16	0.8	–	–	–	–	–	–	◪ 50	0.16	0.6	–	–	–
	T8330	0.4	■ 160	0.15	0.8	■ 95	0.14	0.8	◪ 150	0.15	0.8	◪ 480	0.18	0.8	◪ 40	0.12	0.6	–	–	–
	T8430	0.4	■ 190	0.15	0.8	■ 105	0.14	0.8	◪ 155	0.15	0.8	◪ 525	0.18	0.8	◪ 40	0.12	0.6	–	–	–
	T9315	0.4	■ 255	0.15	0.8	–	–	–	◪ 240	0.15	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 210	0.18	0.8	■ 125	0.16	0.8	◪ 195	0.18	0.8	–	–	–	◪ 45	0.16	0.6	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				

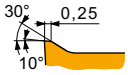
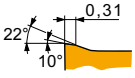
Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.

DNMG 110408E-NF	**T6310**	0.8	■	175	0.17	1.0	■	125	0.15	1.0	◪	140	0.17	1.0	◪	525	0.20	1.0	◪	50	0.14	0.8	–	–	–
	T7325	0.8	◪	200	0.18	1.0	■	155	0.16	1.0		–	–	–		–	–	–	◪	65	0.16	0.8	–	–	–
	T7335	0.8	◪	195	0.18	1.0	■	150	0.16	1.0		–	–	–		–	–	–	◪	60	0.16	0.8	–	–	–
	T8330	0.8	■	175	0.17	1.0	■	105	0.15	1.0	◪	165	0.17	1.0	◪	525	0.20	1.0	◪	40	0.14	0.8	–	–	–
	T8430	0.8	■	205	0.17	1.0	■	110	0.15	1.0	◪	170	0.17	1.0	◪	570	0.20	1.0	◪	45	0.14	0.8	–	–	–
	T9315	0.8	■	280	0.17	1.0		–	–	–	◪	265	0.17	1.0		–	–	–		–	–	–	–	–	–
	T9325	0.8	■	250	0.18	1.0	■	150	0.16	1.0	◪	235	0.18	1.0		–	–	–	◪	55	0.16	0.8	–	–	–
DNMG 150404E-NF	**T6310**	0.4	■	140	0.17	1.7	■	100	0.15	1.7	◪	110	0.17	1.7	◪	420	0.20	1.7	◪	40	0.15	1.4	–	–	–
	T7325	0.4	◪	160	0.18	1.7	■	120	0.16	1.7		–	–	–		–	–	–	◪	50	0.16	1.4	–	–	–
	T7335	0.4	◪	155	0.18	1.7	■	120	0.16	1.7		–	–	–		–	–	–	◪	50	0.16	1.4	–	–	–
	T8330	0.4	■	140	0.17	1.7	■	80	0.15	1.7	◪	130	0.17	1.7	◪	420	0.20	1.7	◪	35	0.15	1.4	–	–	–
	T8430	0.4	■	165	0.17	1.7	■	90	0.15	1.7	◪	135	0.17	1.7	◪	450	0.20	1.7	◪	35	0.15	1.4	–	–	–
	T9315	0.4	■	235	0.15	1.7		–	–	–	◪	220	0.15	1.7		–	–	–		–	–	–	–	–	–
	T9325	0.4	■	200	0.18	1.7	■	120	0.16	1.7	◪	190	0.18	1.7		–	–	–	◪	45	0.16	1.4	–	–	–
DNMG 150408E-NF	**T6310**	0.8	■	165	0.18	1.7	■	115	0.16	1.7	◪	130	0.18	1.7	◪	495	0.22	1.7	◪	45	0.16	1.4	–	–	–
	T7325	0.8	◪	190	0.18	1.7	■	145	0.16	1.7		–	–	–		–	–	–	◪	60	0.16	1.4	–	–	–
	T7335	0.8	◪	185	0.18	1.7	■	140	0.16	1.7		–	–	–		–	–	–	◪	60	0.16	1.4	–	–	–
	T8330	0.8	■	165	0.18	1.7	■	95	0.16	1.7	◪	155	0.18	1.7	◪	495	0.22	1.7	◪	40	0.16	1.4	–	–	–
	T8430	0.8	■	190	0.18	1.7	■	105	0.16	1.7	◪	155	0.18	1.7	◪	525	0.22	1.7	◪	40	0.16	1.4	–	–	–
	T9315	0.8	■	270	0.17	1.7		–	–	–	◪	255	0.17	1.7		–	–	–		–	–	–	–	–	–
	T9325	0.8	■	235	0.18	1.7	■	140	0.16	1.7	◪	220	0.18	1.7		–	–	–	◪	50	0.16	1.4	–	–	–
DNMG 150604E-NF	**HF7**	0.4		–	–	–	◪	80	0.14	1.9	◪	130	0.15	1.9	◪	420	0.18	1.9		–	–	–	–	–	–
	T6310	0.4	■	140	0.17	1.9	■	100	0.15	1.9	◪	110	0.17	1.9	◪	420	0.20	1.9	◪	40	0.15	1.5	–	–	–
	T7325	0.4	◪	155	0.18	1.9	■	120	0.16	1.9		–	–	–		–	–	–	◪	50	0.16	1.5	–	–	–
	T7335	0.4	◪	150	0.18	1.9	■	115	0.16	1.9		–	–	–		–	–	–	◪	45	0.16	1.5	–	–	–
	T8315	0.4	◪	145	0.17	1.9	■	85	0.15	1.9	◪	135	0.17	1.9	◪	435	0.20	1.9	◪	35	0.15	1.5	–	–	–
	T8330	0.4	■	140	0.17	1.9	■	80	0.15	1.9	◪	130	0.17	1.9	◪	420	0.20	1.9	◪	35	0.15	1.5	–	–	–
	T8430	0.4	■	165	0.17	1.9	■	90	0.15	1.9	◪	135	0.17	1.9	◪	450	0.20	1.9	◪	35	0.15	1.5	–	–	–
	T9315	0.4	■	235	0.15	1.9		–	–	–	◪	220	0.15	1.9		–	–	–		–	–	–	–	–	–
	T9325	0.4	■	195	0.18	1.9	■	115	0.16	1.9	◪	185	0.18	1.9		–	–	–	◪	40	0.16	1.5	–	–	–
DNMG 150608E-NF	**HF7**	0.8		–	–	–	◪	90	0.15	1.9	◪	145	0.17	1.9	◪	465	0.20	1.9		–	–	–	–	–	–
	T6310	0.8	■	165	0.18	1.9	■	115	0.16	1.9	◪	130	0.18	1.9	◪	495	0.22	1.9	◪	45	0.16	1.5	–	–	–
	T7325	0.8	◪	185	0.18	1.9	■	140	0.16	1.9		–	–	–		–	–	–	◪	60	0.16	1.5	–	–	–
	T7335	0.8	◪	180	0.18	1.9	■	140	0.16	1.9		–	–	–		–	–	–	◪	55	0.16	1.5	–	–	–
	T8315	0.8	◪	175	0.18	1.9	■	105	0.16	1.9	◪	165	0.18	1.9	◪	525	0.22	1.9	◪	40	0.16	1.5	–	–	–
	T8330	0.8	■	165	0.18	1.9	■	95	0.16	1.9	◪	155	0.18	1.9	◪	495	0.22	1.9	◪	40	0.16	1.5	–	–	–
	T8430	0.8	■	190	0.18	1.9	■	105	0.16	1.9	◪	155	0.18	1.9	◪	525	0.22	1.9	◪	40	0.16	1.5	–	–	–
	T9315	0.8	■	265	0.17	1.9		–	–	–	◪	250	0.17	1.9		–	–	–		–	–	–	–	–	–
	T9325	0.8	■	230	0.18	1.9	■	135	0.16	1.9	◪	215	0.18	1.9		–	–	–	◪	50	0.16	1.5	–	–	–
DNMG 150612E-NF	**T6310**	1.2	■	150	0.30	1.5	■	105	0.27	1.5	◪	120	0.30	1.5	◪	450	0.36	1.5	◪	45	0.21	1.2	–	–	–
	T8430	1.2	■	165	0.30	1.5	■	90	0.27	1.5	◪	135	0.30	1.5	◪	450	0.36	1.5	◪	35	0.21	1.2	–	–	–
	T9325	1.2	■	200	0.30	1.5	■	120	0.27	1.5	◪	190	0.30	1.5		–	–	–	◪	45	0.21	1.2	–	–	–
																				

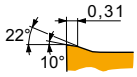
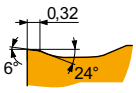
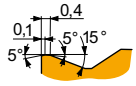
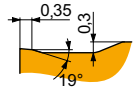
Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média a desbaste, com cortes contínuos.

DNMG 110404E-NM	**T7325**	0.4	◪	175	0.20	0.8	■	135	0.18	0.8		–	–	–		–	–	–	■	55	0.20	0.6	–	–	–
	T7335	0.4	◪	165	0.20	0.8	■	125	0.18	0.8		–	–	–		–	–	–	■	50	0.20	0.6	–	–	–
	T8315	0.4	◪	160	0.20	0.8	■	95	0.18	0.8		–	–	–	◪	480	0.24	0.8	◪	40	0.20	0.6	–	–	–
	T8330	0.4	■	150	0.20	0.8	■	90	0.18	0.8		–	–	–	◪	450	0.24	0.8	◪	35	0.20	0.6	–	–	–
	T8430	0.4	■	175	0.20	0.8	■	95	0.18	0.8		–	–	–	◪	480	0.24	0.8	◪	35	0.20	0.6	–	–	–
	T9325	0.4	■	210	0.20	0.8	■	125	0.18	0.8		–	–	–		–	–	–	◪	45	0.20	0.6	–	–	–

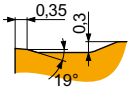
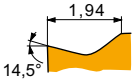
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média a desbaste, com cortes contínuos.																				
DNMG 110408E-NM	**T7325**	0.8	190	0.25	0.8	145	0.23	0.8	–	–	–	–	–	–	60	0.20	0.6	–	–	–
	T7335	0.8	185	0.25	0.8	140	0.23	0.8	–	–	–	–	–	–	60	0.20	0.6	–	–	–
	T8315	0.8	180	0.25	0.8	105	0.23	0.8	–	–	–	540	0.30	0.8	45	0.20	0.6	–	–	–
	T8330	0.8	170	0.25	0.8	100	0.23	0.8	–	–	–	510	0.30	0.8	40	0.20	0.6	–	–	–
	T8430	0.8	190	0.25	0.8	105	0.23	0.8	–	–	–	525	0.30	0.8	40	0.20	0.6	–	–	–
	T9325	0.8	230	0.25	0.8	135	0.23	0.8	–	–	–	–	–	–	50	0.20	0.6	–	–	–
DNMG 150408E-NM	**T7335**	0.8	170	0.25	1.9	130	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T8330	0.8	155	0.25	1.9	90	0.23	1.9	–	–	–	465	0.30	1.9	35	0.20	1.5	–	–	–
	T8430	0.8	175	0.25	1.9	95	0.23	1.9	–	–	–	480	0.30	1.9	35	0.20	1.5	–	–	–
	T9325	0.8	210	0.25	1.9	125	0.23	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
DNMG 150604E-NM	**T7325**	0.4	160	0.20	1.9	120	0.18	1.9	–	–	–	–	–	–	50	0.20	1.5	–	–	–
	T7335	0.4	150	0.20	1.9	115	0.18	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
	T8315	0.4	150	0.20	1.9	90	0.18	1.9	–	–	–	450	0.24	1.9	35	0.20	1.5	–	–	–
	T8330	0.4	135	0.20	1.9	80	0.18	1.9	–	–	–	405	0.24	1.9	30	0.20	1.5	–	–	–
	T8430	0.4	155	0.20	1.9	85	0.18	1.9	–	–	–	435	0.24	1.9	30	0.20	1.5	–	–	–
	T9315	0.4	220	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	195	0.20	1.9	115	0.18	1.9	–	–	–	–	–	–	40	0.20	1.5	–	–	–
DNMG 150608E-NM	**T7325**	0.8	175	0.25	1.9	135	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T7335	0.8	170	0.25	1.9	130	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T8315	0.8	165	0.25	1.9	95	0.23	1.9	–	–	–	495	0.30	1.9	40	0.20	1.5	–	–	–
	T8330	0.8	155	0.25	1.9	90	0.23	1.9	–	–	–	465	0.30	1.9	35	0.20	1.5	–	–	–
	T8430	0.8	175	0.25	1.9	95	0.23	1.9	–	–	–	480	0.30	1.9	35	0.20	1.5	–	–	–
	T9315	0.8	235	0.25	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	210	0.25	1.9	125	0.23	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
DNMG 150612E-NM	**T7325**	1.2	175	0.30	1.9	135	0.27	1.9	–	–	–	–	–	–	55	0.24	1.5	–	–	–
	T7335	1.2	170	0.30	1.9	130	0.27	1.9	–	–	–	–	–	–	55	0.24	1.5	–	–	–
	T8315	1.2	165	0.30	1.9	95	0.27	1.9	–	–	–	495	0.36	1.9	40	0.24	1.5	–	–	–
	T9325	1.2	205	0.30	1.9	120	0.27	1.9	–	–	–	–	–	–	45	0.24	1.5	–	–	–
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
DNMG 110404E-NMR	**T7325**	0.4	150	0.20	0.8	115	0.18	0.8	–	–	–	–	–	–	45	0.18	0.6	–	–	–
	T9315	0.4	205	0.20	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	185	0.20	0.8	110	0.18	0.8	–	–	–	–	–	–	40	0.18	0.6	–	–	–
DNMG 110408E-NMR	**T7325**	0.8	155	0.30	0.8	120	0.27	0.8	–	–	–	–	–	–	50	0.24	0.6	–	–	–
	T9315	0.8	205	0.30	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.30	0.8	110	0.27	0.8	–	–	–	–	–	–	40	0.24	0.6	–	–	–
DNMG 110412E-NMR	**T7325**	1.2	155	0.30	1.6	120	0.27	1.6	–	–	–	–	–	–	50	0.24	1.3	–	–	–
	T9315	1.2	200	0.30	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.30	1.6	105	0.27	1.6	–	–	–	–	–	–	40	0.24	1.3	–	–	–
DNMG 150404E-NMR	**T7325**	0.4	140	0.20	1.9	105	0.18	1.9	–	–	–	–	–	–	45	0.18	1.5	–	–	–
	T7335	0.4	130	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	40	0.18	1.5	–	–	–
	T9325	0.4	170	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	35	0.18	1.5	–	–	–
DNMG 150408E-NMR	**T7325**	0.8	145	0.30	1.9	110	0.27	1.9	–	–	–	–	–	–	45	0.24	1.5	–	–	–
	T7335	0.8	140	0.30	1.9	105	0.27	1.9	–	–	–	–	–	–	45	0.24	1.5	–	–	–
	T8330	0.8	125	0.30	1.9	75	0.27	1.9	–	–	–	–	–	–	30	0.24	1.5	–	–	–
	T8430	0.8	135	0.30	1.9	75	0.27	1.9	–	–	–	–	–	–	25	0.24	1.5	–	–	–
	T9315	0.8	190	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	170	0.30	1.9	100	0.27	1.9	–	–	–	–	–	–	35	0.24	1.5	–	–	–
DNMG 150604E-NMR	**T7325**	0.4	140	0.20	1.9	105	0.18	1.9	–	–	–	–	–	–	45	0.18	1.5	–	–	–
	T7335	0.4	130	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	40	0.18	1.5	–	–	–
	T8330	0.4	120	0.20	1.9	70	0.18	1.9	–	–	–	–	–	–	30	0.18	1.5	–	–	–
	T8430	0.4	135	0.20	1.9	75	0.18	1.9	–	–	–	–	–	–	25	0.18	1.5	–	–	–
	T9315	0.4	190	0.20	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	170	0.20	1.9	100	0.18	1.9	–	–	–	–	–	–	35	0.18	1.5	–	–	–

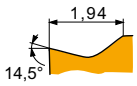
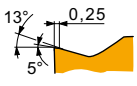
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
DNMG 150608E-NMR	**T6310**	0.8	■ 125	0.30	1.9	■ 90	0.27	1.9	–	–	–	–	–	–	■ 35	0.24	1.5	–	–	–
	T7325	0.8	◪ 145	0.30	1.9	■ 110	0.27	1.9	–	–	–	–	–	–	■ 45	0.24	1.5	–	–	–
	T7335	0.8	◪ 140	0.30	1.9	■ 105	0.27	1.9	–	–	–	–	–	–	■ 45	0.24	1.5	–	–	–
	T8330	0.8	■ 125	0.30	1.9	■ 75	0.27	1.9	–	–	–	–	–	–	◪ 30	0.24	1.5	–	–	–
	T8430	0.8	■ 135	0.30	1.9	■ 75	0.27	1.9	–	–	–	–	–	–	◪ 25	0.24	1.5	–	–	–
	T9315	0.8	■ 190	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 170	0.30	1.9	■ 100	0.27	1.9	–	–	–	–	–	–	◪ 35	0.24	1.5	–	–	–
DNMG 150612E-NMR	**T7325**	1.2	◪ 155	0.30	1.9	■ 120	0.27	1.9	–	–	–	–	–	–	■ 50	0.24	1.5	–	–	–
	T7335	1.2	◪ 145	0.30	1.9	■ 110	0.27	1.9	–	–	–	–	–	–	■ 45	0.24	1.5	–	–	–
	T8330	1.2	■ 135	0.30	1.9	■ 80	0.27	1.9	–	–	–	–	–	–	◪ 30	0.24	1.5	–	–	–
	T8430	1.2	■ 145	0.30	1.9	■ 80	0.27	1.9	–	–	–	–	–	–	◪ 30	0.24	1.5	–	–	–
	T9315	1.2	■ 200	0.30	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 180	0.30	1.9	■ 105	0.27	1.9	–	–	–	–	–	–	◪ 40	0.24	1.5	–	–	–
																				
Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																				
DNMG 150408-NRM	**T7325**	0.8	◪ 140	0.30	3.0	■ 105	0.27	3.0	–	–	–	–	–	–	■ 45	0.24	2.4	–	–	–
	T7335	0.8	◪ 130	0.30	3.0	■ 100	0.27	3.0	–	–	–	–	–	–	■ 40	0.24	2.4	–	–	–
	T9315	0.8	■ 180	0.30	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150604-NRM	**T7325**	0.4	◪ 130	0.20	3.0	■ 100	0.18	3.0	–	–	–	–	–	–	■ 40	0.20	2.4	–	–	–
	T7335	0.4	◪ 130	0.20	3.0	■ 100	0.18	3.0	–	–	–	–	–	–	■ 40	0.20	2.4	–	–	–
	T9315	0.4	■ 180	0.20	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608-NRM	**T7325**	0.8	◪ 140	0.30	3.0	■ 105	0.27	3.0	–	–	–	–	–	–	■ 45	0.24	2.4	–	–	–
	T7335	0.8	◪ 130	0.30	3.0	■ 100	0.27	3.0	–	–	–	–	–	–	■ 40	0.24	2.4	–	–	–
	T9315	0.8	■ 180	0.30	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612-NRM	**T7325**	1.2	◪ 145	0.30	3.0	■ 110	0.27	3.0	–	–	–	–	–	–	■ 45	0.27	2.4	–	–	–
	T7335	1.2	◪ 140	0.30	3.0	■ 105	0.27	3.0	–	–	–	–	–	–	■ 45	0.27	2.4	–	–	–
	T9315	1.2	■ 190	0.30	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria R para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DNMG 150408E-R	**T5315**	0.8	◪ 175	0.40	3.0	–	–	–	■ 165	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
DNMG 150608E-R	**T5305**	0.8	◪ 200	0.40	3.0	–	–	–	■ 190	0.40	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	◪ 175	0.40	3.0	–	–	–	■ 165	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9310	0.8	■ 170	0.40	3.0	–	–	–	◪ 160	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9315	0.8	■ 155	0.40	3.0	–	–	–	◪ 145	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.8	■ 140	0.40	3.0	–	–	–	◪ 130	0.40	3.0	–	–	–	–	–	–	–	–	–
DNMG 150612E-R	**T5305**	1.2	◪ 210	0.40	3.0	–	–	–	■ 195	0.40	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	1.2	◪ 185	0.40	3.0	–	–	–	■ 175	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9310	1.2	■ 180	0.40	3.0	–	–	–	◪ 170	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	1.2	■ 165	0.40	3.0	–	–	–	◪ 155	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	1.2	■ 150	0.40	3.0	–	–	–	◪ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
DNMG 150616E-R	**T9325**	1.6	■ 155	0.40	3.0	–	–	–	◪ 145	0.40	3.0	–	–	–	–	–	–	–	–	–
																				
Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DNMG 110408E-RM	**T9315**	0.8	■ 190	0.40	2.0	–	–	–	◪ 180	0.40	2.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 170	0.40	2.0	◪ 100	0.36	2.0	◪ 160	0.40	2.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.40	2.0	◪ 85	0.36	2.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 110412E-RM	**T9315**	1.2	■ 230	0.30	2.0	–	–	–	◪ 215	0.30	2.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 205	0.30	2.0	◪ 120	0.27	2.0	◪ 190	0.30	2.0	–	–	–	–	–	–	–	–	–

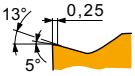
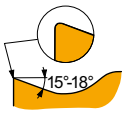
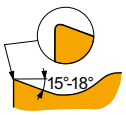
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DNMG 150408E-RM	**T9315**	0.8	180	0.40	3.0	–	–	–	170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	165	0.40	3.0	95	0.36	3.0	155	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	140	0.40	3.0	80	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150412E-RM	**T7325**	1.2	155	0.40	3.0	120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	190	0.40	3.0	–	–	–	180	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	170	0.40	3.0	100	0.36	3.0	160	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	150	0.40	3.0	90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150608E-RM	**T5305**	0.8	230	0.40	3.0	–	–	–	215	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	205	0.40	3.0	–	–	–	190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	145	0.40	3.0	110	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	135	0.40	3.0	105	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	135	0.40	3.0	80	0.36	3.0	125	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	130	0.40	3.0	75	0.36	3.0	120	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	135	0.40	3.0	75	0.36	3.0	110	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	200	0.40	3.0	–	–	–	190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	180	0.40	3.0	–	–	–	170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	165	0.40	3.0	95	0.36	3.0	155	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	140	0.40	3.0	80	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150612E-RM	**T5305**	1.2	240	0.40	3.0	–	–	–	225	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	215	0.40	3.0	–	–	–	200	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	155	0.40	3.0	120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	145	0.40	3.0	110	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	135	0.40	3.0	80	0.36	3.0	125	0.40	3.0	–	–	–	–	–	–	–	–	–
	T8430	1.2	140	0.40	3.0	75	0.36	3.0	115	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	210	0.40	3.0	–	–	–	195	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	190	0.40	3.0	–	–	–	180	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	170	0.40	3.0	100	0.36	3.0	160	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	150	0.40	3.0	90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
DNMG 150616E-RM	**T5315**	1.6	225	0.40	3.0	–	–	–	210	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	200	0.40	3.0	–	–	–	190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	180	0.40	3.0	105	0.36	3.0	170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	155	0.40	3.0	90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.																				
DNMG 110404E-SF	**T6310**	0.4	150	0.15	0.8	105	0.14	0.8	120	0.15	0.8	450	0.18	0.8	45	0.12	0.6	30	0.15	1.0
	T7325	0.4	165	0.17	0.8	125	0.15	0.8	–	–	–	–	–	–	50	0.15	0.6	–	–	–
	T8315	0.4	160	0.15	0.8	95	0.14	0.8	150	0.15	0.8	480	0.18	0.8	40	0.12	0.6	30	0.15	1.0
	T8430	0.4	180	0.15	0.8	95	0.14	0.8	145	0.15	0.8	495	0.18	0.8	35	0.12	0.6	30	0.15	1.0
	T9315	0.4	245	0.15	0.8	–	–	–	230	0.15	0.8	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	210	0.17	0.8	125	0.15	0.8	195	0.17	0.8	–	–	–	45	0.15	0.6	–	–	–
DNMG 110408E-SF	**T6310**	0.8	175	0.17	0.8	125	0.15	0.8	140	0.17	0.8	525	0.20	0.8	50	0.14	0.6	35	0.15	1.0
	T7325	0.8	195	0.17	0.8	150	0.15	0.8	–	–	–	–	–	–	60	0.15	0.6	–	–	–
	T7335	0.8	195	0.17	0.8	150	0.15	0.8	–	–	–	–	–	–	60	0.15	0.6	–	–	–
	T8315	0.8	180	0.17	0.8	105	0.15	0.8	170	0.17	0.8	540	0.20	0.8	45	0.14	0.6	35	0.15	1.0
	T8430	0.8	200	0.17	0.8	110	0.15	0.8	165	0.17	0.8	555	0.20	0.8	40	0.14	0.6	35	0.15	1.0
	T9325	0.8	250	0.17	0.8	150	0.15	0.8	235	0.17	0.8	–	–	–	55	0.15	0.6	–	–	–
DNMG 150404E-SF	**T6310**	0.4	140	0.15	1.5	100	0.14	1.5	110	0.15	1.5	420	0.18	1.5	40	0.12	1.2	25	0.15	1.0
	T8315	0.4	150	0.15	1.5	90	0.14	1.5	140	0.15	1.5	450	0.18	1.5	35	0.12	1.2	30	0.15	1.0
	T8430	0.4	165	0.15	1.5	90	0.14	1.5	135	0.15	1.5	450	0.18	1.5	35	0.12	1.2	25	0.15	1.0
	T9325	0.4	195	0.17	1.5	115	0.15	1.5	185	0.17	1.5	–	–	–	40	0.15	1.2	–	–	–

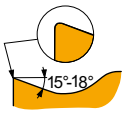
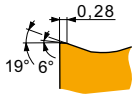
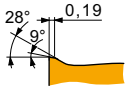
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			 Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.																	
DNMG 150408E-SF	**T6310**	0.8	■	160	0.17	1.5	■	115	0.15	1.5	■	125	0.17	1.5	◪	480	0.20	1.5	■	45	0.14	1.2	■	30	0.15	1.0
	T8315	0.8	◪	170	0.17	1.5	■	100	0.15	1.5	■	160	0.17	1.5	◪	510	0.20	1.5	◪	40	0.14	1.2	■	30	0.15	1.0
	T8330	0.8	■	160	0.17	1.5	■	95	0.15	1.5	■	150	0.17	1.5	◪	480	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T8430	0.8	■	190	0.17	1.5	■	105	0.15	1.5	◪	155	0.17	1.5	◪	525	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T9325	0.8	■	235	0.17	1.5	■	140	0.15	1.5	◪	220	0.17	1.5		–	–	–	◪	50	0.15	1.2		–	–	–
DNMG 150604E-SF	**H07**	0.4		–	–	–	◪	70	0.14	1.5	■	115	0.15	1.5	◪	360	0.18	1.5	■	35	0.12	1.2		–	–	–
	T6310	0.4	■	140	0.15	1.5	■	100	0.14	1.5	■	110	0.15	1.5	◪	420	0.18	1.5	■	40	0.12	1.2	■	25	0.15	1.0
	T7325	0.4	◪	155	0.17	1.5	■	120	0.15	1.5		–	–	–		–	–	–	■	50	0.15	1.2		–	–	–
	T7335	0.4	◪	150	0.17	1.5	■	115	0.15	1.5		–	–	–		–	–	–	■	45	0.15	1.2		–	–	–
	T8315	0.4	◪	150	0.15	1.5	■	90	0.14	1.5	■	140	0.15	1.5	◪	450	0.18	1.5	◪	35	0.12	1.2	■	30	0.15	1.0
	T8330	0.4	■	140	0.15	1.5	■	80	0.14	1.5	■	130	0.15	1.5	◪	420	0.18	1.5	◪	35	0.12	1.2	◪	25	0.15	1.0
	T8430	0.4	■	165	0.15	1.5	■	90	0.14	1.5	◪	135	0.15	1.5	◪	450	0.18	1.5	◪	35	0.12	1.2	◪	25	0.15	1.0
	T9315	0.4	■	230	0.15	1.5		–	–	–	◪	215	0.15	1.5		–	–	–		–	–	–	◪	45	0.15	1.0
	T9325	0.4	■	195	0.17	1.5	■	115	0.15	1.5	◪	185	0.17	1.5		–	–	–	◪	40	0.15	1.2		–	–	–
DNMG 150608E-SF	**H07**	0.8		–	–	–	◪	80	0.15	1.5	■	130	0.17	1.5	◪	415	0.20	1.5	■	40	0.14	1.2		–	–	–
	T6310	0.8	■	160	0.17	1.5	■	115	0.15	1.5	■	125	0.17	1.5	◪	480	0.20	1.5	■	45	0.14	1.2	■	30	0.15	1.0
	T7325	0.8	◪	185	0.17	1.5	■	140	0.15	1.5		–	–	–		–	–	–	■	60	0.15	1.2		–	–	–
	T7335	0.8	◪	180	0.17	1.5	■	140	0.15	1.5		–	–	–		–	–	–	■	55	0.15	1.2		–	–	–
	T8315	0.8	◪	170	0.17	1.5	■	100	0.15	1.5	■	160	0.17	1.5	◪	510	0.20	1.5	◪	40	0.14	1.2	■	30	0.15	1.0
	T8330	0.8	■	160	0.17	1.5	■	95	0.15	1.5	■	150	0.17	1.5	◪	480	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T8430	0.8	■	190	0.17	1.5	■	105	0.15	1.5	◪	155	0.17	1.5	◪	525	0.20	1.5	◪	40	0.14	1.2	◪	30	0.15	1.0
	T9315	0.8	■	255	0.17	1.5		–	–	–	◪	240	0.17	1.5		–	–	–		–	–	–	◪	50	0.15	1.0
	T9325	0.8	■	235	0.17	1.5	■	140	0.15	1.5	◪	220	0.17	1.5		–	–	–	◪	50	0.15	1.2		–	–	–
DNMG 150612E-SF	**T6310**	1.2	■	145	0.30	1.5	■	100	0.27	1.5	■	115	0.30	1.5	◪	435	0.36	1.5	■	40	0.21	1.2	■	25	0.15	1.0
	T7325	1.2	◪	165	0.30	1.5	■	125	0.27	1.5		–	–	–		–	–	–	■	50	0.21	1.2		–	–	–
	T9315	1.2	■	210	0.30	1.5		–	–	–	◪	195	0.30	1.5		–	–	–		–	–	–	◪	40	0.15	1.0
			 Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
DNMG 110404E-SM	**T6310**	0.4	■	140	0.20	0.8	■	100	0.18	0.8	■	110	0.20	0.8	◪	420	0.24	0.8	■	40	0.20	0.6	◪	25	0.15	1.0
	T7325	0.4	◪	160	0.20	0.8	■	120	0.18	0.8		–	–	–		–	–	–	■	50	0.20	0.6		–	–	–
	T7335	0.4	◪	150	0.20	0.8	■	115	0.18	0.8		–	–	–		–	–	–	■	45	0.20	0.6		–	–	–
	T8430	0.4	■	155	0.20	0.8	■	85	0.18	0.8	◪	130	0.20	0.8	◪	435	0.24	0.8	◪	30	0.20	0.6	◪	25	0.15	1.0
	T9325	0.4	■	190	0.20	0.8	■	110	0.18	0.8	◪	180	0.20	0.8		–	–	–	◪	40	0.20	0.6		–	–	–
DNMG 110408E-SM	**T6310**	0.8	■	150	0.25	1.2	■	105	0.23	1.2	■	120	0.25	1.2	◪	450	0.30	1.2	■	45	0.20	1.0	◪	30	0.15	1.0
	T7325	0.8	◪	170	0.25	1.2	■	130	0.23	1.2		–	–	–		–	–	–	■	55	0.20	1.0		–	–	–
	T7335	0.8	◪	160	0.25	1.2	■	120	0.23	1.2		–	–	–		–	–	–	■	50	0.20	1.0		–	–	–
	T8330	0.8	■	150	0.25	1.2	■	90	0.23	1.2	■	140	0.25	1.2	◪	450	0.30	1.2	◪	35	0.20	1.0	◪	30	0.15	1.0
	T8430	0.8	■	170	0.25	1.2	■	90	0.23	1.2	◪	135	0.25	1.2	◪	465	0.30	1.2	◪	35	0.20	1.0	◪	25	0.15	1.0
	T9325	0.8	■	200	0.25	1.2	■	120	0.23	1.2	◪	190	0.25	1.2		–	–	–	◪	45	0.20	1.0		–	–	–
DNMG 150404E-SM	**T6310**	0.4	■	125	0.22	1.7	■	90	0.20	1.7	■	100	0.22	1.7	◪	375	0.26	1.7	■	35	0.20	1.4	◪	25	0.15	1.0
DNMG 150408E-SM	**T6310**	0.8	■	140	0.25	2.1	■	100	0.23	2.1	■	110	0.25	2.1	◪	420	0.30	2.1	■	40	0.20	1.7	◪	25	0.15	1.0
DNMG 150604E-SM	**T6310**	0.4	■	125	0.22	1.7	■	90	0.20	1.7	■	100	0.22	1.7	◪	375	0.26	1.7	■	35	0.20	1.4	◪	25	0.15	1.0
	T7325	0.4	◪	140	0.22	1.7	■	105	0.20	1.7		–	–	–		–	–	–	■	45	0.20	1.4		–	–	–
	T7335	0.4	◪	140	0.22	1.7	■	105	0.20	1.7		–	–	–		–	–	–	■	45	0.20	1.4		–	–	–
	T8330	0.4	■	125	0.22	1.7	■	75	0.20	1.7	■	115	0.22	1.7	◪	375	0.26	1.7	◪	30	0.20	1.4	◪	25	0.15	1.0
	T8430	0.4	■	140	0.22	1.7	■	75	0.20	1.7	◪	115	0.22	1.7	◪	390	0.26	1.7	◪	30	0.20	1.4	◪	20	0.15	1.0
	T9315	0.4	■	200	0.20	1.7		–	–	–	◪	190	0.20	1.7		–	–	–		–	–	–	◪	40	0.15	1.0
	T9325	0.4	■	170	0.22	1.7	■	100	0.20	1.7	◪	160	0.22	1.7		–	–	–	◪	35	0.20	1.4		–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
DNMG 150608E-SM	**T6310**	0.8	■ 140	0.25	1.7	■ 100	0.23	1.7	■ 110	0.25	1.7	◪ 420	0.30	1.7	■ 40	0.20	1.4	◪ 25	0.15	1.0
	T7325	0.8	◪ 160	0.25	1.7	■ 120	0.23	1.7	–	–	–	–	–	–	■ 50	0.20	1.4	–	–	–
	T7335	0.8	◪ 155	0.25	1.7	■ 120	0.23	1.7	–	–	–	–	–	–	■ 50	0.20	1.4	–	–	–
	T8330	0.8	■ 140	0.25	1.7	■ 80	0.23	1.7	■ 130	0.25	1.7	◪ 420	0.30	1.7	◪ 35	0.20	1.4	◪ 25	0.15	1.0
	T8430	0.8	■ 155	0.25	1.7	■ 85	0.23	1.7	◪ 130	0.25	1.7	◪ 435	0.30	1.7	◪ 30	0.20	1.4	◪ 25	0.15	1.0
	T9315	0.8	■ 215	0.25	1.7	–	–	–	◪ 200	0.25	1.7	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 195	0.25	1.7	■ 115	0.23	1.7	◪ 185	0.25	1.7	–	–	–	◪ 40	0.20	1.4	–	–	–
DNMG 150612E-SM	**T6310**	1.2	■ 145	0.30	1.7	■ 100	0.27	1.7	■ 115	0.30	1.7	◪ 435	0.36	1.7	■ 40	0.24	1.4	◪ 25	0.15	1.0
	T7325	1.2	◪ 160	0.30	1.7	■ 120	0.27	1.7	–	–	–	–	–	–	■ 50	0.24	1.4	–	–	–
	T7335	1.2	◪ 155	0.30	1.7	■ 120	0.27	1.7	–	–	–	–	–	–	■ 50	0.24	1.4	–	–	–
	T8330	1.2	■ 145	0.30	1.7	■ 85	0.27	1.7	■ 135	0.30	1.7	◪ 435	0.36	1.7	◪ 35	0.24	1.4	◪ 25	0.15	1.0
	T8430	1.2	■ 155	0.30	1.7	■ 85	0.27	1.7	◪ 130	0.30	1.7	◪ 435	0.36	1.7	◪ 30	0.24	1.4	◪ 25	0.15	1.0
	T9315	1.2	■ 210	0.30	1.7	–	–	–	◪ 195	0.30	1.7	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 190	0.30	1.7	■ 110	0.27	1.7	◪ 180	0.30	1.7	–	–	–	◪ 40	0.24	1.4	–	–	–
																				
			Geometria ER-SI com desenho positivo à direita para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																	
DNMG 110404ER-SI	**T7325**	0.4	◪ 185	0.20	1.0	■ 140	0.18	1.0	–	–	–	–	–	–	◪ 60	0.18	0.8	–	–	–
	T7335	0.4	◪ 180	0.20	1.0	■ 140	0.18	1.0	–	–	–	–	–	–	◪ 55	0.18	0.8	–	–	–
	T8330	0.4	■ 160	0.20	1.0	■ 95	0.18	1.0	–	–	–	◪ 480	0.24	1.0	◪ 40	0.18	0.8	–	–	–
	T8430	0.4	■ 185	0.20	1.0	■ 100	0.18	1.0	–	–	–	◪ 510	0.24	1.0	◪ 40	0.18	0.8	–	–	–
	T9325	0.4	■ 225	0.20	1.0	■ 135	0.18	1.0	–	–	–	–	–	–	◪ 50	0.18	0.8	–	–	–
DNMG 110408ER-SI	**T7335**	0.8	◪ 175	0.35	1.0	■ 135	0.32	1.0	–	–	–	–	–	–	◪ 55	0.25	0.8	–	–	–
	T8330	0.8	■ 165	0.35	1.0	■ 95	0.32	1.0	–	–	–	◪ 495	0.42	1.0	◪ 40	0.25	0.8	–	–	–
	T8430	0.8	■ 180	0.35	1.0	■ 95	0.32	1.0	–	–	–	◪ 495	0.42	1.0	◪ 35	0.25	0.8	–	–	–
	T9325	0.8	■ 210	0.35	1.0	■ 125	0.32	1.0	–	–	–	–	–	–	◪ 45	0.25	0.8	–	–	–
DNMG 150404ER-SI	**T8330**	0.4	■ 155	0.20	1.5	■ 90	0.18	1.5	–	–	–	◪ 465	0.24	1.5	◪ 35	0.18	1.2	–	–	–
	T8430	0.4	■ 175	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 480	0.24	1.5	◪ 35	0.18	1.2	–	–	–
	T9325	0.4	■ 220	0.20	1.5	■ 130	0.18	1.5	–	–	–	–	–	–	◪ 45	0.18	1.2	–	–	–
DNMG 150408ER-SI	**T8330**	0.8	■ 160	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 480	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8430	0.8	■ 170	0.35	1.5	■ 90	0.32	1.5	–	–	–	◪ 465	0.42	1.5	◪ 35	0.25	1.2	–	–	–
	T9325	0.8	■ 200	0.35	1.5	■ 120	0.32	1.5	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
DNMG 150604ER-SI	**T7325**	0.4	◪ 180	0.20	1.5	■ 140	0.18	1.5	–	–	–	–	–	–	◪ 55	0.18	1.2	–	–	–
	T7335	0.4	◪ 170	0.20	1.5	■ 130	0.18	1.5	–	–	–	–	–	–	◪ 55	0.18	1.2	–	–	–
	T8315	0.4	◪ 165	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 495	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8330	0.4	■ 155	0.20	1.5	■ 90	0.18	1.5	–	–	–	◪ 465	0.24	1.5	◪ 35	0.18	1.2	–	–	–
	T8430	0.4	■ 175	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 480	0.24	1.5	◪ 35	0.18	1.2	–	–	–
	T9325	0.4	■ 220	0.20	1.5	■ 130	0.18	1.5	–	–	–	–	–	–	◪ 45	0.18	1.2	–	–	–
	T9335	0.4	■ 185	0.20	1.5	■ 110	0.18	1.5	–	–	–	–	–	–	◪ 40	0.18	1.2	–	–	–
DNMG 150608ER-SI	**T7325**	0.8	◪ 180	0.35	1.5	■ 140	0.32	1.5	–	–	–	–	–	–	◪ 55	0.25	1.2	–	–	–
	T7335	0.8	◪ 170	0.35	1.5	■ 130	0.32	1.5	–	–	–	–	–	–	◪ 55	0.25	1.2	–	–	–
	T8315	0.8	◪ 165	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 495	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8330	0.8	■ 160	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 480	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8430	0.8	■ 170	0.35	1.5	■ 90	0.32	1.5	–	–	–	◪ 465	0.42	1.5	◪ 35	0.25	1.2	–	–	–
	T9325	0.8	■ 200	0.35	1.5	■ 120	0.32	1.5	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	T9335	0.8	■ 180	0.35	1.5	■ 105	0.32	1.5	–	–	–	–	–	–	◪ 40	0.25	1.2	–	–	–
																				
			Geometria EL-SI com desenho positivo à esquerda, para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos.																	
DNMG 110404EL-SI	**T7335**	0.4	◪ 180	0.20	1.0	■ 140	0.18	1.0	–	–	–	–	–	–	◪ 55	0.18	0.8	–	–	–
	T8330	0.4	■ 160	0.20	1.0	■ 95	0.18	1.0	–	–	–	◪ 480	0.24	1.0	◪ 40	0.18	0.8	–	–	–
	T8430	0.4	■ 185	0.20	1.0	■ 100	0.18	1.0	–	–	–	◪ 510	0.24	1.0	◪ 40	0.18	0.8	–	–	–
	T9325	0.4	■ 225	0.20	1.0	■ 135	0.18	1.0	–	–	–	–	–	–	◪ 50	0.18	0.8	–	–	–

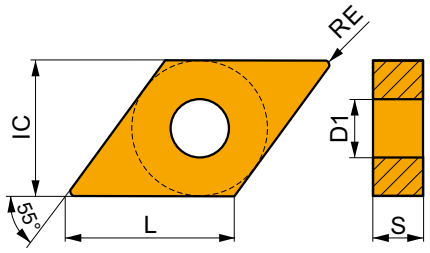
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			 Geometria EL-SI com desenho positivo à esquerda, para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos.																	
DNMG 110408EL-SI	**T7325**	0.8	◪	185	0.35	1.0	■	140	0.32	1.0	–	–	–	–	–	–	◪	60	0.25	0.8	–	–	–
	T8330	0.8	■	165	0.35	1.0	■	95	0.32	1.0	–	–	–	◪	495	0.42	1.0	◪	40	0.25	0.8	–	–	–
	T8430	0.8	■	180	0.35	1.0	■	95	0.32	1.0	–	–	–	◪	495	0.42	1.0	◪	35	0.25	0.8	–	–	–
	T9325	0.8	■	210	0.35	1.0	■	125	0.32	1.0	–	–	–	–	–	–	–	◪	45	0.25	0.8	–	–	–
DNMG 150404EL-SI	**T8330**	0.4	■	155	0.20	1.5	■	90	0.18	1.5	–	–	–	◪	465	0.24	1.5	◪	35	0.18	1.2	–	–	–
	T8430	0.4	■	175	0.20	1.5	■	95	0.18	1.5	–	–	–	◪	480	0.24	1.5	◪	35	0.18	1.2	–	–	–
	T9325	0.4	■	220	0.20	1.5	■	130	0.18	1.5	–	–	–	–	–	–	–	◪	45	0.18	1.2	–	–	–
DNMG 150408EL-SI	**T7335**	0.8	◪	170	0.35	1.5	■	130	0.32	1.5	–	–	–	–	–	–	–	◪	55	0.25	1.2	–	–	–
	T8330	0.8	■	160	0.35	1.5	■	95	0.32	1.5	–	–	–	◪	480	0.42	1.5	◪	40	0.25	1.2	–	–	–
	T8430	0.8	■	170	0.35	1.5	■	90	0.32	1.5	–	–	–	◪	465	0.42	1.5	◪	35	0.25	1.2	–	–	–
	T9325	0.8	■	200	0.35	1.5	■	120	0.32	1.5	–	–	–	–	–	–	–	◪	45	0.25	1.2	–	–	–
DNMG 150604EL-SI	**T7325**	0.4	◪	180	0.20	1.5	■	140	0.18	1.5	–	–	–	–	–	–	–	◪	55	0.18	1.2	–	–	–
	T7335	0.4	◪	170	0.20	1.5	■	130	0.18	1.5	–	–	–	–	–	–	–	◪	55	0.18	1.2	–	–	–
	T8315	0.4	◪	165	0.20	1.5	■	95	0.18	1.5	–	–	–	◪	495	0.24	1.5	◪	40	0.18	1.2	–	–	–
	T8330	0.4	■	155	0.20	1.5	■	90	0.18	1.5	–	–	–	◪	465	0.24	1.5	◪	35	0.18	1.2	–	–	–
	T8430	0.4	■	175	0.20	1.5	■	95	0.18	1.5	–	–	–	◪	480	0.24	1.5	◪	35	0.18	1.2	–	–	–
	T9325	0.4	■	220	0.20	1.5	■	130	0.18	1.5	–	–	–	–	–	–	–	◪	45	0.18	1.2	–	–	–
	T9335	0.4	■	185	0.20	1.5	■	110	0.18	1.5	–	–	–	–	–	–	–	◪	40	0.18	1.2	–	–	–
DNMG 150608EL-SI	**T7325**	0.8	◪	180	0.35	1.5	■	140	0.32	1.5	–	–	–	–	–	–	–	◪	55	0.25	1.2	–	–	–
	T7335	0.8	◪	170	0.35	1.5	■	130	0.32	1.5	–	–	–	–	–	–	–	◪	55	0.25	1.2	–	–	–
	T8315	0.8	◪	165	0.35	1.5	■	95	0.32	1.5	–	–	–	◪	495	0.42	1.5	◪	40	0.25	1.2	–	–	–
	T8330	0.8	■	160	0.35	1.5	■	95	0.32	1.5	–	–	–	◪	480	0.42	1.5	◪	40	0.25	1.2	–	–	–
	T8430	0.8	■	170	0.35	1.5	■	90	0.32	1.5	–	–	–	◪	465	0.42	1.5	◪	35	0.25	1.2	–	–	–
	T9325	0.8	■	200	0.35	1.5	■	120	0.32	1.5	–	–	–	–	–	–	–	◪	45	0.25	1.2	–	–	–
	T9335	0.8	■	180	0.35	1.5	■	105	0.32	1.5	–	–	–	–	–	–	–	◪	40	0.25	1.2	–	–	–
			 Geometria W-MR Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																	
DNMG 150608W-MR	**T5315**	0.8	◪	190	0.40	1.5	–	–	–	◪	180	0.40	1.5	–	–	–	–	–	–	–	–	–	–
	T9315	0.8	■	170	0.40	1.5	–	–	–	◪	160	0.40	1.5	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■	155	0.40	1.5	◪	90	0.36	1.5	◪	145	0.40	1.5	–	–	–	–	–	–	–	–	–
DNMG 150612W-MR	**T9310**	1.2	■	175	0.50	1.5	–	–	–	◪	165	0.50	1.5	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	■	160	0.50	1.5	–	–	–	◪	150	0.50	1.5	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■	145	0.50	1.5	◪	85	0.45	1.5	◪	135	0.50	1.5	–	–	–	–	–	–	–	–	–
			 Geometria W-NM Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																	
DNMX 150604W-NM	**T7325**	0.4	◪	145	0.30	1.5	◪	110	0.27	1.5	–	–	–	–	–	–	–	◪	45	0.21	1.2	–	–	–
	T7335	0.4	◪	135	0.30	1.5	◪	105	0.27	1.5	–	–	–	–	–	–	–	◪	40	0.21	1.2	–	–	–
	T9315	0.4	■	185	0.30	1.5	–	–	–	◪	175	0.30	1.5	–	–	–	–	–	–	–	–	–	–
DNMX 150608W-NM	**T7325**	0.8	◪	155	0.40	1.5	◪	120	0.36	1.5	–	–	–	–	–	–	–	◪	50	0.28	1.2	–	–	–
	T7335	0.8	◪	145	0.40	1.5	◪	110	0.36	1.5	–	–	–	–	–	–	–	◪	45	0.28	1.2	–	–	–
	T9315	0.8	■	195	0.40	1.5	–	–	–	◪	185	0.40	1.5	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■	175	0.40	1.5	◪	105	0.36	1.5	◪	165	0.40	1.5	–	–	–	◪	35	0.28	1.2	–	–	–

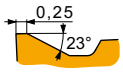
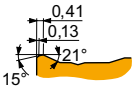
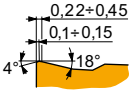
DNMM

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1504	12.700	5.16	15.50	4.76
1506	12.700	5.16	15.50	6.35



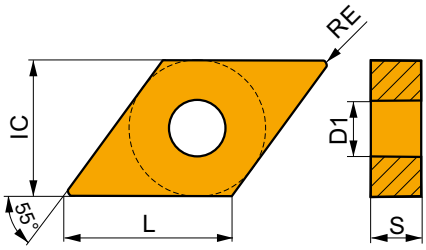
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria NR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DNMM 150408E-NR	**T9325**	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
DNMM 150608E-NR	**T7325**	0.8	◪ 140	0.40	3.0	■ 105	0.36	3.0	–	–	–	–	–	–	◪ 45	0.28	2.4	–	–	–
	T8330	0.8	■ 125	0.40	3.0	■ 75	0.36	3.0	◪ 115	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
	T8430	0.8	■ 130	0.40	3.0	■ 70	0.36	3.0	◪ 105	0.40	3.0	–	–	–	◪ 25	0.28	2.4	–	–	–
	T9325	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
																				
Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DNMM 150608E-NR2	**T9325**	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.32	2.4	–	–	–
																				
Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
DNMM 150608E-OR	**T9325**	0.8	■ 155	0.40	3.0	◪ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 30	0.28	2.4	–	–	–
DNMM 150612E-OR	**T9315**	1.2	■ 180	0.40	3.0	–	–	–	◪ 170	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 165	0.40	3.0	◪ 95	0.36	3.0	◪ 155	0.40	3.0	–	–	–	◪ 35	0.32	2.4	–	–	–
	T9335	1.2	■ 145	0.40	3.0	◪ 85	0.36	3.0	–	–	–	–	–	–	◪ 30	0.32	2.4	–	–	–
DNMM 150616E-OR	**T9325**	1.6	■ 165	0.45	3.0	◪ 95	0.41	3.0	◪ 155	0.45	3.0	–	–	–	◪ 35	0.41	2.4	–	–	–

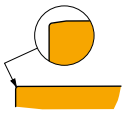
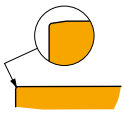
DNGA CER

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1504	12.700	5.16	15.50	4.76



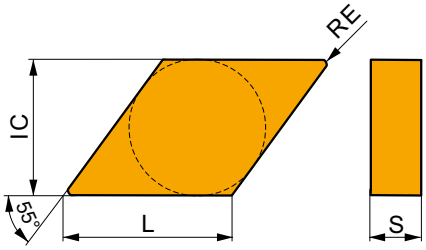
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC S																	
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
DNGA 150408 S02020	**TC100**	0.8	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–
			HSC T																	
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
DNGA 150404 T01020	**TC100**	0.4	–	–	–	–	–	–	475	0.10	1.5	–	–	–	–	–	–	–	–	–
DNGA 150408 T00520	**TC100**	0.8	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–

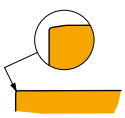
DNGN CER

PRAMET

	IC (mm)	L (mm)	S (mm)
1504	12.700	15.50	4.76



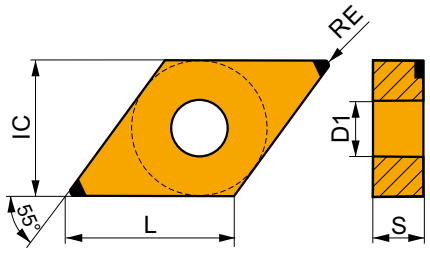
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC T																	
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
DNGN 150408 T01020	**TC100**	0.8	–	–	–	–	–	–	450	0.20	1.5	–	–	–	–	–	–	–	–	–

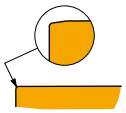
DNGA CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1506	12.700	5.16	15.50	6.35



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		S															
			Para operações de maquinação de acabamento, e cortes contínuos.																	
DNGA 150608S01020B	**TB310**	0.8	–	–	–	–	–	–	420	0.15	0.6	–	–	–	110	0.11	0.5	85	0.15	1.0

DDJN(RL) EXT

P M K N S H

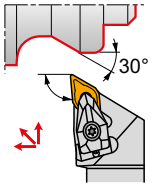
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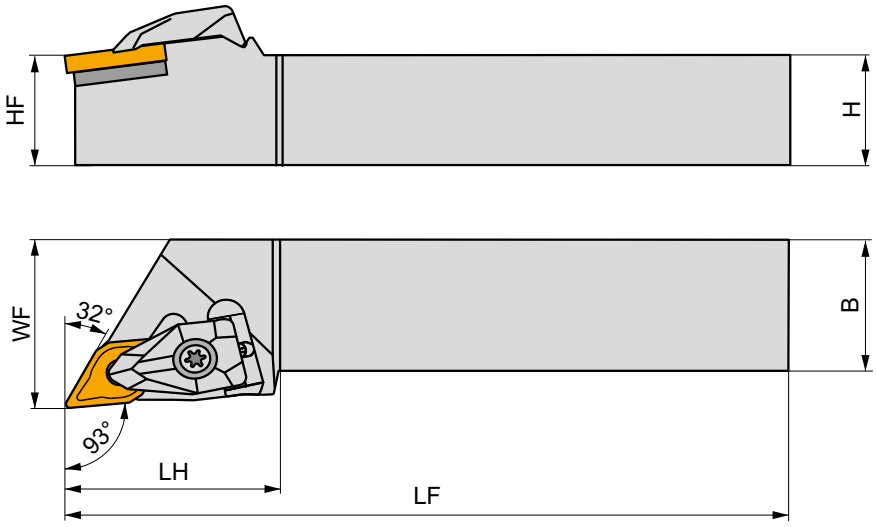
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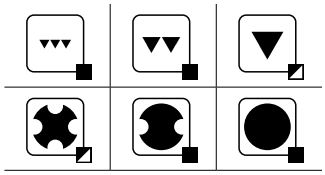


Porta-Ferramenta de Exterior, Fixação Dupla, Ângulo de Corte de 93 °, para Pastilhas DN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de corte de 93 °. Adequado para torneamento longitudinal com esquadria, de cópia, frontal e de chanfro, com pastilhas negativas DN ... de tamanho 11 ou 15. Disponível com hastes de 20x20 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg			
R	DDJNR 2020 K 11	20	20	20	25	125	30.2	-7	-6	0.45	GI046	DD11	–
	DDJNR 2525 M 11	25	25	25	32	150	30.2	-7	-6	0.77	GI046	DD11	–
	DDJNR 2020 K 15	20	20	20	25	125	39.4	-7	-6	0.42	GI044	DD154	AT002
	DDJNR 2525 M 15	25	25	25	32	150	39.4	-7	-6	0.74	GI044	DD154	AT002
	DDJNR 3225 P 15	32	25	32	32	170	39.4	-7	-6	1.12	GI044	DD154	AT002
	DDJNR 3232 P 15	32	32	32	40	170	39.4	-7	-6	1.33	GI044	DD154	AT002
L	DDJNL 2020 K 11	20	20	20	25	125	30.2	-7	-6	0.45	GI046	DD11	–
	DDJNL 2525 M 11	25	25	25	32	150	30.2	-7	-6	0.77	GI046	DD11	–
	DDJNL 2020 K 15	20	20	20	25	125	39.4	-7	-6	0.42	GI044	DD154	AT002
	DDJNL 2525 M 15	25	25	25	32	150	39.4	-7	-6	0.74	GI044	DD154	AT002
	DDJNL 3225 P 15	32	25	32	32	170	39.4	-7	-6	1.01	GI044	DD154	AT002
	DDJNL 3232 P 15	32	32	32	40	170	39.4	-7	-6	1.34	GI044	DD154	AT002

GI044	DN.. 1506..
GI046	DN.. 1104..

DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P
DD154	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–

PDJN(RL) EXT

P M K N S H

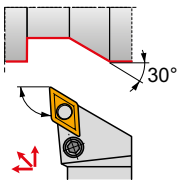
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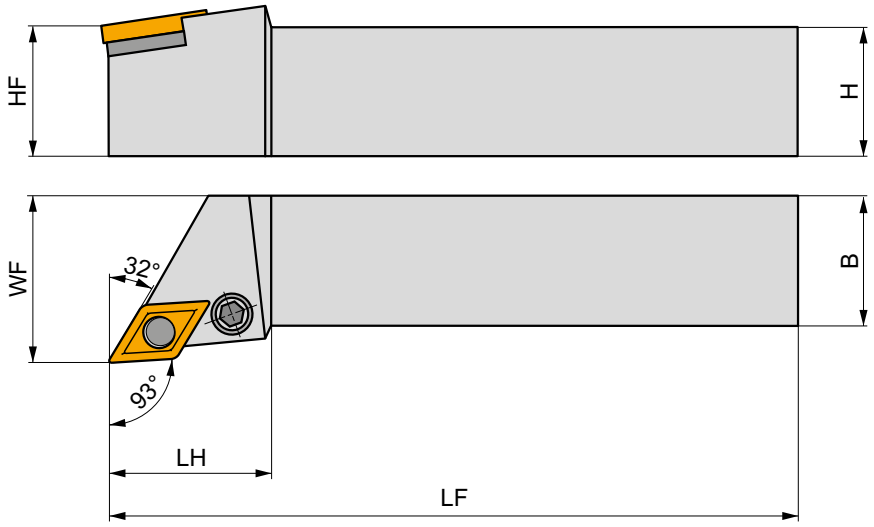
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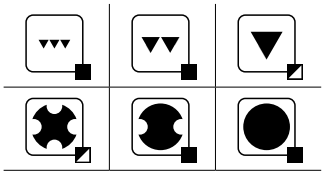


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 93 °, para Pastilhas DN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 93 °. Adequado para torneamento longitudinal com esquadria, torneamento de cópia até 30 ° e chanfrar com pastilhas negativas DN ...tamanhos 11 e 15. Disponível com hastes de 20x20 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PDJNR 2020 K 11	20	20	20	25	125	30	-6	-6	0.43	GI046	PD60
	PDJNR 2525 M 11	25	25	25	32	150	30	-6	-6	0.73	GI046	PD60
	PDJNR 3225 P 11	32	25	32	32	170	30	-6	-6	1.10	GI046	PD60
	PDJNR 2020 K 15	20	20	20	25	125	40	-6	-6	0.44	GI044	PD31
	PDJNR 2525 M 15	25	25	25	32	150	40	-6	-6	0.73	GI044	PD30
	PDJNR 3225 P 15	32	25	32	32	170	40	-6	-6	1.05	GI044	PD30
	PDJNR 3232 P 15	32	32	32	40	170	40	-6	-6	1.30	GI044	PD30
L	PDJNL 2020 K 11	20	20	20	25	125	30	-6	-6	0.41	GI046	PD60
	PDJNL 2525 M 11	25	25	25	32	150	30	-6	-6	0.73	GI046	PD60
	PDJNL 3225 P 11	32	25	32	32	170	30	-6	-6	1.10	GI046	PD60
	PDJNL 2020 K 15	20	20	20	25	125	40	-6	-6	0.42	GI044	PD31
	PDJNL 2525 M 15	25	25	25	32	150	40	-6	-6	0.73	GI044	PD30
	PDJNL 3225 P 15	32	25	32	32	170	40	-6	-6	0.98	GI044	PD30
	PDJNL 3232 P 15	32	32	32	40	170	40	-6	-6	1.30	GI044	PD30

GI044	DN.. 1506..
GI046	DN.. 1104..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD31	DNU 150308	PU 03	US 40	6.0	M 8x1	20.5	NT 05	MT 05	HXK 4
PD60	PDN 110308	PU 3512	PS 0616	3.0	M 6	16	NT 5153	MT 0912	HXK 2.5

PDNN(RL) EXT

P M K N S H

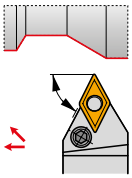
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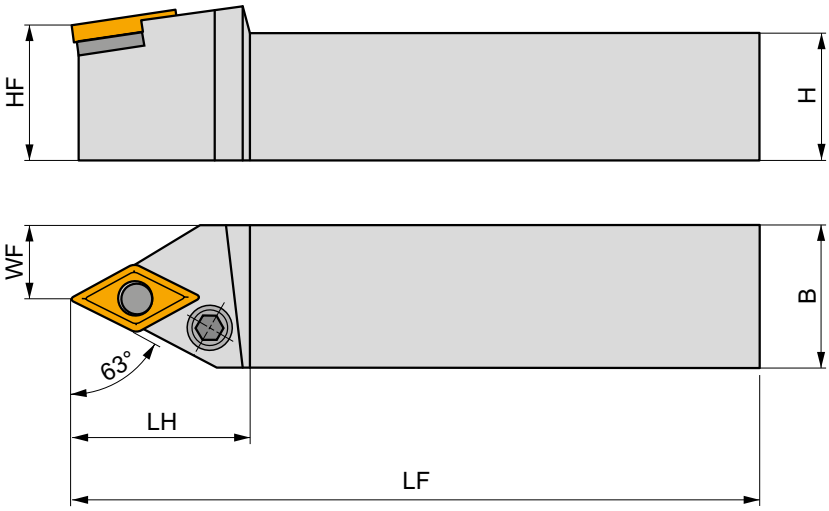
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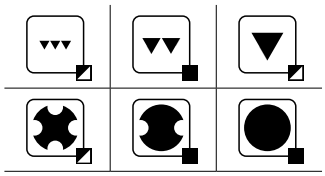


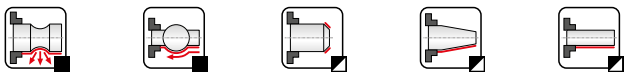
Porta-Ferramentas de Torneamento Exterior Fixação por Alavanca, Ângulo de 63 °, para Pastilhas DN ..

Porta-ferramentas de exterior neutro à direita ou à esquerda fixação por alavanca e ângulo de 63 ° . Adequado para torneamento longitudinal sem esquadria, cónico, de cópia e chanfrar com pastilhas negativas DN .. 15. Disponível com hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PDNNR 2020 K 11	20	20	20	10	125	24	-6	-6	0.39	GI046	PD60
	PDNNR 2525 M 11	25	25	25	12.5	150	30	-6	-6	0.60	GI046	PD60
	PDNNR 2525 M 15	25	25	25	12.5	150	40	-6	-6	0.64	GI044	PD30
	PDNNR 3225 P 15	32	25	32	12.5	170	40	-6	-6	1.05	GI044	PD30
L	PDNNL 2020 K 11	20	20	20	10	125	24	-6	-6	0.40	GI046	PD60
	PDNNL 2525 M 11	25	25	25	12.5	150	30	-6	-6	0.60	GI046	PD60
	PDNNL 2525 M 15	25	25	25	12.5	150	40	-6	-6	0.07	GI044	PD30
	PDNNL 3225 P 15	32	25	32	12.5	170	40	-6	-6	1.05	GI044	PD30

GI044	DN.. 1506..
GI046	DN.. 1104..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD60	PDN 110308	PU 3512	PS 0616	3.0	M 6	16	NT 5153	MT 0912	HXK 2.5

PDXN(RL) EXT

P M K N S H

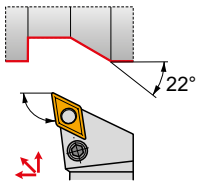
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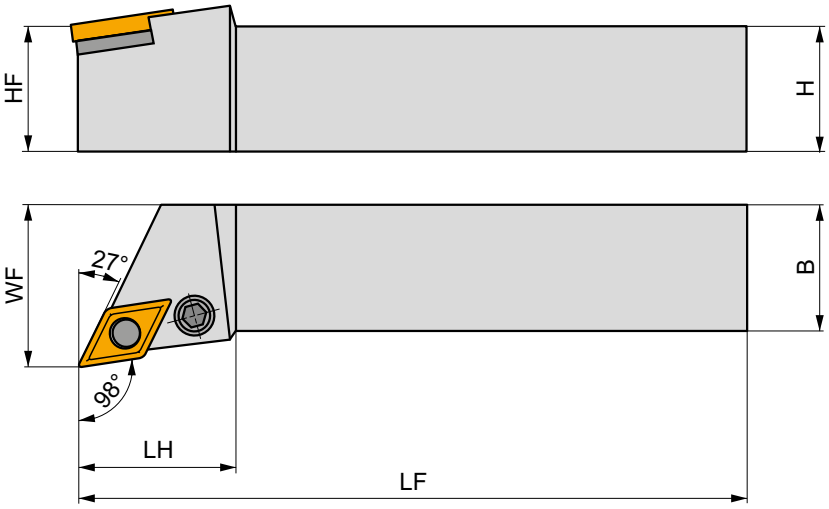
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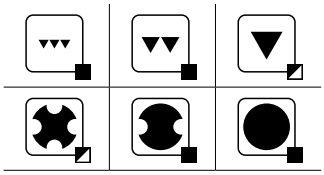


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 98 °, para Pastilhas DN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 98 °. Adequado para torneamento cónico, longitudinal com esquadria, de cópia até 22 ° e chanfrar com pastilhas negativas DN ...15. Disponível em hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PDXNR 2020 K 15**	20	20	20	25	125	40	-6	-6	0.43	GI044	PD31
	PDXNR 2525 M 15	25	25	25	32	150	40	-6	-6	0.73	GI044	PD30
	PDXNR 3225 P 15	32	25	32	32	170	40	-6	-6	0.80	GI044	PD30
L	**PDXNL 2020 K 15**	20	20	20	25	125	40	-6	-6	0.42	GI044	PD31
	PDXNL 2525 M 15	25	25	25	32	150	40	-6	-6	0.71	GI044	PD30
	PDXNL 3225 P 15	32	25	32	32	170	40	-6	-6	0.95	GI044	PD30

GI044	DN.. 1506..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD31	DNU 150308	PU 03	US 40	6.0	M 8x1	20.5	NT 05	MT 05	HXK 4

NEW

C.-DDJN(RL) EXT

P M K N S H

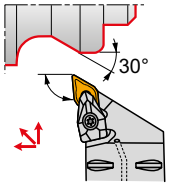
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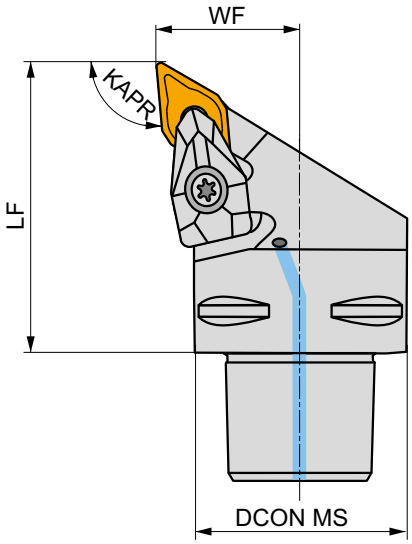
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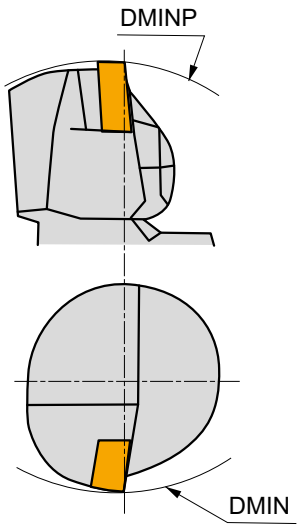


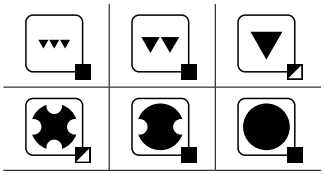
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 93 °, para Pastilhas DN ..

Ferramenta exterior à direita ou à esquerda com fixação dupla, com refrigeração interna e ângulo de corte de 93 °, para torneamento cónico e longitudinal com esquadria, de cópia e de chanfro com pastilhas negativas DN ... 11 ou 15. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 até C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	**C4-DDJNR-27050-11**	40	60	140	27	50	93	-7	-6	✓	0.38	GI046	C-DD11	–
	C4-DDJNR-27055-15	40	110	145	27	55	93	-7	-6	✓	0.43	GI044	C-DD154-1	AT002
	C5-DDJNR-35060-15	50	110	165	35	60	93	-7	-6	✓	0.72	GI044	C-DD154-2	AT002
	C6-DDJNR-45065-15	63	110	190	45	65	93	-7	-6	✓	1.18	GI044	C-DD154-3	AT002
L	**C4-DDJNL-27050-11**	40	60	140	27	50	93	-7	-6	✓	0.39	GI046	C-DD11	–
	C4-DDJNL-27055-15	40	110	145	27	55	93	-7	-6	✓	0.43	GI044	C-DD154-1	AT002
	C5-DDJNL-35060-15	50	110	165	35	60	93	-7	-6	✓	0.72	GI044	C-DD154-2	AT002
	C6-DDJNL-45065-15	63	110	190	45	65	93	-7	-6	✓	1.18	GI044	C-DD154-3	AT002

GI044	DN.. 1506..
GI046	DN.. 1104..

		Nm				
C-DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P	CN 034-01
C-DD154-1	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 034-01
C-DD154-2	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 045-01
C-DD154-3	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 034-02

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–
AT002d	CER DN.N 1504..	DCS 12C4	DDS 266-01
AT002e	CER DN.A 1504..	DCS 12C2	DDS 266-01

NEW

C.-DDNNN EXT

P M K N S H

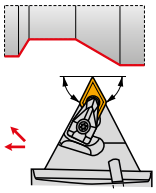
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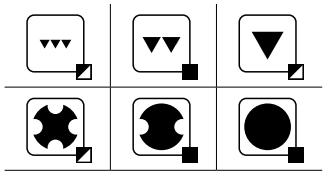
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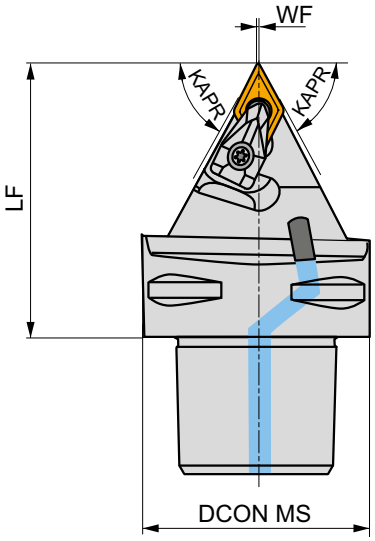


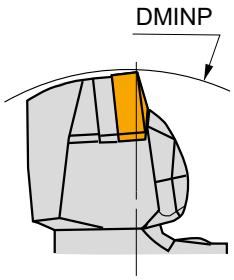
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 62,5 °, para Pastilhas DN …

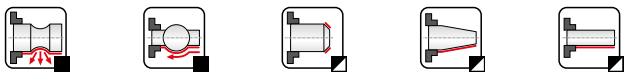
Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla, com refrigeração interna e ângulo de corte de 62,5 °, para torneamento cónico e longitudinal sem esquadria, de cópia e de chanfro com pastilhas negativas DN .. 15. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C5 e C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
N	C5-DDNNN-00060-15	50	165	0.5	60	62.5	-9	-5	✓	0.62	GI044	C-DD154-2	AT002
	C6-DDNNN-00065-15	63	190	0.5	65	62.5	-9	-5	✓	1.06	GI044	C-DD154-2	AT002

GI044	DN.. 1506..

C-DD154-2	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 045-01

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–
AT002d	CER DN.N 1504..	DCS 12C4	DDS 266-01
AT002e	CER DN.A 1504..	DCS 12C2	DDS 266-01

NEW

C.-DDUN(RL) EXT

P M K N S H

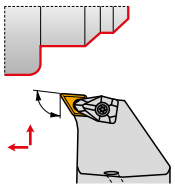
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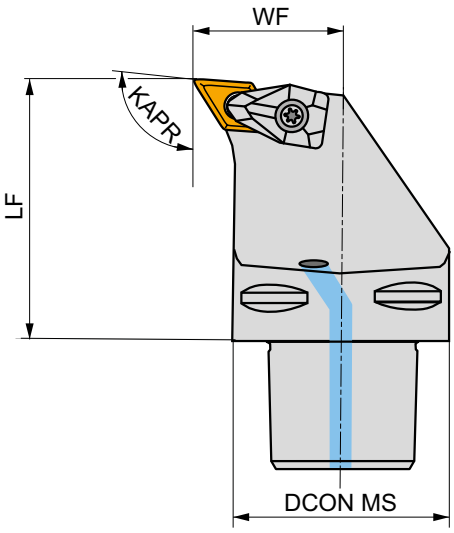
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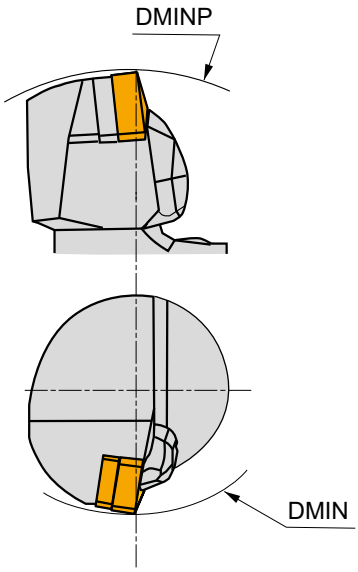


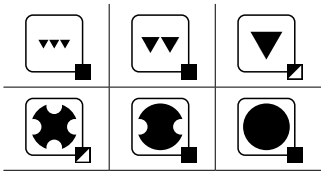
Ferramenta de Ext. de Mudança Rápida PSC, Fixação Dupla, Ângulo de 93 ° (Frontal), p/ Pastilhas DN ..

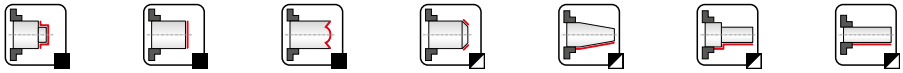
Porta-ferramentas de exterior à direita ou à esquerda de fixação dupla, com refrigeração interna, com ângulo de corte de 93 ° para torneamento frontal com esquadria, de cópia de face, torneamento cónico, torneamento longitudinal e chanfra com pastilhas negativas DN...15. Disponível com acoplamento PSC (Polygon Shank Coupling) haste C5 e C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	**C5-DDUNR-35060-15**	50	110	165	35	60	93	-7	-6	✓	0.82	GI044	C-DD154-3	AT002
	C6-DDUNR-45065-15	63	110	190	45	65	93	-7	-6	✓	1.39	GI044	C-DD154-3	AT002
L	**C5-DDUNL-35060-15**	50	110	165	35	60	93	-7	-6	✓	0.82	GI044	C-DD154-3	AT002

GI044	DN.. 1506..

C-DD154-3	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5	CN 034-02

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–
AT002d	CER DN.N 1504..	DCS 12C4	DDS 266-01
AT002e	CER DN.A 1504..	DCS 12C2	DDS 266-01

DDUN(RL) INT

P M K N S H

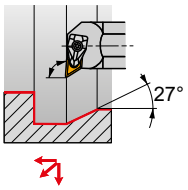
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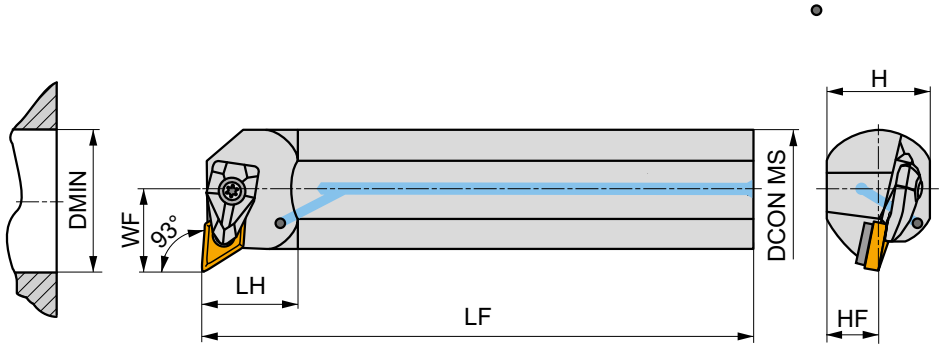
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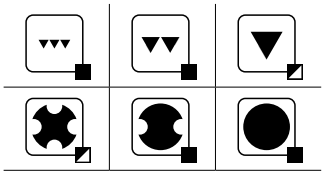


Porta-ferramentas de Interior, Fixação Dupla, Ângulo de 93 °, para Pastilhas DN ..

Porta-ferramentas de interior à direita ou à esquerda com fixação dupla e refrigeração interna, ângulo de corte de 93 para pastilhas DN .. 11 e 15. Diâmetro mínimo de torneamento Ø32 mm. Adequado para uma ampla gama de aplicações de torneamento interno, de cópia de até 27 °. Disponível com hastes de Ø25 até Ø50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg			
R	A25T-DDUNR 11	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNR 11	32	40	22	30	15	300	30	-10	-6	✓	1.68	GI046	DD11	–
	A40T-DDUNR 15	40	50	27	37	18.5	300	36	-11	-6	✓	2.59	GI044	DD154	AT002
	A50U-DDUNR 15	50	63	35	47	23.5	350	39	-8	-6	✓	5.23	GI044	DD154	AT002
L	A25T-DDUNL 11	25	32	17	23	11.5	300	28	-12	-6	✓	0.96	GI046	DD11	–
	A32T-DDUNL 11	32	40	22	30	15	300	30	-10	-6	✓	1.69	GI046	DD11	–
	A40T-DDUNL 15	40	50	27	37	18.5	300	36	-11	-6	✓	2.59	GI044	DD154	AT002
	A50U-DDUNL 15	50	63	35	47	23.5	350	39	-8	-6	✓	5.25	GI044	DD154	AT002

GI044	DN.. 1506..
GI046	DN.. 1104..

		Nm			
DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P
DD154	DCS 12	3.9	DDS 266-02	US 2002-T15P	FLAG T15P/3,5

AT002a	DN.. 1504..	–	DDS 266-01
AT002b	CER DN.N 1506..	DCS 12C4	–
AT002c	CER DN.A 1506..	DCS 12C2	–

PDUN(RL) INT

P M K N S H

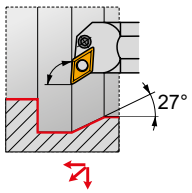
PRAMET

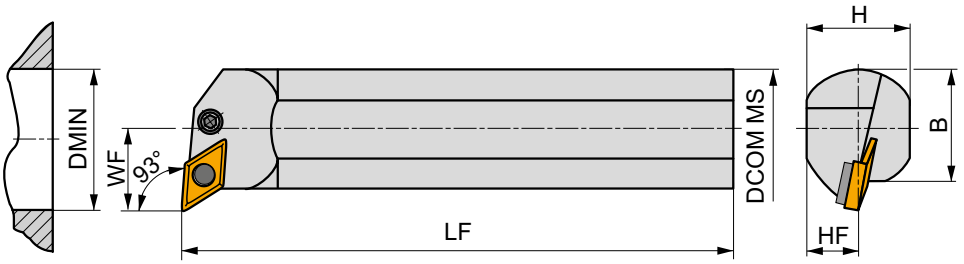
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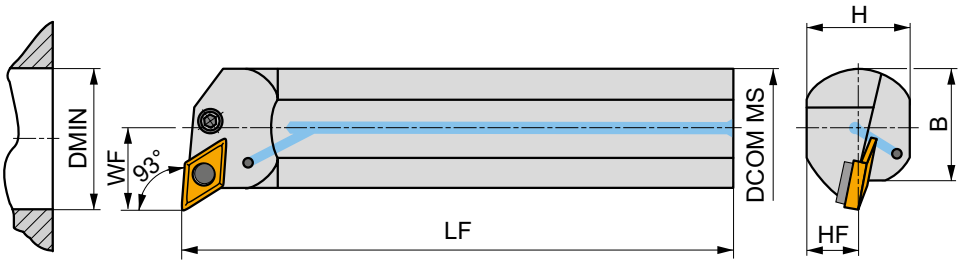


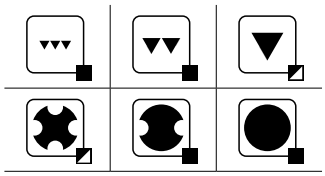
Porta-Ferramentas de Interior, Fixação por Alavanca, Ângulo de 93 °, para Pastilhas DN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por alavanca e refrigeração interna, e ângulo de corte de 93° para pastilhas DN .. 11 e 15. Diâmetro interno mínimo de torneamento Ø32 mm. Para uma ampla gama de aplicações de torneamento interno, incluindo de cópia até 27 °. Disponível com hastes de Ø25 até Ø60 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	S25T-PDUNR 11-A	25	32	17	23	23	300	-12	-6	–	1.10	GI046	PD61
	S32U-PDUNR 11	32	40	22	30	30	350	-12	-6	–	2.10	GI046	PD60
	A32S-PDUNR 15	32	40	32	30	30	250	-12	-6	✓	1.47	GI097	PD33
	A40T-PDUNR 15	40	50	27	38	38	300	-12	-6	✓	2.40	GI097	PD30
	A50U-PDUNR 15	50	63	35	47	48.5	350	-12	-6	✓	4.95	GI097	PD30
	A60V-PDUNR 15	60	80	43	57	58.5	400	-12	-6	✓	8.22	GI097	PD30
L	S25T-PDUNL 11-A	25	32	17	23	23	300	-12	-6	–	1.11	GI046	PD61
	S32U-PDUNL 11	32	40	22	30	30	350	-12	-6	–	2.09	GI046	PD60
	A32S-PDUNL 15	32	40	32	30	30	250	-12	-6	✓	1.47	GI097	PD33
	A40T-PDUNL 15	40	50	27	38	38	300	-12	-6	✓	2.56	GI097	PD30
	A50U-PDUNL 15	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI097	PD30
	A60V-PDUNL 15	60	80	43	57	58.5	400	-12	-6	✓	8.16	GI097	PD30

GI046	DN.. 1104..
GI097	DN.. 1504..

				Nm					
PD30	DNU 150308	PU 03	US 36	6.0	M 8x1	26	NT 05	MT 05	HXK 4
PD33	–	PU 03-A	US 41	6.0	M 8x1	17	NT 15	MT 05	HXK 4
PD60	PDN 110308	PU 3512	PS 0616	3.0	M 6	16	NT 5153	MT 0912	HXK 2.5
PD61	–	PU 3611-A	PS 0512-A	2.0	M 5	12	–	–	HXK 2

NEW

C.-DDUN(RL) INT

P M K N S H

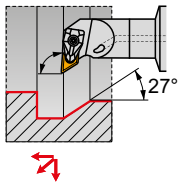
PRAMET

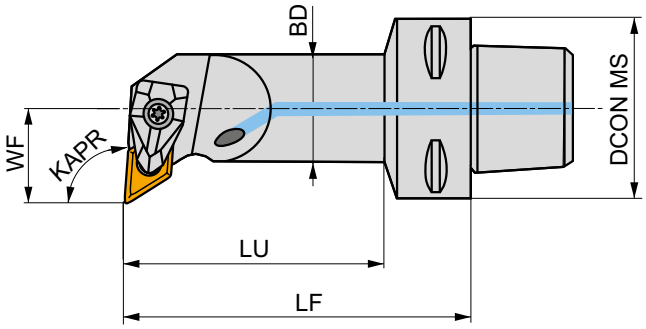
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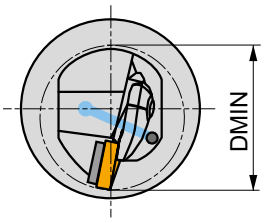


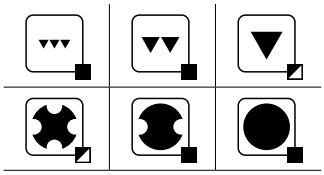
Ferramenta de Interior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 93 °, para Pastilhas DN ..

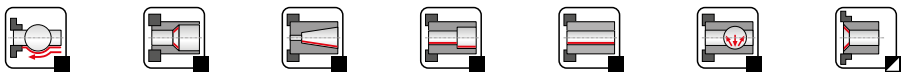
Porta-ferramentas de interior à direita ou à esquerda com fixação dupla e refrigeração interna, e ângulo de corte de 93º para aplicações de torneamento interno incluindo torneamento de cópia até 27 ° com pastilhas DN .. 11. Diâmetro interno mínimo de Ø32mm. Haste poligonal PSC (Polygon Shank Coupling) tamanho C4 com comprimento de torneamento de 68 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-DDUNR-17090-11	40	32	17	90	68	25	93	-12	-6	✓	0.51	GI046	DD11
L	C4-DDUNL-17090-11	40	32	17	90	68	25	93	-12	-6	✓	0.51	GI046	DD11

GI046	DN.. 1104..

DD11	DCS 09	1.7	DDS 267-01	US 2004-T09P	FLAG T09P

KN 16

PASTILHAS DE METAL DURO

KNUX

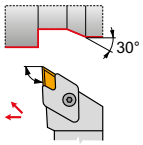


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CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
KNUX 160405L-22	CKJNR 2020 K 16

TORNEAMENTO ISO - EXTERIOR

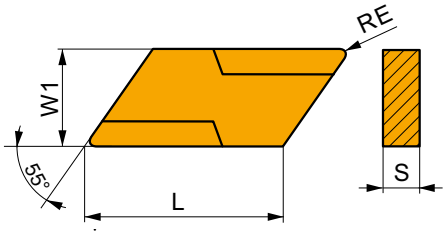
CKJN(RL) EXT

93°	KN..
	 16
 20×20 32×25	
287	284 – 286

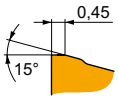
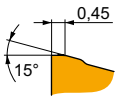
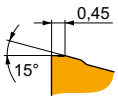
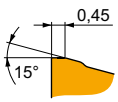
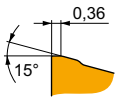
KNUX

PRAMET

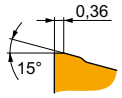
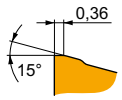
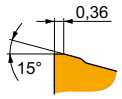
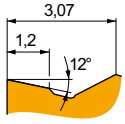
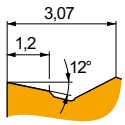
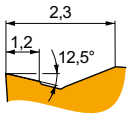
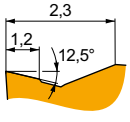
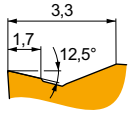
	W1 (mm)	L (mm)	S (mm)
1604	9.525	19.50	4.76



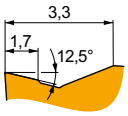
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria L-22 com desenho à esquerda para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																				
KNUX 160405L-22	**T5315**	0.5	190	0.25	2.7	–	–	–	180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	130	0.25	2.7	100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	125	0.25	2.7	95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	155	0.25	2.7	90	0.25	2.7	145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	135	0.25	2.7	80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria R-22 com desenho à direita para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																				
KNUX 160405R-22	**T5315**	0.5	190	0.25	2.7	–	–	–	180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	130	0.25	2.7	100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	125	0.25	2.7	95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	155	0.25	2.7	90	0.25	2.7	145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	135	0.25	2.7	80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria L-22 com desenho à esquerda para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																				
KNUX 160410L-22	**T9335**	1.0	155	0.32	2.7	90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria R-22 com desenho à direita para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																				
KNUX 160410R-22	**T9335**	1.0	155	0.32	2.7	90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria L-32 com desenho à esquerda para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																				
KNUX 160405L-32	**T5315**	0.5	190	0.25	2.7	–	–	–	180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	130	0.25	2.7	100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	125	0.25	2.7	95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	155	0.25	2.7	90	0.25	2.7	145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	135	0.25	2.7	80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria R-32 com desenho à direita para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																	
KNUX 160405R-32	**T5315**	0.5	◪ 190	0.25	2.7	–	–	–	◪ 180	0.25	2.7	–	–	–	–	–	–	–	–	–
	T7325	0.5	◪ 130	0.25	2.7	◪ 100	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.5	◪ 125	0.25	2.7	◪ 95	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 155	0.25	2.7	◪ 90	0.25	2.7	◪ 145	0.25	2.7	–	–	–	–	–	–	–	–	–
	T9335	0.5	■ 135	0.25	2.7	◪ 80	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria L-32 com desenho à esquerda para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																	
KNUX 160410L-32	**T9325**	1.0	■ 175	0.32	2.7	◪ 105	0.29	2.7	◪ 165	0.32	2.7	–	–	–	–	–	–	–	–	–
	T9335	1.0	■ 155	0.32	2.7	◪ 90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria R-32 com desenho à direita para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																	
KNUX 160410R-32	**T9325**	1.0	■ 175	0.32	2.7	◪ 105	0.29	2.7	◪ 165	0.32	2.7	–	–	–	–	–	–	–	–	–
	T9335	1.0	■ 155	0.32	2.7	◪ 90	0.29	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria ER-72 com desenho à direita para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																	
KNUX 160405ER-72	**T5315**	0.5	◪ 250	0.20	2.0	–	–	–	■ 235	0.20	2.0	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 215	0.20	2.0	◪ 125	0.18	2.0	◪ 200	0.20	2.0	–	–	–	◪ 45	0.16	1.6	–	–	–
	T9335	0.5	■ 185	0.20	2.0	◪ 110	0.18	2.0	–	–	–	–	–	–	◪ 40	0.16	1.6	–	–	–
																				
			Geometria EL-72 com desenho à esquerda para operações de maquinação de acabamento a acabamento fino, e cortes contínuos.																	
KNUX 160405EL-72	**T5315**	0.5	◪ 250	0.20	2.0	–	–	–	■ 235	0.20	2.0	–	–	–	–	–	–	–	–	–
	T9325	0.5	■ 215	0.20	2.0	◪ 125	0.18	2.0	◪ 200	0.20	2.0	–	–	–	◪ 45	0.16	1.6	–	–	–
	T9335	0.5	■ 185	0.20	2.0	◪ 110	0.18	2.0	–	–	–	–	–	–	◪ 40	0.16	1.6	–	–	–
																				
			Geometria ER-73 com design à direita para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																	
KNUX 160405SR-73	**6640**	0.5	■ 150	0.25	3.0	◪ 90	0.23	3.0	■ 140	0.25	3.0	–	–	–	–	–	–	–	–	–
KNUX 160410SR-73	**6640**	1.0	■ 150	0.40	3.0	◪ 90	0.36	3.0	■ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	1.0	◪ 235	0.40	3.0	–	–	–	■ 220	0.40	3.0	–	–	–	–	–	–	–	–	–
																				
			Geometria EL-73 com desenho à esquerda para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos.																	
KNUX 160405SL-73	**6640**	0.5	■ 150	0.25	3.0	◪ 90	0.23	3.0	■ 140	0.25	3.0	–	–	–	–	–	–	–	–	–
KNUX 160410SL-73	**6640**	1.0	■ 150	0.40	3.0	◪ 90	0.36	3.0	■ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
																				
			Geometria ER-74 com desenho à direita para operações de acabamento a desbaste, e cortes contínuos.																	
KNUX 160415SR-74	**6640**	1.5	■ 155	0.45	3.0	◪ 90	0.41	3.0	■ 145	0.45	3.0	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria EL-74 com desenho à esquerda para operações de maquinação de acabamento a desbaste, e cortes contínuos.																	
KNUX 160415SL-74	**6640**	1.5	■	155	0.45	3.0	◪	90	0.41	3.0	■	145	0.45	3.0	–	–	–	–	–	–	–	–	–

CKJN(RL) EXT

P M K N S H

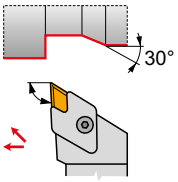
PRAMET

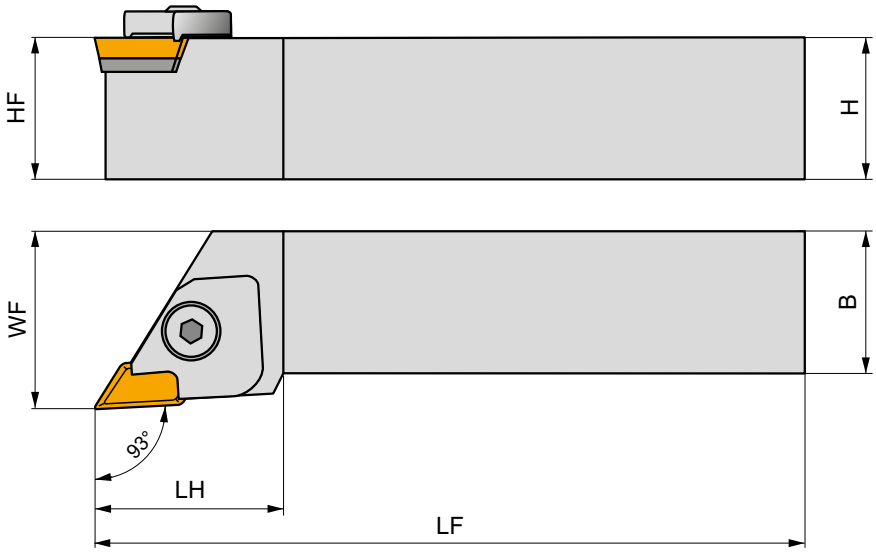
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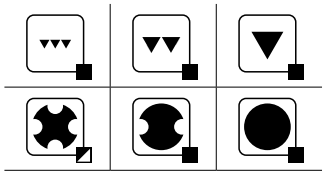


Porta-Ferramentas de Torneamento Exterior, Fixação Superior, Ângulo de 93 °, para Pastilhas KN .. 16

Porta-ferramentas de exterior à direita ou à esquerda com fixação superior e ângulo de corte de 93 °. Adequado para torneamento longitudinal com esquadria, cónico, torneamento de cópia até 30 ° e chanfrar com pastilhas negativas KN ...16. Disponível em hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**CKJNR 2020 K 16**	20	20	20	30	125	34	1	-5	0.43	GI066	R1
	CKJNR 2525 M 16	25	25	25	32	150	34	1	-5	0.70	GI066	R
	CKJNR 3225 P 16	32	25	32	32	170	34	1	-5	1.05	GI066	R
L	**CKJNL 2020 K 16**	20	20	20	30	125	34	1	-5	0.43	GI067	L1
	CKJNL 2525 M 16	25	25	25	32	150	34	1	-5	0.74	GI067	L
	CKJNL 3225 P 16	32	25	32	32	170	34	1	-5	1.06	GI067	L

GI066	KN.X 1604...R
GI067	KN.X 1604...L

						Nm			
L	KNN 190412L	NT 03	–	UP 26	US 83	6.0	PR 07	K 23	HXK 4
L1	KNN 190412L	NT 03	–	UP 26	US 83	6.0	PR 07	K 22	HXK 4
R	KNN 190412R	NT 03	UP 25	–	US 83	6.0	PR 07	K 23	HXK 4
R1	KNN 190412R	NT 03	UP 25	–	US 83	6.0	PR 07	K 22	HXK 4

LN 40/ 50

PASTILHAS DE METAL DURO

LNUX 40, LN.X 50

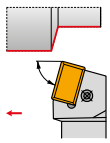


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CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
LNUX **40**-1129003	KHP-LBNR **40**-A

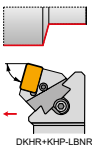
TORNEAMENTO ISO - EXTERIOR

PLBN(RL) EXT

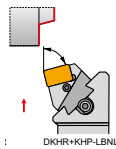
75°	LN..
	 40 50
 60×60	
290	289

TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

KHP-LBNR + DKH(RL)

75°	LN..
	 40
 40×50 60×80	
291, 292	289

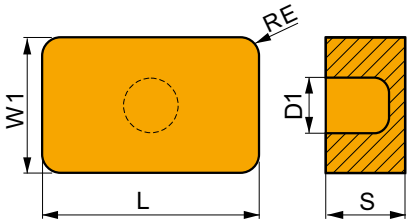
KHP-LBNL + DKH(RL)

75°	LN..
	 40
 40×50 60×80	
291, 292	289

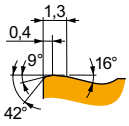
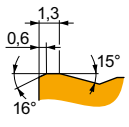
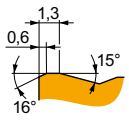
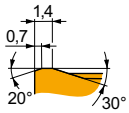
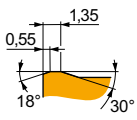
LNUX 40, LN.X 50

PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
40-1	25.200	9.30	40.00	14.00
50-1	25.400	9.30	50.80	14.00
50-2	25.400	6.45	50.80	14.00
5014	25.400	6.35	50.80	14.00



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			Para operações de maquinação de desbaste pesado, e cortes contínuos a interrompidos.																	
LNUX 40-1129002	**T9226**	3.2	45	1.35	25.0	–	–	–	40	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	55	1.35	25.0	–	–	–	50	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9335	3.2	40	1.35	25.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			Para operações de maquinação de desbaste pesado, e cortes contínuos a interrompidos.																	
LNUX 40-1129003	**T9226**	3.2	45	1.35	25.0	–	–	–	40	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	55	1.35	25.0	–	–	–	50	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9335	3.2	40	1.35	25.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			Para operações de maquinação de desbaste pesado, e cortes contínuos a interrompidos.																	
LNUX 50-1275000	**T9226**	3.2	45	1.35	25.0	–	–	–	40	1.35	25.0	–	–	–	–	–	–	–	–	–
	T9325	3.2	55	1.35	25.0	–	–	–	50	1.35	25.0	–	–	–	–	–	–	–	–	–
			Desenho para operações de maquinação de desbaste pesado, e cortes contínuos a interrompidos pesados.																	
LNMX 501432E	**T9335**	3.2	45	1.50	25.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			Para operações de maquinação de desbaste pesado, e cortes contínuos a interrompidos.																	
LNMX 50-2284000	**T9315**	3.2	60	1.50	25.0	–	–	–	55	1.50	25.0	–	–	–	–	–	–	–	–	–

PLBN(RL) EXT

P M K

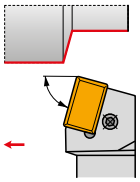
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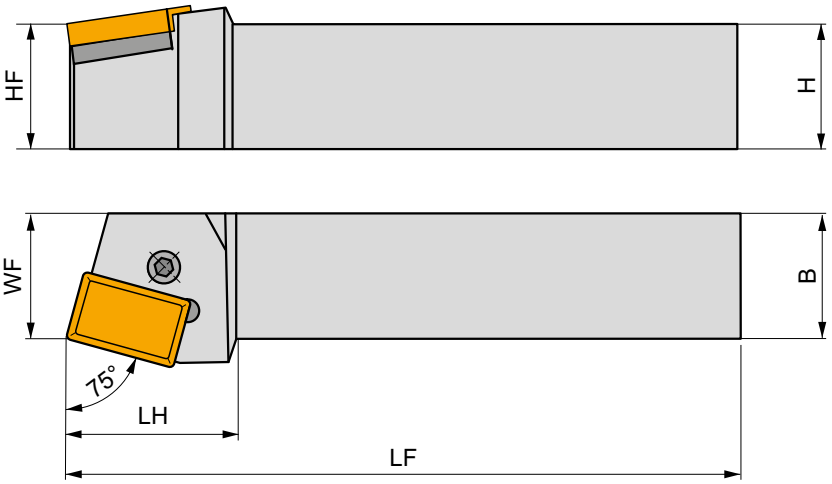
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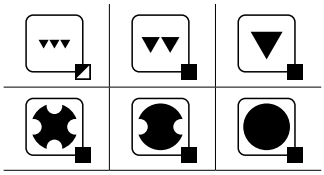


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 75 °, para pastilhas LNUX

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 75 ° para torneamento pesado. Adequado para torneamento longitudinal sem esquadria, torneamento cónico e chanfrar com pastilhas negativas LN ... nos tamanhos 40 e 50. Disponível em haste 60x60 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PLBNR 6060 V 40-A**	60	60	60	60	400	64	-6	-6	13.00	GI102	PL71
	PLBNR 6060 V 50	60	60	60	60	400	70	-6	-6	12.75	GI145	PL72
	PLBNR 6060 V 50-2	60	60	60	60	400	70	-6	-6	11.60	GI291	PL73
L	**PLBNL 6060 V 40-A**	60	60	60	60	400	64	-6	-6	11.14	GI102	PL71
	PLBNL 6060 V 50	60	60	60	60	400	70	-6	-6	13.09	GI145	PL72

GI102	LNUX 40....
GI145	LNUX 50....
GI291	LNMX 50....

				Nm							
PL71	LNX 400632	PU 06	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5	–	–
PL72	LNX 500632	PU 06	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5	–	–
PL73	LNX 500432P	–	–	–	–	–	–	–	–	UP 1515A-T15P	SDR T15P

KHP-LBN(RL)

P M K

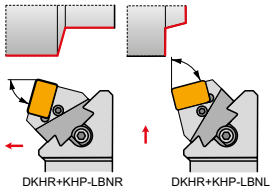
PRAMET

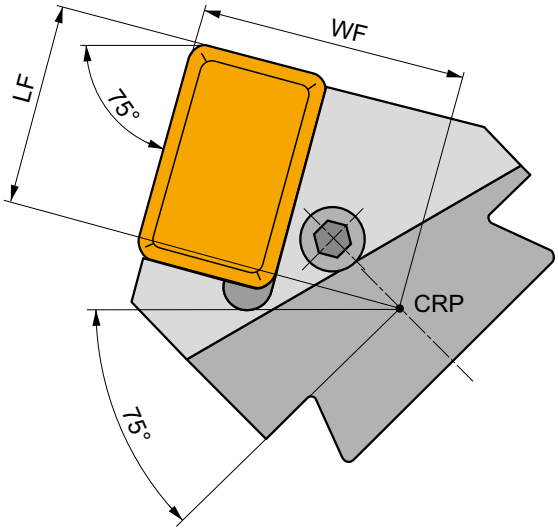
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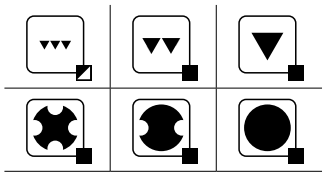


Cartucho Modular para Torneamento KHP, Fixação por Alavanca, Ângulo de 75º, para Pastilhas LNUX

Cartucho de torneamento de fixação por alavanca à direita ou à esquerda com cauda de andorinha, ângulo de corte de 75 °, para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado sem esquadria, torneamento cónico e de chanfro com pastilhas negativas LNUX 40. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.









	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
L	**KHP-LBNR 40-A**	48	36	-6	-6	1.50	GI102	PL71
	KHP-LBNL 40-A	48	36	-6	-6	1.47	GI102	PL71

GI102	LNUX 40....

PL71	LNX 400632	PU 06	PS 12040	8.0 Nm	M 12x1	40	NT 08	MT 08	HXK 5

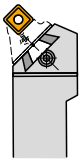
DKH(RL)

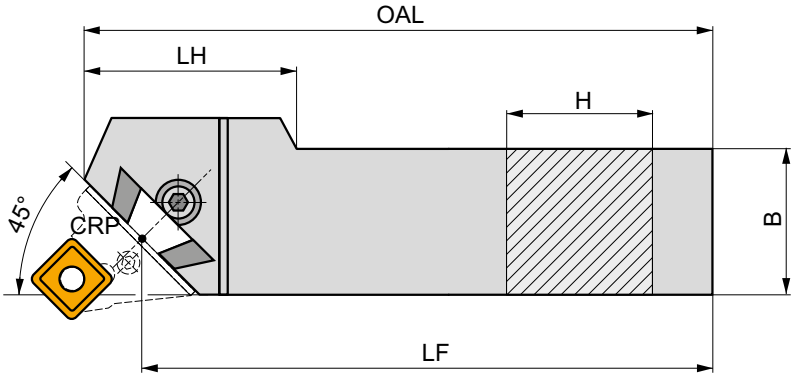
PRAMET

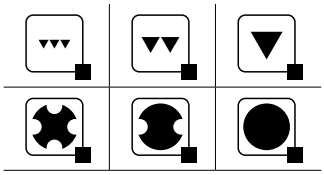


Porta-Ferramentas de Exterior para Cartuchos de Torneamento Pesado KHP/KHS

Porta-ferramentas modular à direita ou à esquerda com cauda de andorinha para cartuchos KHP / KHS. Adequado para aplicações de torneamento pesado. Disponível com hastes de 40x50 até 60x80 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	H (mm)	B (mm)	LF (mm)	OAL (mm)	LH (mm)	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

RN

09/ 12/ 15/ 19/ 25

PASTILHAS DE METAL DURO

RNMG



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PASTILHAS CER

RNGN CER



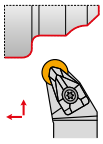
294

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)

Pastilha	Porta-ferramentas
RNMG 120400E-08	DRSNR 2525 M 12

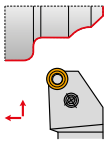
TORNEAMENTO ISO - EXTERIOR

DRSN(RL) EXT



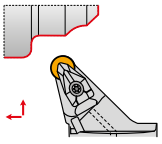
RN..
12
25×25
295 / 294

PRSN(RL) EXT



RN..
12 15 19
25×25 40×40
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C.-DRSN(RL) EXT NEW

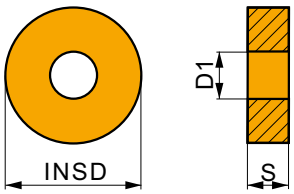


RN..
12
C6
297 / 294

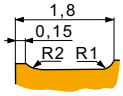
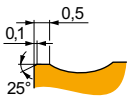
RNMG

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1204	12.700	5.16	4.76
1506	15.875	6.35	6.35
1906	19.050	7.94	6.35
2509	25.400	9.12	9.53



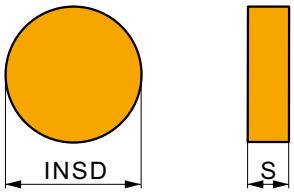
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HFC S																	
Geometria 08 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																				
RNMG 120400E-08	**T5305**	–	195	0.70	3.0	–	–	–	185	0.70	3.0	–	–	–	–	–	–	35	0.15	1.0
	T9315	–	150	0.70	3.0	–	–	–	140	0.70	3.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	–	135	0.70	3.0	–	–	–	125	0.70	3.0	–	–	–	–	–	–	–	–	–
RNMG 150600E-08	**T5305**	–	295	0.70	3.0	–	–	–	280	0.70	3.0	–	–	–	–	–	–	55	0.15	1.0
	T9315	–	225	0.70	3.0	–	–	–	210	0.70	3.0	–	–	–	–	–	–	45	0.15	1.0
	T9325	–	205	0.70	3.0	–	–	–	190	0.70	3.0	–	–	–	–	–	–	–	–	–
RNMG 190600E-08	**T9315**	–	150	0.70	3.0	–	–	–	140	0.70	3.0	–	–	–	–	–	–	30	0.15	1.0
	T9325	–	135	0.70	3.0	–	–	–	125	0.70	3.0	–	–	–	–	–	–	–	–	–
			HFC P																	
Geometria 081 para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																				
RNMG 250900E-081	**T9315**	–	145	0.90	5.0	–	–	–	135	0.90	5.0	–	–	–	–	–	–	25	0.15	1.0
	T9325	–	130	0.90	5.0	–	–	–	120	0.90	5.0	–	–	–	–	–	–	–	–	–

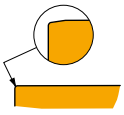
RNGN CER

PRAMET

	INSD (mm)	S (mm)
0903	9.525	3.18
1204	12.700	4.76
1207	12.700	7.94



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		T															
Para operações de maquinação com altas velocidades e cortes contínuos.																				
RNGN 090300 T01020	**TC100**	–	–	–	–	–	–	–	460	0.20	1.2	–	–	–	–	–	–	–	–	–
RNGN 120400 T01020	**TC100**	–	–	–	–	–	–	–	455	0.20	1.5	–	–	–	–	–	–	–	–	–
RNGN 120700 T01020	**TC100**	–	–	–	–	–	–	–	455	0.20	1.5	–	–	–	–	–	–	–	–	–
RNGN 120700 T15015	**TC100**	–	–	–	–	–	–	–	455	0.20	1.5	–	–	–	–	–	–	–	–	–

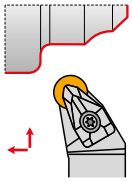
DRSN(RL) EXT

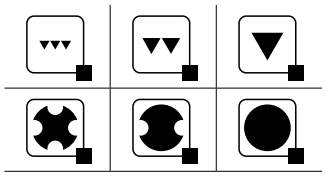
P M K H

PRAMET

D

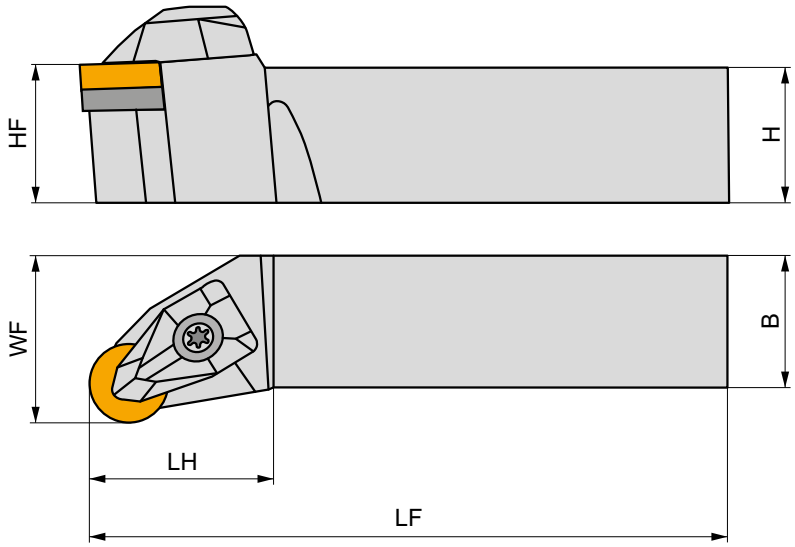


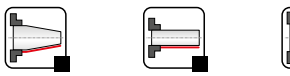




Porta-Ferramentas de Exterior, Fixação Dupla, para Pastilhas RN ...

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla. Adequado para torneamento longitudinal sem esquadria, torneamento de cópia, cónico e de chanfro com pastilhas redondas negativas RN ... 12. Disponível em haste 25x25 mm. Corpo tratado para maior tempo devida útil da ferramenta.





	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**DRSNR 2525 M 12**	25	25	25	32	150	31.6	-6	-6	0.74	GI083	DR12
L	**DRSNL 2525 M 12**	25	25	25	32	150	31.6	-6	-6	0.75	GI083	DR12

GI083	RN.. 120400

DR12	DCS 12	3.9 Nm	DRS 155-02	US 2002-T15P	FLAG T15P/3,5

PRSN(RL) EXT

P M K H

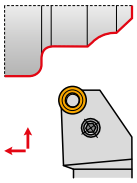
PRAMET

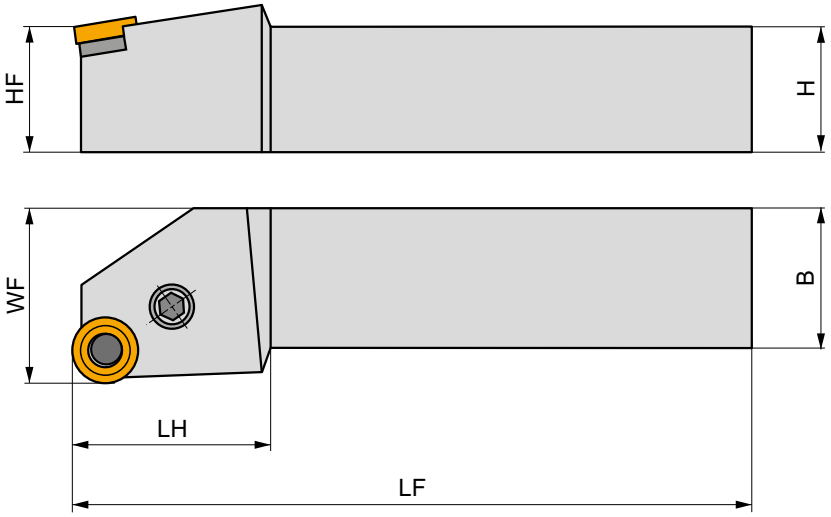
P

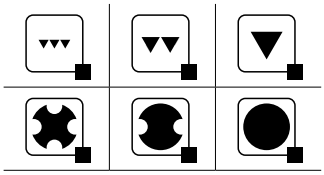


Porta-Ferramentas de Exterior, Fixação por Alavanca, para Pastilhas RN ...

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca. Adequado para torneamento longitudinal, de cópia até 90 °, torneamento cónico e chanfrar com pastilhas redondas negativas RN ... tamanhos 12, 15 e 19. Disponível em hastes de 25x25 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PRSNR 2525 M 12**	25	25	25	32	150	32	-6	-6	0.68	GI083	PR20
	PRSNR 3232 P 15	32	32	32	40	170	38	-6	-6	1.40	GI105	PR40
	PRSNR 4040 R 19	40	40	40	50	200	40	-6	-6	2.49	GI106	PR50
L	**PRSNL 2525 M 12**	25	25	25	32	150	32	-6	-6	0.74	GI083	PR20
	PRSNL 3232 P 15	32	32	32	40	170	38	-6	-6	1.40	GI105	PR40
	PRSNL 4040 R 19	40	40	40	50	200	40	-6	-6	2.48	GI106	PR50

GI083	RN.. 120400
GI105	RN.. 150600
GI106	RN.. 190600

				Nm					
PR20	RNU 120300	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PR40	RNU 150300	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PR50	RNU 190400	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

NEW

C.-DRSN(RL) EXT

P M K H

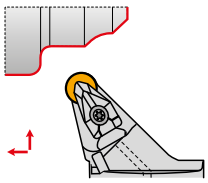
PRAMET

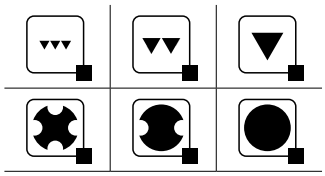
D

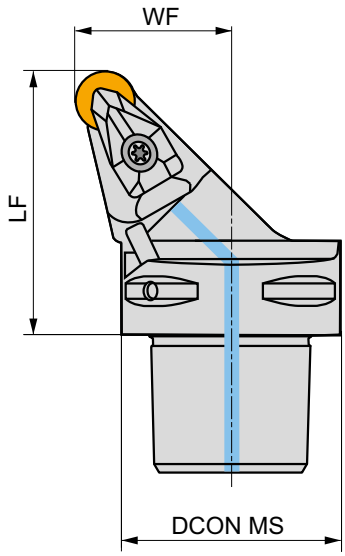


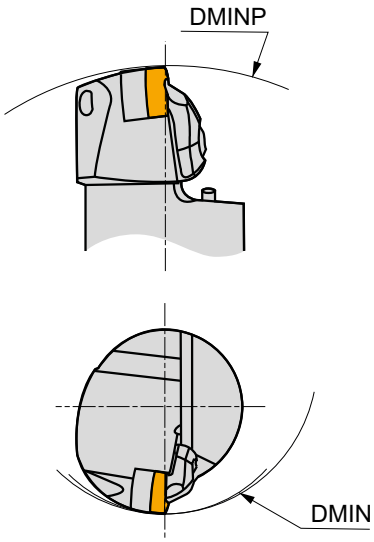
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, para Pastilhas RN ...

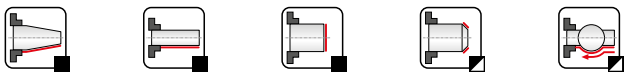
Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla, com refrigeração interna, para torneamento longitudinal sem esquadria, de cópia, torneamento cónico e de chanfro com pastilhas redondas negativas RN .. 12. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanho C6 . Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg			
R	C6-DRSNR-45065-12	63	110	190	45	65	-6	-6	✓	1.11	GI083	C-DR12	–
L	C6-DRSNL-45065-12	63	110	190	45	65	-6	-6	✓	1.10	GI083	C-DR12	–

GI083	RN.. 120400

C-DR12	DCS 12	3.9 Nm	DRS 155-02	US 2002-T15P	FLAG T15P/3,5	CN 045-01

SN

09/ 12/ 15/ 19/ 25

PASTILHAS DE METAL DURO

SNMA



300

SNMG



301

SNMM



307

SNMX



311

PASTILHAS CER

SNGA CER



311

SNGN CER



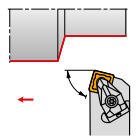
312

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
SNMG **19**0616E-RM	DSDNN 3232 P **19**

TORNEAMENTO ISO - EXTERIOR

DSBN(RL) EXT

75° | SN..



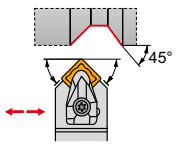
12
15
19

20×20
40×40

313 | 300 – 312

DSDNN EXT

45° | SN..



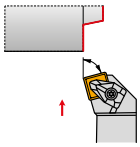
12
15
19
25

20×20
40×40

315 | 300 – 312

DSKN(RL) EXT

75° | SN..



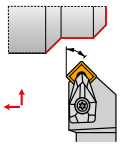
12
19

25×25
32×32

316 | 300 – 312

DSSN(RL) EXT

45° | SN..



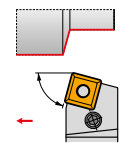
12
15
19

20×20
40×40

317 | 300 – 312

PSBN(RL) EXT

75° | SN..



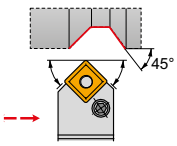
12
15
19
25

20×20
50×50

318 | 300 – 312

PSDNN EXT

45° | SN..



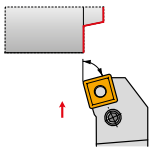
12
15
19
25

20×20
50×50

320 | 300 – 312

PSKN(RL) EXT

75° | SN..



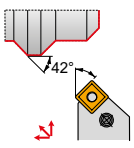
12
15
19
25

20×20
50×50

321 | 300 – 312

PSSN(RL) EXT

45° | SN..



19
25

40×40
50×50

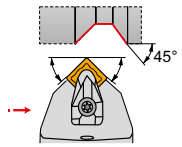
323 | 300 – 312

SN

09/ 12/ 15/ 19/ 25

C.-DSDNN EXT NEW

45°



SN..

12
19

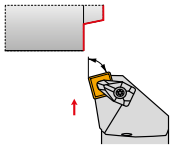
C4
C6

324

300 – 312

C.-DSKN(RL) EXT NEW

75°



SN..

12

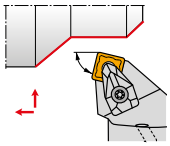
C4

325

300 – 312

C.-DSRN(RL) EXT NEW

75°



SN..

12
19

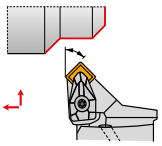
C4
C6

326

300 – 312

C.-DSSN(RL) EXT NEW

45°



SN..

12

C4
C5

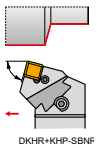
327

300 – 312

TORNEAMENTO ISO - DESBASTE PESADO - EXTERIOR

KHP-SBNR + DKH(RL)

75°



SN..

25

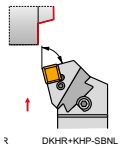
40×50
60×80

328, 330

300 – 312

KHP-SBNL + DKH(RL)

75°



SN..

25

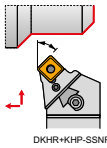
40×50
60×80

328, 330

300 – 312

KHP-SSNR/L + DKH(RL)

45°



SN..

19
25

40×50
60×80

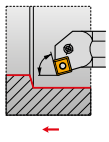
329, 330

300 – 312

TORNEAMENTO ISO - INTERIOR

PSKN(RL) INT

93°



SN..

11
15

32
80

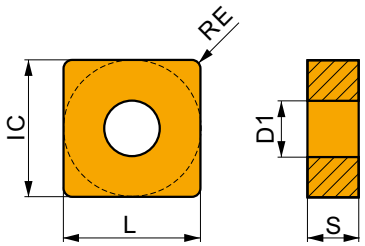
331

300 – 312

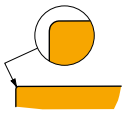
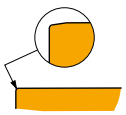
SNMA

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.70	4.76
1506	15.875	6.35	15.875	6.35
1906	19.050	7.94	19.05	6.35
2507	25.400	9.12	25.40	7.94
2509	25.400	9.12	25.40	9.525



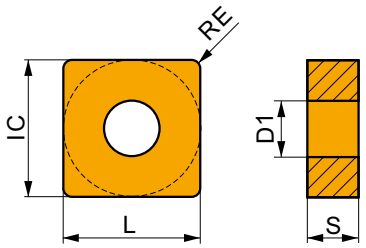
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
SNMA 120408	**T5305**	0.8	–	–	–	–	–	–	230	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	200	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	25	0.15	1.0
SNMA 120412	**T5305**	1.2	–	–	–	–	–	–	205	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	190	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
SNMA 150612	**T5305**	1.2	–	–	–	–	–	–	200	0.30	5.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	185	0.30	5.0	–	–	–	–	–	–	35	0.15	1.0
SNMA 190612	**T5305**	1.2	–	–	–	–	–	–	195	0.30	6.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	180	0.30	6.0	–	–	–	–	–	–	35	0.15	1.0
SNMA 190616	**T5305**	1.6	–	–	–	–	–	–	190	0.40	6.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.6	–	–	–	–	–	–	170	0.40	6.0	–	–	–	–	–	–	35	0.15	1.0
SNMA 250724	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0
	T5315	2.4	–	–	–	–	–	–	90	0.60	8.0	–	–	–	–	–	–	15	0.15	1.0
SNMA 250924	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0
	T5315	2.4	–	–	–	–	–	–	90	0.60	8.0	–	–	–	–	–	–	15	0.15	1.0
																				
			Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																	
SNMA 120412S	**T5305**	1.2	–	–	–	–	–	–	205	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
SNMA 190616S	**T5305**	1.6	–	–	–	–	–	–	195	0.30	6.0	–	–	–	–	–	–	40	0.15	1.0
SNMA 250724S	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0
SNMA 250924S	**T5305**	2.4	–	–	–	–	–	–	95	0.60	8.0	–	–	–	–	–	–	20	0.15	1.0

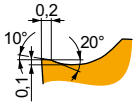
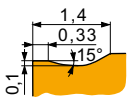
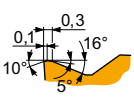
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PRAMET

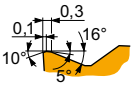
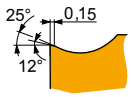
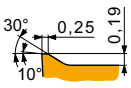
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.70	4.76
1506	15.875	6.35	15.875	6.35
1906	19.050	7.94	19.05	6.35
2507	25.400	9.12	25.40	7.94
2509	25.400	9.12	25.40	9.525



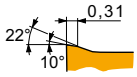
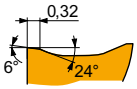
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
SNMG 120404E-FM	**T6310**	0.4	175	0.20	2.1	125	0.18	2.1	140	0.20	2.1	–	–	–	50	0.14	1.7	–	–	–
	T7325	0.4	195	0.20	2.1	150	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T8315	0.4	180	0.20	2.1	105	0.18	2.1	170	0.20	2.1	–	–	–	45	0.14	1.7	–	–	–
	T8330	0.4	175	0.20	2.1	105	0.18	2.1	165	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T8430	0.4	195	0.20	2.1	105	0.18	2.1	160	0.20	2.1	–	–	–	40	0.14	1.7	–	–	–
	T9315	0.4	270	0.20	2.1	–	–	–	255	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	2.1	140	0.18	2.1	225	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
SNMG 120408E-FM	**T7325**	0.8	235	0.20	2.1	180	0.18	2.1	–	–	–	–	–	–	75	0.16	1.7	–	–	–
	T8315	0.8	215	0.20	2.1	125	0.18	2.1	200	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	T8330	0.8	205	0.20	2.1	120	0.18	2.1	190	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	T8430	0.8	235	0.20	2.1	125	0.18	2.1	190	0.20	2.1	–	–	–	50	0.16	1.7	–	–	–
	T9310	0.8	355	0.20	2.1	–	–	–	335	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9315	0.8	320	0.20	2.1	–	–	–	300	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	290	0.20	2.1	170	0.18	2.1	275	0.20	2.1	–	–	–	65	0.16	1.7	–	–	–
SNMG 120412E-FM	**T8330**	1.2	200	0.27	2.1	120	0.24	2.1	190	0.27	2.1	–	–	–	50	0.19	1.7	–	–	–
	T8430	1.2	220	0.27	2.1	120	0.24	2.1	180	0.27	2.1	–	–	–	45	0.19	1.7	–	–	–
	T9315	1.2	300	0.27	2.1	–	–	–	285	0.27	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	270	0.27	2.1	160	0.24	2.1	255	0.27	2.1	–	–	–	60	0.19	1.7	–	–	–
SNMG 120416E-FM	**T8330**	1.6	200	0.32	2.1	120	0.29	2.1	190	0.32	2.1	–	–	–	50	0.22	1.7	–	–	–
	T8430	1.6	220	0.32	2.1	120	0.29	2.1	180	0.32	2.1	–	–	–	45	0.22	1.7	–	–	–
	T9325	1.6	260	0.32	2.1	155	0.29	2.1	245	0.32	2.1	–	–	–	55	0.22	1.7	–	–	–
																				
			Geometria KR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SNMG 120408E-KR	**T5305**	0.8	265	0.35	3.8	–	–	–	250	0.35	3.8	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	235	0.35	3.8	–	–	–	220	0.35	3.8	–	–	–	–	–	–	45	0.15	1.0
SNMG 120412E-KR	**T5305**	1.2	265	0.40	3.8	–	–	–	250	0.40	3.8	–	–	–	–	–	–	50	0.15	1.0
	T5315	1.2	240	0.40	3.8	–	–	–	225	0.40	3.8	–	–	–	–	–	–	45	0.15	1.0
																				
			Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
SNMG 120408E-M	**T5305**	0.8	290	0.32	2.1	–	–	–	275	0.32	2.1	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	260	0.32	2.1	–	–	–	245	0.32	2.1	–	–	–	–	–	–	50	0.15	1.0
	T9310	0.8	255	0.32	2.1	–	–	–	240	0.32	2.1	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.8	235	0.32	2.1	–	–	–	220	0.32	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	210	0.32	2.1	–	–	–	195	0.32	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.8	185	0.32	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

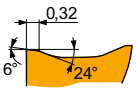
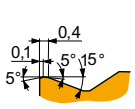
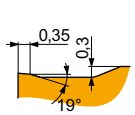
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			 Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
SNMG 120412E-M	**T9315**	1.2	■ 230	0.40	2.1	–	–	–	◪ 215	0.40	2.1	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 200	0.40	2.1	–	–	–	◪ 190	0.40	2.1	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 175	0.40	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120416E-M	**T9325**	1.6	■ 210	0.40	2.1	–	–	–	◪ 195	0.40	2.1	–	–	–	–	–	–	–	–	–
SNMG 150612E-M	**T9315**	1.2	■ 220	0.40	3.4	–	–	–	◪ 205	0.40	3.4	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 195	0.40	3.4	–	–	–	◪ 185	0.40	3.4	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 170	0.40	3.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190612E-M	**T9315**	1.2	■ 215	0.40	4.0	–	–	–	◪ 200	0.40	4.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 190	0.40	4.0	–	–	–	◪ 180	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 165	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190616E-M	**T9315**	1.6	■ 225	0.40	4.0	–	–	–	◪ 210	0.40	4.0	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.6	■ 200	0.40	4.0	–	–	–	◪ 190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 175	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			 Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																	
SNMG 120404E-NF	**T6310**	0.4	■ 185	0.17	1.7	■ 130	0.15	1.7	◪ 145	0.17	1.7	◪ 555	0.20	1.7	◪ 55	0.14	1.4	–	–	–
	T7325	0.4	◪ 210	0.18	1.7	■ 160	0.16	1.7	–	–	–	–	–	–	◪ 65	0.16	1.4	–	–	–
	T7335	0.4	◪ 205	0.18	1.7	■ 155	0.16	1.7	–	–	–	–	–	–	◪ 65	0.16	1.4	–	–	–
	T8330	0.4	■ 185	0.17	1.7	■ 110	0.15	1.7	◪ 175	0.17	1.7	◪ 555	0.20	1.7	◪ 45	0.14	1.4	–	–	–
	T8430	0.4	■ 210	0.17	1.7	■ 115	0.15	1.7	◪ 175	0.17	1.7	◪ 585	0.20	1.7	◪ 45	0.14	1.4	–	–	–
	T9315	0.4	■ 300	0.17	1.7	–	–	–	◪ 285	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 260	0.18	1.7	■ 155	0.16	1.7	◪ 245	0.18	1.7	–	–	–	◪ 55	0.16	1.4	–	–	–
SNMG 120408E-NF	**HF7**	0.8	–	–	–	◪ 120	0.17	1.7	◪ 190	0.19	1.7	◪ 600	0.23	1.7	–	–	–	–	–	–
	T6310	0.8	■ 210	0.19	1.7	■ 150	0.17	1.7	◪ 165	0.19	1.7	◪ 630	0.23	1.7	◪ 60	0.15	1.4	–	–	–
	T7325	0.8	◪ 245	0.19	1.7	■ 190	0.17	1.7	–	–	–	–	–	–	◪ 75	0.15	1.4	–	–	–
	T7335	0.8	◪ 240	0.19	1.7	■ 185	0.17	1.7	–	–	–	–	–	–	◪ 75	0.15	1.4	–	–	–
	T8315	0.8	◪ 230	0.19	1.7	■ 135	0.17	1.7	◪ 215	0.19	1.7	◪ 690	0.23	1.7	◪ 55	0.15	1.4	–	–	–
	T8330	0.8	■ 210	0.19	1.7	■ 125	0.17	1.7	◪ 195	0.19	1.7	◪ 630	0.23	1.7	◪ 50	0.15	1.4	–	–	–
	T8430	0.8	■ 250	0.19	1.7	■ 135	0.17	1.7	◪ 205	0.19	1.7	◪ 690	0.23	1.7	◪ 50	0.15	1.4	–	–	–
	T9315	0.8	■ 340	0.19	1.7	–	–	–	◪ 320	0.19	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 300	0.19	1.7	■ 180	0.17	1.7	◪ 285	0.19	1.7	–	–	–	◪ 65	0.15	1.4	–	–	–
			 Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, em cortes contínuos.																	
SNMG 120408E-NM	**T7325**	0.8	◪ 225	0.25	2.1	■ 175	0.23	2.1	–	–	–	–	–	–	■ 70	0.20	1.7	–	–	–
	T7335	0.8	◪ 220	0.25	2.1	■ 170	0.23	2.1	–	–	–	–	–	–	■ 70	0.20	1.7	–	–	–
	T8315	0.8	◪ 215	0.25	2.1	■ 125	0.23	2.1	–	–	–	◪ 645	0.30	2.1	◪ 50	0.20	1.7	–	–	–
	T8330	0.8	■ 205	0.25	2.1	■ 120	0.23	2.1	–	–	–	◪ 615	0.30	2.1	◪ 50	0.20	1.7	–	–	–
	T8430	0.8	■ 225	0.25	2.1	■ 120	0.23	2.1	–	–	–	◪ 615	0.30	2.1	◪ 45	0.20	1.7	–	–	–
	T9325	0.8	■ 275	0.25	2.1	■ 165	0.23	2.1	–	–	–	–	–	–	◪ 60	0.20	1.7	–	–	–
SNMG 120412E-NM	**T7325**	1.2	◪ 225	0.30	2.1	■ 175	0.27	2.1	–	–	–	–	–	–	■ 70	0.24	1.7	–	–	–
	T7335	1.2	◪ 220	0.30	2.1	■ 170	0.27	2.1	–	–	–	–	–	–	■ 70	0.24	1.7	–	–	–
	T8315	1.2	◪ 215	0.30	2.1	■ 125	0.27	2.1	–	–	–	◪ 645	0.36	2.1	◪ 50	0.24	1.7	–	–	–
	T9325	1.2	■ 270	0.30	2.1	■ 160	0.27	2.1	–	–	–	–	–	–	◪ 60	0.24	1.7	–	–	–

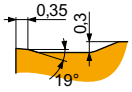
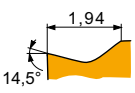
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
SNMG 120408E-NMR	**T6310**	0.8	■	155	0.35	2.6	■	110	0.32	2.6	–	–	–	–	–	–	■	45	0.25	2.1	–	–	–
	T7325	0.8	◪	175	0.35	2.6	■	135	0.32	2.6	–	–	–	–	–	–	■	55	0.25	2.1	–	–	–
	T7335	0.8	◪	165	0.35	2.6	■	125	0.32	2.6	–	–	–	–	–	–	■	50	0.25	2.1	–	–	–
	T8330	0.8	■	155	0.35	2.6	■	90	0.32	2.6	–	–	–	–	–	–	◪	35	0.25	2.1	–	–	–
	T8430	0.8	■	165	0.35	2.6	■	90	0.32	2.6	–	–	–	–	–	–	◪	35	0.25	2.1	–	–	–
	T9315	0.8	■	225	0.35	2.6		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	0.8	■	200	0.35	2.6	■	120	0.32	2.6	–	–	–	–	–	–	◪	45	0.25	2.1	–	–	–
SNMG 120412E-NMR	**T6310**	1.2	■	160	0.40	2.6	■	115	0.36	2.6	–	–	–	–	–	–	■	45	0.28	2.1	–	–	–
	T7325	1.2	◪	175	0.40	2.6	■	135	0.36	2.6	–	–	–	–	–	–	■	55	0.28	2.1	–	–	–
	T7335	1.2	◪	165	0.40	2.6	■	125	0.36	2.6	–	–	–	–	–	–	■	50	0.28	2.1	–	–	–
	T9315	1.2	■	225	0.40	2.6		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.2	■	200	0.40	2.6	■	120	0.36	2.6	–	–	–	–	–	–	◪	45	0.28	2.1	–	–	–
SNMG 120416E-NMR	**T7325**	1.6	◪	180	0.45	2.6	■	140	0.41	2.6	–	–	–	–	–	–	■	55	0.32	2.1	–	–	–
	T7335	1.6	◪	170	0.45	2.6	■	130	0.41	2.6	–	–	–	–	–	–	■	55	0.32	2.1	–	–	–
	T9325	1.6	■	200	0.45	2.6	■	120	0.41	2.6	–	–	–	–	–	–	◪	45	0.32	2.1	–	–	–
SNMG 150612E-NMR	**T6310**	1.2	■	150	0.40	3.8	■	105	0.36	3.8	–	–	–	–	–	–	■	45	0.28	3.0	–	–	–
	T7325	1.2	◪	170	0.40	3.8	■	130	0.36	3.8	–	–	–	–	–	–	■	55	0.28	3.0	–	–	–
	T9315	1.2	■	215	0.40	3.8		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.2	■	190	0.40	3.8	■	110	0.36	3.8	–	–	–	–	–	–	◪	40	0.28	3.0	–	–	–
SNMG 190612E-NMR	**T6310**	1.2	■	145	0.40	5.2	■	100	0.36	5.2	–	–	–	–	–	–	■	40	0.28	4.2	–	–	–
	T7325	1.2	◪	165	0.40	5.2	■	125	0.36	5.2	–	–	–	–	–	–	■	50	0.28	4.2	–	–	–
	T7335	1.2	◪	155	0.40	5.2	■	120	0.36	5.2	–	–	–	–	–	–	■	50	0.28	4.2	–	–	–
	T9315	1.2	■	210	0.40	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.2	■	185	0.40	5.2	■	110	0.36	5.2	–	–	–	–	–	–	◪	40	0.28	4.2	–	–	–
SNMG 190616E-NMR	**T6310**	1.6	■	150	0.45	5.2	■	105	0.41	5.2	–	–	–	–	–	–	■	45	0.32	4.2	–	–	–
	T7325	1.6	◪	170	0.45	5.2	■	130	0.41	5.2	–	–	–	–	–	–	■	55	0.32	4.2	–	–	–
	T7335	1.6	◪	155	0.45	5.2	■	120	0.41	5.2	–	–	–	–	–	–	■	50	0.32	4.2	–	–	–
	T9315	1.6	■	205	0.45	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
	T9325	1.6	■	185	0.45	5.2	■	110	0.41	5.2	–	–	–	–	–	–	◪	40	0.32	4.2	–	–	–
																				
Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																				
SNMG 120408-NRM	**T7325**	0.8	◪	175	0.35	2.6	■	135	0.32	2.6	–	–	–	–	–	–	■	55	0.28	2.1	–	–	–
	T7335	0.8	◪	165	0.35	2.6	■	125	0.32	2.6	–	–	–	–	–	–	■	50	0.28	2.1	–	–	–
	T9315	0.8	■	225	0.35	2.6		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 120412-NRM	**T7325**	1.2	◪	175	0.40	3.0	■	135	0.36	3.0	–	–	–	–	–	–	■	55	0.28	2.4	–	–	–
	T7335	1.2	◪	165	0.40	3.0	■	125	0.36	3.0	–	–	–	–	–	–	■	50	0.28	2.4	–	–	–
	T9315	1.2	■	220	0.40	3.0		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 150612-NRM	**T7325**	1.2	◪	170	0.40	4.0	■	130	0.36	4.0	–	–	–	–	–	–	■	55	0.32	3.2	–	–	–
	T7335	1.2	◪	160	0.40	4.0	■	120	0.36	4.0	–	–	–	–	–	–	■	50	0.32	3.2	–	–	–
	T9315	1.2	■	215	0.40	4.0		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 150616-NRM	**T7325**	1.6	◪	170	0.45	5.0	■	130	0.41	5.0	–	–	–	–	–	–	■	55	0.36	4.0	–	–	–
	T7335	1.6	◪	155	0.45	5.0	■	120	0.41	5.0	–	–	–	–	–	–	■	50	0.36	4.0	–	–	–
	T9315	1.6	■	205	0.45	5.0		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 190612-NRM	**T7325**	1.2	◪	165	0.40	5.2	■	125	0.36	5.2	–	–	–	–	–	–	■	50	0.32	4.2	–	–	–
	T7335	1.2	◪	155	0.40	5.2	■	120	0.36	5.2	–	–	–	–	–	–	■	50	0.32	4.2	–	–	–
	T9315	1.2	■	210	0.40	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 190616-NRM	**T7325**	1.6	◪	170	0.45	5.2	■	130	0.41	5.2	–	–	–	–	–	–	■	55	0.36	4.2	–	–	–
	T7335	1.6	◪	155	0.45	5.2	■	120	0.41	5.2	–	–	–	–	–	–	■	50	0.36	4.2	–	–	–
	T9315	1.6	■	205	0.45	5.2		–	–	–	–	–	–	–	–	–		–	–	–	–	–	–
SNMG 250724-NRM	**T7325**	2.4	◪	105	0.65	9.0	■	80	0.59	9.0	–	–	–	–	–	–	■	30	0.46	7.2	–	–	–
	T7335	2.4	◪	100	0.65	9.0	■	75	0.59	9.0	–	–	–	–	–	–	■	30	0.46	7.2	–	–	–
	T9315	2.4	■	120	0.65	9.0		–	–	–	◪	110	0.65	9.0	–	–	–	–	–	–	–	–	–

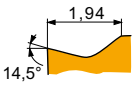
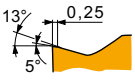
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																				
SNMG 250924-NRM	**T7325**	2.4	◪ 105	0.70	9.0	■ 80	0.63	9.0	–	–	–	–	–	–	■ 30	0.49	7.2	–	–	–
	T7335	2.4	◪ 95	0.70	9.0	■ 70	0.63	9.0	–	–	–	–	–	–	■ 30	0.49	7.2	–	–	–
	T9315	2.4	■ 120	0.70	9.0	–	–	–	◪ 110	0.70	9.0	–	–	–	–	–	–	–	–	–
																				
Geometria R para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
SNMG 120408E-R	**6640**	0.8	■ 145	0.40	3.8	–	–	–	■ 135	0.40	3.8	–	–	–	–	–	–	–	–	–
	T5305	0.8	◪ 250	0.40	3.8	–	–	–	■ 235	0.40	3.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9315	0.8	■ 200	0.40	3.8	–	–	–	◪ 190	0.40	3.8	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	0.8	■ 180	0.40	3.8	–	–	–	◪ 170	0.40	3.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 155	0.40	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120412E-R	**T5305**	1.2	◪ 255	0.45	3.8	–	–	–	■ 240	0.45	3.8	–	–	–	–	–	–	◪ 50	0.15	1.0
	T9310	1.2	■ 220	0.45	3.8	–	–	–	◪ 205	0.45	3.8	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 180	0.45	3.8	–	–	–	◪ 170	0.45	3.8	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 160	0.45	3.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120416E-R	**T9315**	1.6	■ 205	0.50	3.8	–	–	–	◪ 190	0.50	3.8	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.6	■ 185	0.50	3.8	–	–	–	◪ 175	0.50	3.8	–	–	–	–	–	–	–	–	–
SNMG 150612E-R	**T5305**	1.2	◪ 250	0.45	4.5	–	–	–	■ 235	0.45	4.5	–	–	–	–	–	–	◪ 50	0.15	1.0
	T5315	1.2	◪ 230	0.45	4.5	–	–	–	■ 215	0.45	4.5	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9315	1.2	■ 200	0.45	4.5	–	–	–	◪ 190	0.45	4.5	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9325	1.2	■ 180	0.45	4.5	–	–	–	◪ 170	0.45	4.5	–	–	–	–	–	–	–	–	–
SNMG 150616E-R	**T5315**	1.6	◪ 230	0.50	4.5	–	–	–	■ 215	0.50	4.5	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.6	■ 180	0.50	4.5	–	–	–	◪ 170	0.50	4.5	–	–	–	–	–	–	–	–	–
SNMG 190612E-R	**6640**	1.2	■ 140	0.45	6.0	–	–	–	■ 130	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	■ 210	0.45	6.0	–	–	–	◪ 195	0.45	6.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.2	■ 195	0.45	6.0	–	–	–	◪ 185	0.45	6.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 175	0.45	6.0	–	–	–	◪ 165	0.45	6.0	–	–	–	–	–	–	–	–	–
SNMG 190616E-R	**T9310**	1.6	■ 205	0.50	6.0	–	–	–	◪ 190	0.50	6.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T9315	1.6	■ 195	0.50	6.0	–	–	–	◪ 185	0.50	6.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.6	■ 175	0.50	6.0	–	–	–	◪ 165	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 150	0.50	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
SNMG 120408E-RM	**T5305**	0.8	◪ 290	0.40	4.0	–	–	–	◪ 275	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 260	0.40	4.0	–	–	–	◪ 245	0.40	4.0	–	–	–	–	–	–	–	–	–
	T6310	0.8	■ 165	0.40	4.0	◪ 115	0.36	4.0	◪ 130	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 185	0.40	4.0	◪ 140	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 175	0.40	4.0	◪ 135	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 175	0.40	4.0	◪ 105	0.36	4.0	◪ 165	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	■ 165	0.40	4.0	◪ 95	0.36	4.0	◪ 155	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	■ 175	0.40	4.0	◪ 95	0.36	4.0	◪ 140	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 250	0.40	4.0	–	–	–	◪ 235	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 235	0.40	4.0	–	–	–	◪ 220	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 210	0.40	4.0	◪ 125	0.36	4.0	◪ 195	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 180	0.40	4.0	◪ 105	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SNMG 120412E-RM	**T5305**	1.2	295	0.45	4.0	–	–	–	280	0.45	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	265	0.45	4.0	–	–	–	250	0.45	4.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	165	0.45	4.0	115	0.41	4.0	130	0.45	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	190	0.45	4.0	145	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	180	0.45	4.0	140	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	250	0.45	4.0	–	–	–	235	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	235	0.45	4.0	–	–	–	220	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	210	0.45	4.0	125	0.41	4.0	195	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	185	0.45	4.0	110	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 120416E-RM	**T5315**	1.6	270	0.50	4.0	–	–	–	255	0.50	4.0	–	–	–	–	–	–	–	–	–
	T7335	1.6	180	0.50	4.0	140	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.6	170	0.50	4.0	100	0.45	4.0	160	0.50	4.0	–	–	–	–	–	–	–	–	–
	T8430	1.6	175	0.50	4.0	95	0.45	4.0	140	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	230	0.50	4.0	–	–	–	215	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	215	0.50	4.0	125	0.45	4.0	200	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	180	0.50	4.0	105	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 150612E-RM	**T5315**	1.2	255	0.45	5.0	–	–	–	240	0.45	5.0	–	–	–	–	–	–	–	–	–
	T6310	1.2	165	0.45	5.0	115	0.41	5.0	130	0.45	5.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	185	0.45	5.0	140	0.41	5.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	175	0.45	5.0	135	0.41	5.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	245	0.45	5.0	–	–	–	230	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	225	0.45	5.0	–	–	–	210	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	205	0.45	5.0	120	0.41	5.0	190	0.45	5.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	180	0.45	5.0	105	0.41	5.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 150616E-RM	**T7335**	1.6	175	0.50	5.0	135	0.45	5.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.6	230	0.50	5.0	–	–	–	215	0.50	5.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	205	0.50	5.0	120	0.45	5.0	190	0.50	5.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	180	0.50	5.0	105	0.45	5.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190612E-RM	**T5305**	1.2	275	0.45	7.0	–	–	–	260	0.45	7.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	250	0.45	7.0	–	–	–	235	0.45	7.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	180	0.45	7.0	140	0.41	7.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	165	0.45	7.0	125	0.41	7.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.2	240	0.45	7.0	–	–	–	225	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	220	0.45	7.0	–	–	–	205	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	195	0.45	7.0	115	0.41	7.0	185	0.45	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	175	0.45	7.0	105	0.41	7.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 190616E-RM	**T5305**	1.6	285	0.50	7.0	–	–	–	270	0.50	7.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	250	0.50	7.0	–	–	–	235	0.50	7.0	–	–	–	–	–	–	–	–	–
	T6310	1.6	160	0.50	7.0	115	0.45	7.0	125	0.50	7.0	–	–	–	–	–	–	–	–	–
	T7335	1.6	170	0.50	7.0	130	0.45	7.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	1.6	240	0.50	7.0	–	–	–	225	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	220	0.50	7.0	–	–	–	205	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	200	0.50	7.0	120	0.45	7.0	190	0.50	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	175	0.50	7.0	105	0.45	7.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMG 250924E-RM	**T7325**	2.4	110	0.80	12.0	85	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	2.4	105	0.80	12.0	80	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9226	2.4	95	0.80	12.0	55	0.72	12.0	90	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	125	0.80	12.0	–	–	–	115	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	110	0.80	12.0	65	0.72	12.0	100	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	90	0.80	12.0	50	0.72	12.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.																	
SNMG 120404E-SF	**T7325**	0.4	215	0.17	1.0	165	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T9325	0.4	265	0.17	1.0	155	0.15	1.0	250	0.17	1.0	–	–	–	55	0.15	0.8	–	–	–

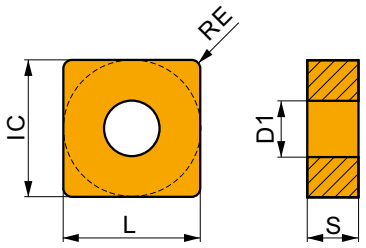
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			  																	
			Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.																	
SNMG 120408E-SF	**H07**	0.8	–	–	–	105	0.18	1.0	165	0.20	1.0	525	0.24	1.0	50	0.14	0.8	–	–	–
	T6310	0.8	210	0.20	1.0	150	0.18	1.0	165	0.20	1.0	630	0.24	1.0	60	0.14	0.8	40	0.15	1.0
	T7325	0.8	245	0.20	1.0	190	0.18	1.0	–	–	–	–	–	–	75	0.16	0.8	–	–	–
	T7335	0.8	235	0.20	1.0	180	0.18	1.0	–	–	–	–	–	–	75	0.16	0.8	–	–	–
	T8315	0.8	225	0.20	1.0	135	0.18	1.0	210	0.20	1.0	675	0.24	1.0	55	0.14	0.8	45	0.15	1.0
	T8330	0.8	210	0.20	1.0	125	0.18	1.0	195	0.20	1.0	630	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8430	0.8	245	0.20	1.0	135	0.18	1.0	200	0.20	1.0	675	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T9325	0.8	295	0.20	1.0	175	0.18	1.0	280	0.20	1.0	–	–	–	65	0.16	0.8	–	–	–
SNMG 120412E-SF	**T6310**	1.2	200	0.25	1.5	140	0.23	1.5	160	0.25	1.5	600	0.30	1.5	60	0.18	1.2	40	0.15	1.0
	T7325	1.2	230	0.25	1.5	175	0.23	1.5	–	–	–	–	–	–	70	0.18	1.2	–	–	–
	T8330	1.2	200	0.25	1.5	120	0.23	1.5	190	0.25	1.5	600	0.30	1.5	50	0.18	1.2	40	0.15	1.0
	T8430	1.2	225	0.25	1.5	120	0.23	1.5	185	0.25	1.5	615	0.30	1.5	45	0.18	1.2	35	0.15	1.0
			 																	
			Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
SNMG 120408E-SM	**T6310**	0.8	185	0.25	1.8	130	0.23	1.8	145	0.25	1.8	555	0.30	1.8	55	0.20	1.4	35	0.15	1.0
	T7325	0.8	210	0.25	1.8	160	0.23	1.8	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T7335	0.8	205	0.25	1.8	155	0.23	1.8	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T8330	0.8	185	0.25	1.8	110	0.23	1.8	175	0.25	1.8	555	0.30	1.8	45	0.20	1.4	35	0.15	1.0
	T8430	0.8	205	0.25	1.8	110	0.23	1.8	170	0.25	1.8	570	0.30	1.8	45	0.20	1.4	35	0.15	1.0
	T9315	0.8	280	0.25	1.8	–	–	–	265	0.25	1.8	–	–	–	–	–	–	55	0.15	1.0
	T9325	0.8	255	0.25	1.8	150	0.23	1.8	240	0.25	1.8	–	–	–	55	0.20	1.4	–	–	–
SNMG 120412E-SM	**T7325**	1.2	210	0.30	1.8	160	0.27	1.8	–	–	–	–	–	–	65	0.24	1.4	–	–	–
	T7335	1.2	200	0.30	1.8	155	0.27	1.8	–	–	–	–	–	–	65	0.24	1.4	–	–	–
	T9315	1.2	275	0.30	1.8	–	–	–	260	0.30	1.8	–	–	–	–	–	–	55	0.15	1.0
	T9325	1.2	245	0.30	1.8	145	0.27	1.8	230	0.30	1.8	–	–	–	55	0.24	1.4	–	–	–
SNMG 190612E-SM	**T6310**	1.2	175	0.30	4.0	125	0.27	4.0	140	0.30	4.0	525	0.36	4.0	50	0.27	3.2	35	0.15	1.0
	T7325	1.2	195	0.30	4.0	150	0.27	4.0	–	–	–	–	–	–	60	0.27	3.2	–	–	–
	T7335	1.2	185	0.30	4.0	140	0.27	4.0	–	–	–	–	–	–	60	0.27	3.2	–	–	–
	T9325	1.2	230	0.30	4.0	135	0.27	4.0	215	0.30	4.0	–	–	–	50	0.27	3.2	–	–	–
SNMG 190616E-SM	**T7325**	1.6	190	0.40	4.0	145	0.36	4.0	–	–	–	–	–	–	60	0.32	3.2	–	–	–
	T7335	1.6	175	0.40	4.0	135	0.36	4.0	–	–	–	–	–	–	55	0.32	3.2	–	–	–
	T9325	1.6	210	0.40	4.0	125	0.36	4.0	195	0.40	4.0	–	–	–	45	0.32	3.2	–	–	–

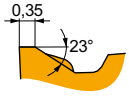
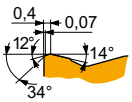
SNMM

PRAMET

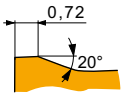
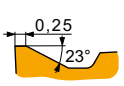
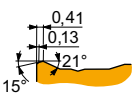
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.70	4.76
1506	15.875	6.35	15.875	6.35
1906	19.050	7.94	19.05	6.35
2507	25.400	9.12	25.40	7.94
2509	25.400	9.12	25.40	9.525



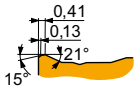
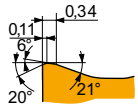
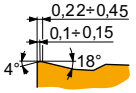
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria DR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SNMM 120412E-DR	**T9315**	1.2	245	0.45	4.7	–	–	–	230	0.45	4.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	220	0.45	4.7	130	0.41	4.7	205	0.45	4.7	–	–	–	–	–	–	–	–	–
	T9335	1.2	185	0.45	4.7	110	0.41	4.7	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 150612E-DR	**T9325**	1.2	210	0.45	6.0	125	0.41	6.0	195	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	180	0.45	6.0	105	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190612E-DR	**6640**	1.2	170	0.45	6.0	100	0.41	6.0	160	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	210	0.45	6.0	125	0.41	6.0	195	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	180	0.45	6.0	105	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190616E-DR	**T9325**	1.6	210	0.50	6.0	125	0.45	6.0	195	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	185	0.50	6.0	110	0.45	6.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria HR para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SNMM 190616E-HR	**T8345**	1.6	60	0.60	9.0	35	0.54	9.0	55	0.60	9.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	110	0.60	9.0	65	0.54	9.0	100	0.60	9.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	85	0.60	9.0	50	0.54	9.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190624E-HR	**T8345**	2.4	60	0.65	9.0	35	0.59	9.0	55	0.65	9.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.65	9.0	–	–	–	110	0.65	9.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	115	0.65	9.0	65	0.59	9.0	105	0.65	9.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	90	0.65	9.0	50	0.59	9.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250716E-HR	**T8345**	1.6	60	0.60	13.0	35	0.54	13.0	55	0.60	13.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	100	0.60	13.0	60	0.54	13.0	95	0.60	13.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	85	0.60	13.0	50	0.54	13.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250724E-HR	**6640**	2.4	80	0.65	13.0	45	0.59	13.0	75	0.65	13.0	–	–	–	–	–	–	–	–	–
	T8345	2.4	55	0.65	13.0	30	0.59	13.0	50	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.65	13.0	–	–	–	110	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.65	13.0	60	0.59	13.0	95	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.65	13.0	50	0.59	13.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250732E-HR	**T9325**	3.2	95	0.80	13.0	55	0.72	13.0	90	0.80	13.0	–	–	–	–	–	–	–	–	–
SNMM 250924E-HR	**T8345**	2.4	55	0.65	13.0	30	0.59	13.0	50	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	120	0.65	13.0	–	–	–	110	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.65	13.0	60	0.59	13.0	95	0.65	13.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	85	0.65	13.0	50	0.59	13.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250932E-HR	**T9325**	3.2	95	0.80	13.0	55	0.72	13.0	90	0.80	13.0	–	–	–	–	–	–	–	–	–

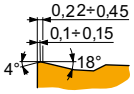
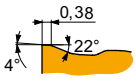
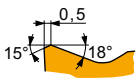
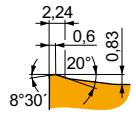
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria HR2 para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																				
SNMM 190616-HR2	**T9315**	1.6	115	0.65	8.9	–	–	–	105	0.65	8.9	–	–	–	–	–	–	–	–	–
	T9335	1.6	85	0.65	8.9	50	0.59	8.9	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 190624-HR2	**T9315**	2.4	105	0.85	8.9	–	–	–	95	0.85	8.9	–	–	–	–	–	–	–	–	–
	T9335	2.4	80	0.85	8.9	45	0.77	8.9	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250724-HR2	**T9226**	2.4	85	0.85	11.0	50	0.77	11.0	80	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	105	0.85	11.0	–	–	–	95	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	80	0.85	11.0	45	0.77	11.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250732-HR2	**T9315**	3.2	95	1.00	11.0	–	–	–	90	1.00	11.0	–	–	–	–	–	–	–	–	–
SNMM 250924-HR2	**T9226**	2.4	85	0.85	11.0	50	0.77	11.0	80	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9315	2.4	105	0.85	11.0	–	–	–	95	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	80	0.85	11.0	45	0.77	11.0	–	–	–	–	–	–	–	–	–	–	–	–
SNMM 250932-HR2	**T9315**	3.2	95	1.00	11.0	–	–	–	90	1.00	11.0	–	–	–	–	–	–	–	–	–
	T9335	3.2	75	1.00	11.0	45	0.90	11.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria NR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
SNMM 120408E-NR	**T7325**	0.8	185	0.40	3.0	140	0.36	3.0	–	–	–	–	–	–	60	0.28	2.4	–	–	–
	T7335	0.8	175	0.40	3.0	135	0.36	3.0	–	–	–	–	–	–	55	0.28	2.4	–	–	–
	T8330	0.8	160	0.40	3.0	95	0.36	3.0	150	0.40	3.0	–	–	–	40	0.28	2.4	–	–	–
	T8430	0.8	170	0.40	3.0	90	0.36	3.0	135	0.40	3.0	–	–	–	35	0.28	2.4	–	–	–
	T9325	0.8	205	0.40	3.0	120	0.36	3.0	190	0.40	3.0	–	–	–	45	0.28	2.4	–	–	–
																				
Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
SNMM 120408E-NR2	**T7325**	0.8	175	0.40	4.7	135	0.36	4.7	–	–	–	–	–	–	55	0.32	3.8	–	–	–
	T7335	0.8	170	0.40	4.7	130	0.36	4.7	–	–	–	–	–	–	55	0.32	3.8	–	–	–
	T8330	0.8	155	0.40	4.7	90	0.36	4.7	145	0.40	4.7	–	–	–	35	0.32	3.8	–	–	–
	T8430	0.8	165	0.40	4.7	90	0.36	4.7	135	0.40	4.7	–	–	–	35	0.32	3.8	–	–	–
	T9325	0.8	195	0.40	4.7	115	0.36	4.7	185	0.40	4.7	–	–	–	40	0.32	3.8	–	–	–
SNMM 120412E-NR2	**T7335**	1.2	165	0.45	4.7	125	0.41	4.7	–	–	–	–	–	–	50	0.36	3.8	–	–	–
	T8330	1.2	160	0.45	4.7	95	0.41	4.7	150	0.45	4.7	–	–	–	40	0.36	3.8	–	–	–
	T8430	1.2	165	0.45	4.7	90	0.41	4.7	135	0.45	4.7	–	–	–	35	0.36	3.8	–	–	–
	T9325	1.2	200	0.45	4.7	120	0.41	4.7	190	0.45	4.7	–	–	–	45	0.36	3.8	–	–	–
SNMM 150612E-NR2	**T7325**	1.2	170	0.45	6.0	130	0.41	6.0	–	–	–	–	–	–	55	0.36	4.8	–	–	–
	T7335	1.2	165	0.45	6.0	125	0.41	6.0	–	–	–	–	–	–	50	0.36	4.8	–	–	–
	T8330	1.2	155	0.45	6.0	90	0.41	6.0	145	0.45	6.0	–	–	–	35	0.36	4.8	–	–	–
	T8430	1.2	165	0.45	6.0	90	0.41	6.0	135	0.45	6.0	–	–	–	35	0.36	4.8	–	–	–
	T9325	1.2	195	0.45	6.0	115	0.41	6.0	185	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
SNMM 150616E-NR2	**T7335**	1.6	165	0.50	6.0	125	0.45	6.0	–	–	–	–	–	–	50	0.40	4.8	–	–	–
	T9325	1.6	190	0.50	6.0	110	0.45	6.0	180	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–
SNMM 190612E-NR2	**T7335**	1.2	160	0.45	8.0	120	0.41	8.0	–	–	–	–	–	–	50	0.36	6.4	–	–	–
	T9325	1.2	190	0.45	8.0	110	0.41	8.0	180	0.45	8.0	–	–	–	40	0.36	6.4	–	–	–
SNMM 190616E-NR2	**T7325**	1.6	175	0.50	8.0	135	0.45	8.0	–	–	–	–	–	–	55	0.40	6.4	–	–	–
	T7335	1.6	160	0.50	8.0	120	0.45	8.0	–	–	–	–	–	–	50	0.40	6.4	–	–	–
	T8330	1.6	155	0.50	8.0	90	0.45	8.0	145	0.50	8.0	–	–	–	35	0.40	6.4	–	–	–
	T8430	1.6	155	0.50	8.0	85	0.45	8.0	130	0.50	8.0	–	–	–	30	0.40	6.4	–	–	–
	T9315	1.6	210	0.50	8.0	–	–	–	195	0.50	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	185	0.50	8.0	110	0.45	8.0	175	0.50	8.0	–	–	–	40	0.40	6.4	–	–	–
SNMM 190624E-NR2	**T7325**	2.4	155	0.80	8.0	120	0.72	8.0	–	–	–	–	–	–	50	0.56	6.4	–	–	–
	T7335	2.4	145	0.80	8.0	110	0.72	8.0	–	–	–	–	–	–	45	0.56	6.4	–	–	–
	T9325	2.4	165	0.80	8.0	95	0.72	8.0	155	0.80	8.0	–	–	–	35	0.56	6.4	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SNMM 250724E-NR2	**T7335**	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T8330	2.4	85	0.80	12.0	50	0.72	12.0	80	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
	T8430	2.4	85	0.80	12.0	45	0.72	12.0	70	0.80	12.0	–	–	–	15	0.56	9.6	–	–	–
	T9226	2.4	95	0.80	12.0	55	0.72	12.0	90	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
	T9315	2.4	120	0.80	12.0	–	–	–	110	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
SNMM 250924E-NR2	**T7325**	2.4	105	0.80	12.0	80	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T7335	2.4	100	0.80	12.0	75	0.72	12.0	–	–	–	–	–	–	30	0.56	9.6	–	–	–
	T9226	2.4	95	0.80	12.0	55	0.72	12.0	90	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
	T9315	2.4	120	0.80	12.0	–	–	–	110	0.80	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	105	0.80	12.0	60	0.72	12.0	95	0.80	12.0	–	–	–	20	0.56	9.6	–	–	–
																				
			Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																	
SNMM 250716-NRM	**T7325**	1.6	115	0.45	9.0	85	0.41	9.0	–	–	–	–	–	–	35	0.36	7.2	–	–	–
	T7335	1.6	110	0.45	9.0	85	0.41	9.0	–	–	–	–	–	–	35	0.36	7.2	–	–	–
	T9315	1.6	135	0.45	9.0	–	–	–	125	0.45	9.0	–	–	–	–	–	–	–	–	–
SNMM 250724-NRM	**T7325**	2.4	105	0.65	9.0	80	0.59	9.0	–	–	–	–	–	–	30	0.46	7.2	–	–	–
	T7335	2.4	100	0.65	9.0	75	0.59	9.0	–	–	–	–	–	–	30	0.46	7.2	–	–	–
	T9315	2.4	120	0.65	9.0	–	–	–	110	0.65	9.0	–	–	–	–	–	–	–	–	–
SNMM 250924-NRM	**T7325**	2.4	105	0.70	9.0	80	0.63	9.0	–	–	–	–	–	–	30	0.49	7.2	–	–	–
	T7335	2.4	95	0.70	9.0	70	0.63	9.0	–	–	–	–	–	–	30	0.49	7.2	–	–	–
	T9315	2.4	120	0.70	9.0	–	–	–	110	0.70	9.0	–	–	–	–	–	–	–	–	–
																				
			Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SNMM 120408E-OR	**T9315**	0.8	220	0.40	4.7	–	–	–	205	0.40	4.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	195	0.40	4.7	115	0.36	4.7	185	0.40	4.7	–	–	–	40	0.32	3.8	–	–	–
	T9335	0.8	175	0.40	4.7	105	0.36	4.7	–	–	–	–	–	–	35	0.32	3.8	–	–	–
SNMM 120412E-OR	**T9315**	1.2	225	0.45	4.7	–	–	–	210	0.45	4.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	4.7	120	0.41	4.7	190	0.45	4.7	–	–	–	45	0.36	3.8	–	–	–
SNMM 120416E-OR	**T9325**	1.6	200	0.50	4.7	120	0.45	4.7	190	0.50	4.7	–	–	–	45	0.40	3.8	–	–	–
SNMM 150608E-OR	**T9325**	0.8	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.41	4.8	–	–	–
	T9335	0.8	170	0.40	6.0	100	0.36	6.0	–	–	–	–	–	–	35	0.36	4.8	–	–	–
SNMM 150612E-OR	**T9325**	1.2	195	0.45	6.0	115	0.41	6.0	185	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
	T9335	1.2	165	0.45	6.0	95	0.41	6.0	–	–	–	–	–	–	35	0.36	4.8	–	–	–
SNMM 150616E-OR	**T9315**	1.6	215	0.50	6.0	–	–	–	200	0.50	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	190	0.50	6.0	110	0.45	6.0	180	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–
SNMM 190612E-OR	**T8330**	1.2	150	0.45	8.0	90	0.41	8.0	140	0.45	8.0	–	–	–	35	0.36	6.4	–	–	–
	T8430	1.2	150	0.45	8.0	80	0.41	8.0	125	0.45	8.0	–	–	–	30	0.36	6.4	–	–	–
	T9315	1.2	210	0.45	8.0	–	–	–	195	0.45	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.45	8.0	110	0.41	8.0	180	0.45	8.0	–	–	–	40	0.36	6.4	–	–	–
	T9335	1.2	165	0.45	8.0	95	0.41	8.0	–	–	–	–	–	–	35	0.36	6.4	–	–	–
SNMM 190616E-OR	**T8330**	1.6	155	0.50	8.0	90	0.45	8.0	145	0.50	8.0	–	–	–	35	0.40	6.4	–	–	–
	T8345	1.6	125	0.50	8.0	75	0.45	8.0	115	0.50	8.0	–	–	–	30	0.40	6.4	–	–	–
	T8430	1.6	155	0.50	8.0	85	0.45	8.0	130	0.50	8.0	–	–	–	30	0.40	6.4	–	–	–
	T9315	1.6	210	0.50	8.0	–	–	–	195	0.50	8.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	185	0.50	8.0	110	0.45	8.0	175	0.50	8.0	–	–	–	40	0.40	6.4	–	–	–
	T9335	1.6	160	0.50	8.0	95	0.45	8.0	–	–	–	–	–	–	35	0.40	6.4	–	–	–
SNMM 190624E-OR	**T9315**	2.4	180	0.80	8.0	–	–	–	170	0.80	8.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	165	0.80	8.0	95	0.72	8.0	155	0.80	8.0	–	–	–	35	0.56	6.4	–	–	–
SNMM 250716E-OR	**T9226**	1.6	115	0.50	12.0	65	0.45	12.0	105	0.50	12.0	–	–	–	20	0.45	9.6	–	–	–
	T9325	1.6	120	0.55	12.0	70	0.50	12.0	110	0.55	12.0	–	–	–	25	0.50	9.6	–	–	–

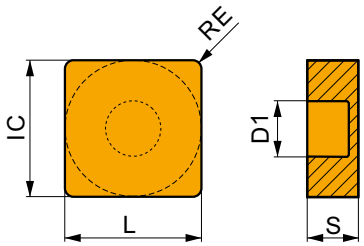
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
SNMM 250724E-OR	**T8330**	2.4	80	1.00	12.0	45	0.90	12.0	75	1.00	12.0	–	–	–	20	0.70	9.6	–	–	–
	T8345	2.4	55	1.00	12.0	30	0.90	12.0	50	1.00	12.0	–	–	–	10	0.70	9.6	–	–	–
	T8430	2.4	80	1.00	12.0	45	0.90	12.0	65	1.00	12.0	–	–	–	15	0.70	9.6	–	–	–
	T9315	2.4	105	1.00	12.0	–	–	–	95	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	1.00	12.0	60	0.90	12.0	95	1.00	12.0	–	–	–	20	0.70	9.6	–	–	–
	T9335	2.4	80	1.00	12.0	45	0.90	12.0	–	–	–	–	–	–	15	0.70	9.6	–	–	–
SNMM 250924E-OR	**T8430**	2.4	80	1.00	12.0	45	0.90	12.0	65	1.00	12.0	–	–	–	15	0.70	9.6	–	–	–
	T9226	2.4	85	1.00	12.0	50	0.90	12.0	80	1.00	12.0	–	–	–	15	0.70	9.6	–	–	–
	T9315	2.4	105	1.00	12.0	–	–	–	95	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	100	1.00	12.0	60	0.90	12.0	95	1.00	12.0	–	–	–	20	0.70	9.6	–	–	–
	T9335	2.4	80	1.00	12.0	45	0.90	12.0	–	–	–	–	–	–	15	0.70	9.6	–	–	–
																				
			Geometria OR1 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SNMM 190616E-OR1	**T9325**	1.6	185	0.50	8.0	110	0.45	8.0	175	0.50	8.0	–	–	–	40	0.35	6.4	–	–	–
	T9335	1.6	160	0.50	8.0	95	0.45	8.0	–	–	–	–	–	–	35	0.35	6.4	–	–	–
																				
			Geometria SR para operações de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SNMM 250724S-SR	**6640**	2.4	60	1.00	12.0	35	0.90	12.0	55	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9226	2.4	70	1.00	12.0	40	0.90	12.0	65	1.00	12.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	80	1.00	12.0	45	0.90	12.0	75	1.00	12.0	–	–	–	–	–	–	–	–	–
SNMM 250924S-SR	**T9335**	2.4	65	1.00	14.0	35	0.90	14.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria 923 para operações de maquinação de semi-desbaste a desbaste pesado, e cortes contínuos a interrompidos pesados.																	
SNMM 190616S-923	**T8330**	1.6	125	0.65	8.9	75	0.59	8.9	115	0.65	8.9	–	–	–	30	0.52	7.1	–	–	–
	T8345	1.6	100	0.65	8.9	60	0.59	8.9	95	0.65	8.9	–	–	–	25	0.52	7.1	–	–	–
	T8430	1.6	125	0.65	8.9	65	0.59	8.9	100	0.65	8.9	–	–	–	25	0.52	7.1	–	–	–
	T9335	1.6	130	0.65	8.9	75	0.59	8.9	–	–	–	–	–	–	25	0.52	7.1	–	–	–
SNMM 250724S-923	**T8330**	2.4	80	0.85	11.0	45	0.77	11.0	75	0.85	11.0	–	–	–	20	0.60	8.8	–	–	–
	T8430	2.4	80	0.85	11.0	45	0.77	11.0	65	0.85	11.0	–	–	–	15	0.60	8.8	–	–	–
	T9335	2.4	80	0.85	11.0	45	0.77	11.0	–	–	–	–	–	–	15	0.60	8.8	–	–	–
SNMM 250924S-923	**T8345**	2.4	55	0.85	11.0	30	0.77	11.0	50	0.85	11.0	–	–	–	10	0.60	8.8	–	–	–
	T8430	2.4	80	0.85	11.0	45	0.77	11.0	65	0.85	11.0	–	–	–	15	0.60	8.8	–	–	–
	T9226	2.4	85	0.85	11.0	50	0.77	11.0	80	0.85	11.0	–	–	–	15	0.60	8.8	–	–	–
	T9315	2.4	105	0.85	11.0	–	–	–	95	0.85	11.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	80	0.85	11.0	45	0.77	11.0	–	–	–	–	–	–	15	0.60	8.8	–	–	–
SNMM 250932S-923	**T9226**	3.2	80	1.00	11.0	45	0.90	11.0	75	1.00	11.0	–	–	–	15	0.70	8.8	–	–	–

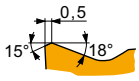
SNMX

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
2512	25.400	9.17	25.40	12.00



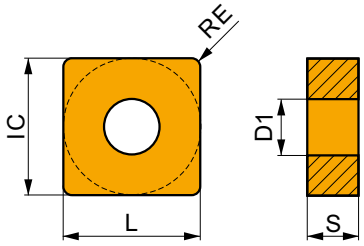
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria SR para operações de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																	
SNMX 251224S-SR	**T8345**	2.4	45	1.00	14.0	25	0.90	14.0	40	1.00	14.0	–	–	–	–	–	–	–	–	–
	T9325	2.4	80	1.00	14.0	45	0.90	14.0	75	1.00	14.0	–	–	–	–	–	–	–	–	–
	T9335	2.4	65	1.00	14.0	35	0.90	14.0	–	–	–	–	–	–	–	–	–	–	–	–

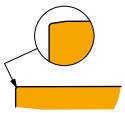
SNGA CER

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.70	4.76



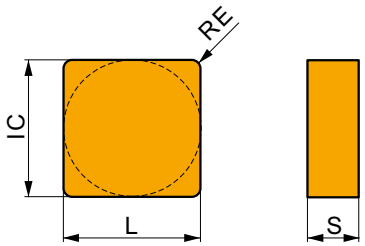
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
SNGA 120408 T01025	**TC100**	0.8	–	–	–	–	–	–	575	0.20	2.0	–	–	–	–	–	–	–	–	–
SNGA 120412 T01020	**TC100**	1.2	–	–	–	–	–	–	565	0.25	2.0	–	–	–	–	–	–	–	–	–

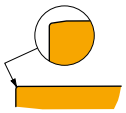
SNGN CER

PRAMET

	IC (mm)	L (mm)	S (mm)
0903	9.525	9.525	3.18
1204	12.700	12.70	4.76
1207	12.700	12.70	7.94



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC		T															
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
SNGN 090308 T01020	**TC100**	0.8	–	–	–	–	–	–	◪ 580	0.20	1.8	–	–	–	–	–	–	–	–	–
SNGN 090312 T01020	**TC100**	1.2	–	–	–	–	–	–	◪ 565	0.25	1.8	–	–	–	–	–	–	–	–	–
SNGN 120404 T01020	**TC100**	0.4	–	–	–	–	–	–	◪ 620	0.10	2.0	–	–	–	–	–	–	–	–	–
SNGN 120408 T01020	**TC100**	0.8	–	–	–	–	–	–	◪ 575	0.20	2.0	–	–	–	–	–	–	–	–	–
SNGN 120708 T01020	**TC100**	0.8	–	–	–	–	–	–	◪ 575	0.20	2.0	–	–	–	–	–	–	–	–	–
SNGN 120712 T01020	**TC100**	1.2	–	–	–	–	–	–	◪ 565	0.25	2.0	–	–	–	–	–	–	–	–	–

DSBN(RL) EXT

P M K N S H

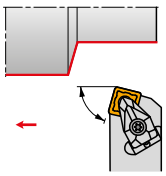
PRAMET

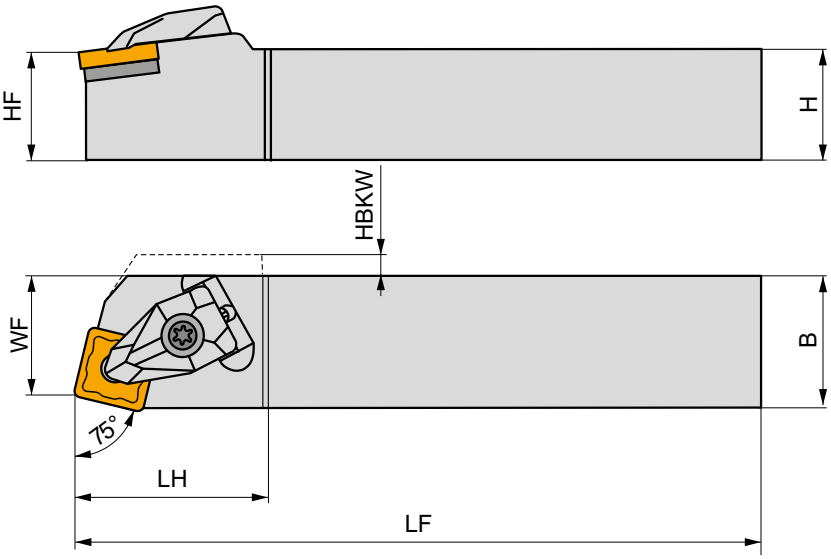
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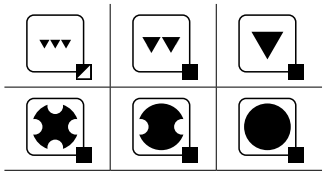


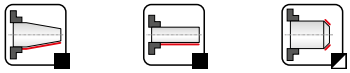
Porta-Ferramentas de Exterior, Fixação Dupla, Ângulo de 75 °, para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de corte de 75 °. Adequado para torneamento longitudinal sem esquadria, torneamento cónico e de chanfro com pastilhas negativas SN .. 12, 15 ou 19. Disponível em hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	HBKW (mm)	LAMS (°)	GAMO (°)	kg			
R	**DSBNR 2020 K 12**	20	20	20	17	125	34.2	2.5	-6	-6	0.43	GI029	DS12	AT003
	DSBNR 2525 M 12	25	25	25	22	150	34.3	–	-6	-6	0.74	GI029	DS12	AT003
	DSBNR 2525 M 15	25	25	25	22	150	41.6	2	-6	-6	0.80	GI082	DS15	AT006
	DSBNR 3225 P 15	32	25	32	22	170	41.7	2	-6	-6	1.07	GI082	DS15	AT006
	DSBNR 3232 P 19	32	32	32	27	170	46.4	–	-6	-6	1.38	GI026	DS19	–
	DSBNR 4040 S 19	40	40	40	35	250	46.5	–	-6	-6	3.18	GI026	DS19	–
L	**DSBNL 2525 M 12**	25	25	25	22	150	34.3	–	-6	-6	0.74	GI029	DS12	AT003
	DSBNL 2525 M 15	25	25	25	22	150	41.6	2	-6	-6	0.80	GI082	DS15	AT006
	DSBNL 3225 P 15	32	25	32	22	170	41.7	2	-6	-6	1.16	GI082	DS15	AT006
	DSBNL 3232 P 19	32	32	32	27	170	46.4	–	-6	-6	1.38	GI026	DS19	–
	DSBNL 4040 S 19	40	40	40	35	250	46.5	–	-6	-6	3.18	GI026	DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..
GI082	SN.. 1506..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS15	DCS 16	6.4	DSS 425-03	US 2007-T20P	–	LK T20P
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P

			
AT003a	SN.. 1207..	–	DSS 425-02
AT006a	SN.. 1507..	–	DSS 425-05
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–
AT006b	CER CN.N 1606..	DCS 16C4	–
AT006c	CER CN.A 1606..	DCS 16C2	–

DSDNN EXT

P M K N S H

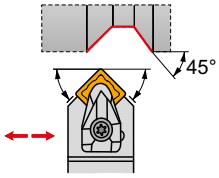
PRAMET

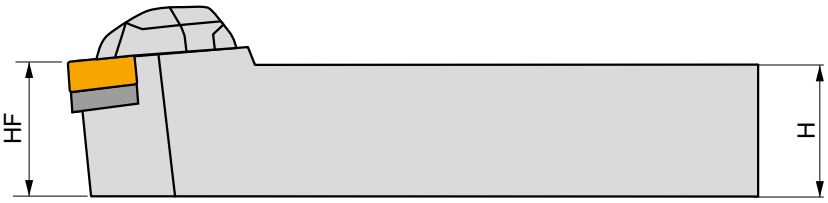
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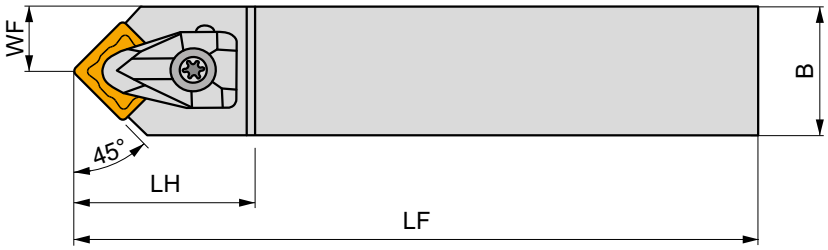


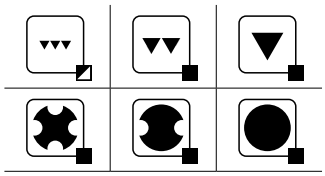
Porta-Ferramentas de Exterior com Fixação Dupla, Ângulo de 45 °, para Pastilhas SN ..

Porta-ferramentas de exterior neutro de fixação dupla com ângulo de corte de 45 °. Adequado para torneamento longitudinal sem esquadria, de cópia, torneamento cónico e de chanfro com pastilhas negativas SN .. 12, 15, 19 ou 25. Disponível em hastes de 25x25 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg			
N	**DSDNN 2525 M 12**	25	25	25	12.8	150	36.5	-6	-6	0.74	GI029	DS12	AT003
	DSDNN 2525 M 15	25	25	25	12.8	150	44.8	-6	-6	0.76	GI082	DS15	AT006
	DSDNN 3232 P 19	32	32	32	16.5	170	49.5	-6	-6	1.36	GI026	DS19	–
	DSDNN 4040 S 25	40	40	40	21	250	57.2	-6	-6	3.13	GI027	DS25	–

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI082	SN.. 1506..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS15	DCS 16	6.4	DSS 425-03	US 2007-T20P	–	LK T20P
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P
DS25	DCS 25	9.5	DSS 425-07	US 2008-T25P	–	LK T25P

AT003a	SN.. 1207..	–	DSS 425-02
AT006a	SN.. 1507..	–	DSS 425-05
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–
AT006b	CER CN.N 1606..	DCS 16C4	–
AT006c	CER CN.A 1606..	DCS 16C2	–

DSKN(RL) EXT

P M K N S H

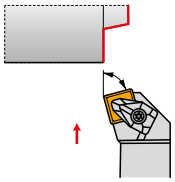
PRAMET

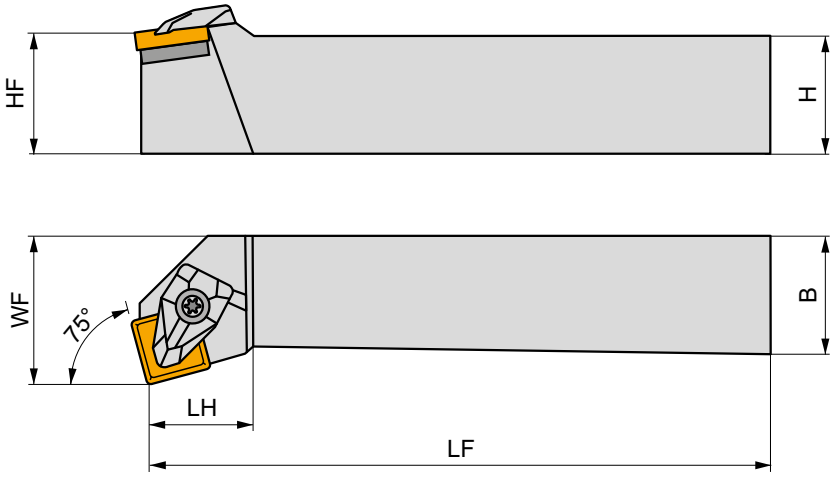
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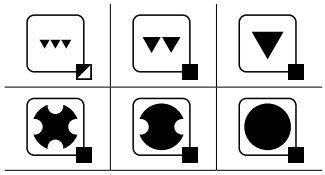


Porta-Ferramentas de Exterior, Fixação Dupla, Ângulo de 75 ° (Frontal), para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de 75 °. Adequado para torneamento frontal sem esquadria e chanfrar com pastilhas negativas SN .. tamanho 12 .. ou 19 ... Disponível em hastes de 25x25 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg			
R	**DSKNR 2525 M 12**	25	25	25	32	150	23.6	-6	-6	0.79	GI029	DS12	AT003
	DSKNR 3232 P 19	32	32	32	40	170	32.1	-6	-6	1.46	GI026	DS19	–
L	**DSKNL 2525 M 12**	25	25	25	32	150	23.6	-6	-6	0.79	GI029	DS12	AT003
	DSKNL 3232 P 19	32	32	32	40	170	32.1	-6	-6	1.46	GI026	DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

DSSN(RL) EXT

P M K N S H

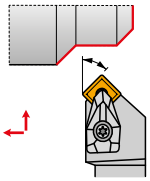
PRAMET

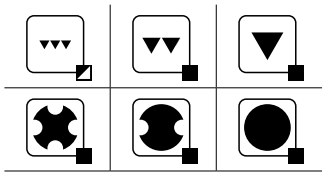
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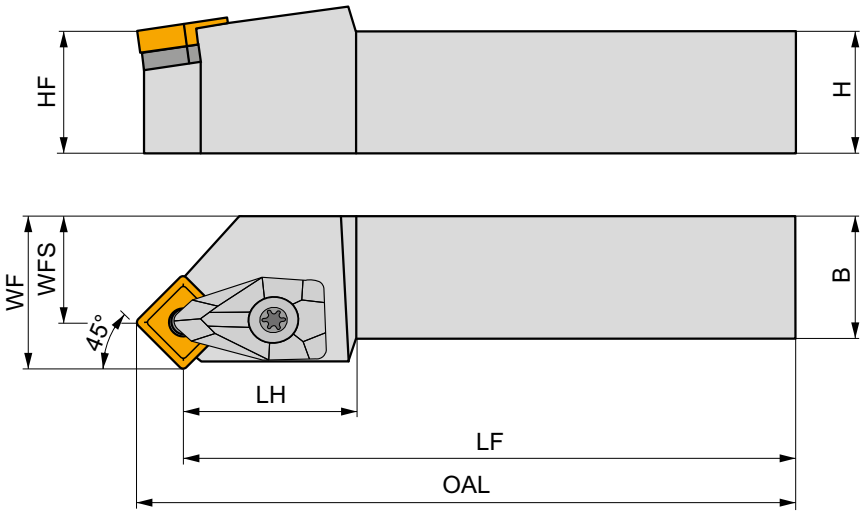


Porta-Ferramentas de Exterior, de Fixação Dupla, Ângulo de 45 °, para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de 45 °. Adequado para torneamento longitudinal e frontal sem esquadria, torneamento cónico, de cópia e chanfrar com pastilhas negativas SN ... tamanho 12, 15 ou 19. Disponível em hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	WFS (mm)	LF (mm)	OAL (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg			
R	DSSNR 2020 K 12	20	20	20	25	16.7	125	133.3	27.5	0	-8	0.45	GI029	DS12	AT003
	DSSNR 2525 M 12	25	25	25	32	23.7	150	158.3	27.5	0	-8	0.80	GI029	DS12	AT003
	DSSNR 2525 M 15	25	25	25	32	21.8	150	160.2	32	0	-8	0.83	GI082	DS15	AT006
	DSSNR 3225 P 15	32	25	32	32	21.8	170	180.2	34.9	0	-8	1.16	GI082	DS15	AT006
	DSSNR 3232 P 19	32	32	32	40	27.5	170	182.5	37	0	-8	1.48	GI026	DS19	–
	DSSNR 4040 S 19	40	40	40	50	37.5	250	262.5	37.7	0	-8	3.27	GI026	DS19	–
L	DSSNL 2020 K 12	20	20	20	25	16.7	125	133.3	27.5	0	-8	0.45	GI029	DS12	AT003
	DSSNL 2525 M 12	25	25	25	32	23.7	150	158.3	27.5	0	-8	0.19	GI029	DS12	AT003
	DSSNL 2525 M 15	25	25	25	32	21.8	150	160.2	32	0	-8	0.83	GI082	DS15	AT006
	DSSNL 3225 P 15	32	25	32	32	21.8	170	180.2	34.9	0	-8	1.16	GI082	DS15	AT006
	DSSNL 3232 P 19	32	32	32	40	27.5	170	182.5	37	0	-8	1.48	GI026	DS19	–
	DSSNL 4040 S 19	40	40	40	50	37.5	250	262.5	37.7	0	-8	3.27	GI026	DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..
GI082	SN.. 1506..

		Nm				
DS12	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–
DS15	DCS 16	6.4	DSS 425-03	US 2007-T20P	–	LK T20P
DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P

AT003a	SN.. 1207..	–	DSS 425-02
AT006a	SN.. 1507..	–	DSS 425-05
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–
AT006b	CER CN.N 1606..	DCS 16C4	–
AT006c	CER CN.A 1606..	DCS 16C2	–

PSBN(RL) EXT

P M K N S H

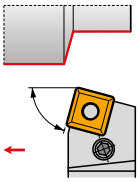
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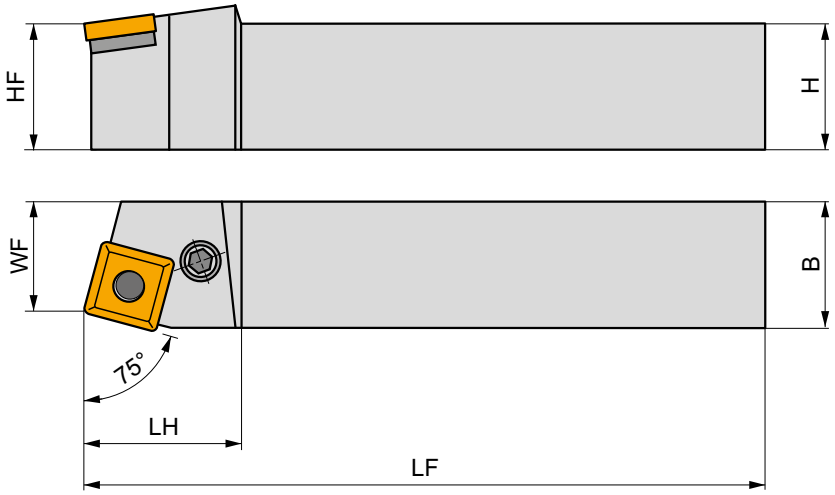
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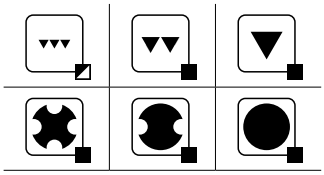


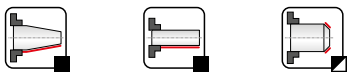
Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 75 °, para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 75 °. Adequado para torneamento longitudinal sem esquadria, torneamento cónico e chanfrar com pastilhas negativas SN ... tamanhos 12, 15, 19 ou 25. Disponível em hastes de 20x20 até 50x50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PSBNR 2020 K 12	20	20	20	17	125	36	-6	-6	0.43	GI029	PS22
	PSBNR 2525 M 12	25	25	25	22	150	36	-6	-6	0.75	GI029	PS20
	PSBNR 3225 P 15	32	25	32	22	170	40	-6	-6	1.05	GI082	PS40
	PSBNR 3232 P 19	32	32	32	27	170	45	-6	-6	1.30	GI026	PS50
	PSBNR 4040 R 19	40	40	40	35	200	45	-6	-6	2.40	GI026	PS50
	PSBNR 4040 S 19	40	40	40	35	250	45	-6	-6	3.12	GI026	PS50
	PSBNR 4040 R 25	40	40	40	35	200	45	-6	-6	2.45	GI027	PS60
	PSBNR 4040 S 25	40	40	40	35	250	50	-6	-6	2.85	GI027	PS60
	PSBNR 4040 S 2509	40	40	40	35	250	50	-6	-6	2.50	GI040	PS70
	PSBNR 4040 S 2512-A	40	40	40	35	250	50	-6	-6	3.08	GI162	PS72
	PSBNR 5050 S 25	50	50	50	43	250	50	-6	-6	4.70	GI027	PS60
	PSBNR 5050 T 25	50	50	50	43	300	50	-6	-6	5.83	GI027	PS60
	PSBNR 5050 T 2509	50	50	50	43	300	50	-6	-6	5.50	GI040	PS70
	PSBNR 5050 T 2512-A	50	50	50	43	300	50	-6	-6	5.83	GI162	PS72
L	PSBNL 2020 K 12	20	20	20	17	125	36	-6	-6	0.42	GI029	PS22
	PSBNL 2525 M 12	25	25	25	22	150	36	-6	-6	0.75	GI029	PS20
	PSBNL 3225 P 15	32	25	32	22	170	40	-6	-6	1.05	GI082	PS40
	PSBNL 3232 P 19	32	32	32	27	170	45	-6	-6	1.36	GI026	PS50
	PSBNL 4040 R 19	40	40	40	35	200	45	-6	-6	2.50	GI026	PS50
	PSBNL 4040 S 19	40	40	40	35	250	45	-6	-6	3.13	GI026	PS50
	PSBNL 4040 R 25	40	40	40	35	200	45	-6	-6	2.45	GI027	PS60
	PSBNL 4040 S 25	40	40	40	35	250	50	-6	-6	3.10	GI027	PS60
	PSBNL 4040 S 2509	40	40	40	35	250	50	-6	-6	2.50	GI040	PS70
	PSBNL 4040 S 2512-A	40	40	40	35	250	50	-6	-6	3.11	GI162	PS72
	PSBNL 5050 S 25	50	50	50	43	250	50	-6	-6	4.70	GI027	PS60
	PSBNL 5050 T 25	50	50	50	43	300	50	-6	-6	5.84	GI027	PS60
	PSBNL 5050 T 2509	50	50	50	43	300	50	-6	-6	5.80	GI040	PS70

	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
L	**PSBNL 5050 T 2512-A**	50	50	50	43	300	50	-6	-6	5.82	GI162	PS72

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI040	SN.. 2509..
GI082	SN.. 1506..
GI162	SN.. 2512..

				Nm					
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PS72	SNU 250624	PU 10-N	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5

PSDNN EXT

P M K N S H

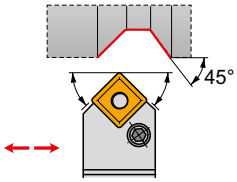
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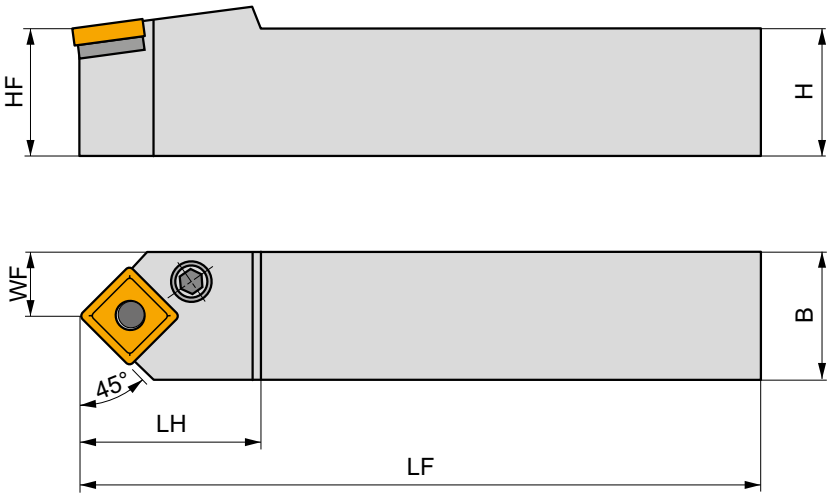
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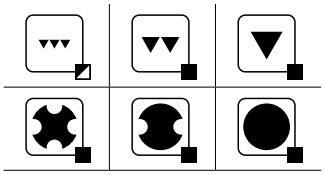


Porta-Ferramenta de Exterior, Fixação por Alavanca, Ângulo de 45 °, para Pastilhas SN ..

Porta-ferramentas de exterior neutro com fixação por alavanca com ângulo de corte de 45 °. Adequado para torneamento longitudinal sem esquadria, de cópia e torneamento cónico e de chanfro com pastilhas negativas SN .. 12, 15, 19 ou 25. Disponível em hastes de 20x20 até 50x50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
N	**PSDNN 2020 K 12**	20	20	20	10	125	36	-6	-6	0.42	GI029	PS22
	PSDNN 2525 M 12	25	25	25	12.5	150	36	-6	-6	0.68	GI029	PS20
	PSDNN 3232 P 15	32	32	32	16	170	40	-6	-6	1.32	GI082	PS40
	PSDNN 3232 P 19	32	32	32	16	170	45	-6	-6	1.25	GI026	PS50
	PSDNN 4040 S 19	40	40	40	20	250	45	-6	-6	3.05	GI026	PS50
	PSDNN 4040 S 25	40	40	40	20	250	50	-6	-6	3.02	GI027	PS60
	PSDNN 5050 T 25	50	50	50	25	300	50	-6	-6	5.65	GI027	PS60

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI082	SN.. 1506..

				Nm					
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

PSKN(RL) EXT

P M K N S H

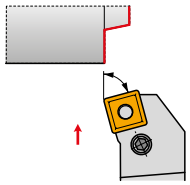
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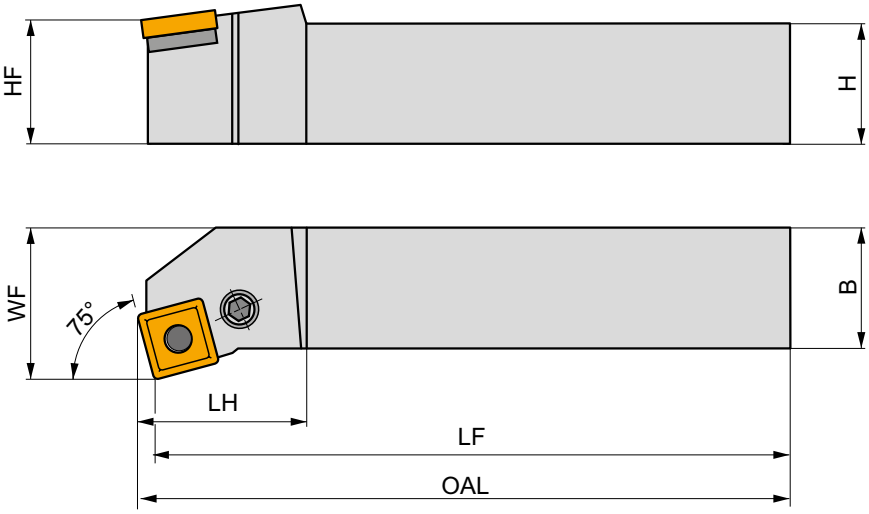
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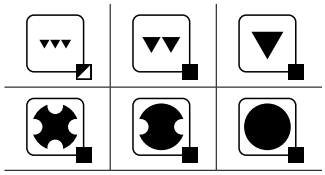


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 75 ° (Frontal), para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 75 °. Adequado para torneamento frontal sem esquadria e chanfrar com pastilhas negativas SN ...tamanhos 12, 15, 19 ou 25. Disponível em hastes de 20x20 até 50x50 mm. Corpo tratado para maior tempo devida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	OAL (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PSKNR 2020 K 12	20	20	20	25	125	128.1	36	-6	-6	0.43	GI029	PS22
	PSKNR 2525 M 12	25	25	25	32	150	153.1	36	-6	-6	0.79	GI029	PS20
	PSKNR 3225 P 15	32	25	32	32	170	173.9	40	-6	-6	0.40	GI082	PS40
	PSKNR 3232 P 19	32	32	32	40	170	174.6	45	-6	-6	1.40	GI026	PS50
	PSKNR 4040 S 19	40	40	40	50	250	254.6	45	-6	-6	3.25	GI026	PS50
	PSKNR 4040 S 25	40	40	40	50	250	256.5	50	-6	-6	3.40	GI027	PS60
	PSKNR 5050 T 25	50	50	50	60	300	306.5	50	-6	-6	6.05	GI027	PS60
	PSKNR 5050 T 2509	50	50	50	60	300	306.5	50	-6	-6	6.20	GI040	PS70
L	PSKNL 2020 K 12	20	20	20	25	125	128.1	36	-6	-6	0.43	GI029	PS22
	PSKNL 2525 M 12	25	25	25	32	150	153.1	36	-6	-6	0.79	GI029	PS20
	PSKNL 3225 P 15	32	25	32	32	170	173.9	40	-6	-6	1.05	GI082	PS40
	PSKNL 3232 P 19	32	32	32	40	170	174.6	45	-6	-6	1.40	GI026	PS50
	PSKNL 4040 S 19	40	40	40	50	250	254.6	45	-6	-6	3.26	GI026	PS50
	PSKNL 4040 S 25	40	40	40	50	250	256.5	50	-6	-6	3.40	GI027	PS60
	PSKNL 5050 T 25	50	50	50	60	300	306.5	50	-6	-6	6.00	GI027	PS60
	PSKNL 5050 T 2509	50	50	50	60	300	306.5	50	-6	-6	6.20	GI040	PS70

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI040	SN.. 2509..
GI082	SN.. 1506..

									
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5

PSSN(RL) EXT

P M K N S H

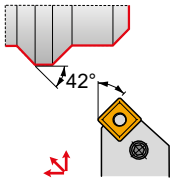
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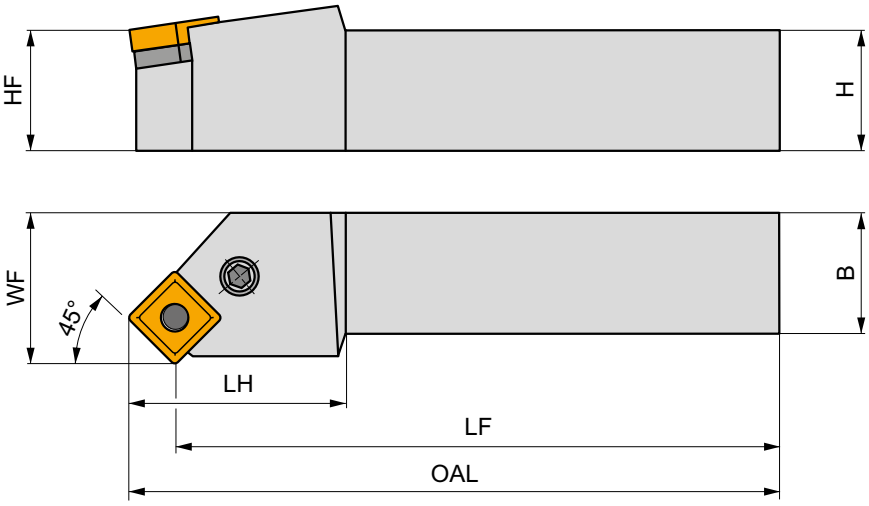
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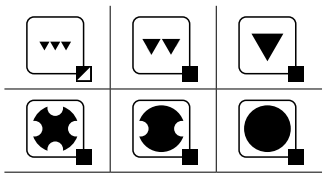


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 45 °, para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 45 °. Adequado para torneamento longitudinal e frontal sem esquadria, de cópia, torneamento cónico e chanfrar com pastilhas negativas SN .. 12, 15, 19 ou 25. Disponível em hastes de 20x20 até 50x50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	OAL (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PSSNR 2020 K 12	20	20	20	25	125	133.3	36	0	-8	0.41	GI029	PS22
	PSSNR 2525 M 12	25	25	25	32	150	158.3	36	0	-8	0.75	GI029	PS20
	PSSNR 3225 P 15	32	25	32	32	170	180.2	40	0	-8	1.13	GI082	PS40
	PSSNR 3232 P 19	32	32	32	40	170	182.5	45	0	-8	1.34	GI026	PS50
	PSSNR 4040 R 19	40	40	40	50	200	212.5	45	0	-8	2.50	GI026	PS50
	PSSNR 5050 T 25	50	50	50	60	300	316	50	0	-8	6.00	GI027	PS60
	PSSNR 5050 T 2509	50	50	50	60	300	316	50	0	-8	6.05	GI040	PS70
L	PSSNL 2020 K 12	20	20	20	25	125	133.3	36	0	-8	0.41	GI029	PS22
	PSSNL 2525 M 12	25	25	25	32	150	158.3	36	0	-8	0.67	GI029	PS20
	PSSNL 3225 P 15	32	25	32	32	170	180.2	40	0	-8	1.15	GI082	PS40
	PSSNL 3232 P 19	32	32	32	40	170	182.5	45	0	-8	1.44	GI026	PS50
	PSSNL 4040 R 19	40	40	40	50	200	212.5	45	0	-8	2.58	GI026	PS50
	PSSNL 5050 T 25	50	50	50	60	300	316	50	0	-8	6.00	GI027	PS60
	PSSNL 5050 T 2509	50	50	50	60	300	316	50	0	-8	6.08	GI040	PS70

GI026	SN.. 1906..
GI027	SN.. 2507..
GI029	SN.. 1204..
GI040	SN.. 2509..
GI082	SN.. 1506..

				Nm					
PS20	SNU 120312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PS22	SNU 120312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5

NEW

C.-DSDNN EXT

P M K N S H

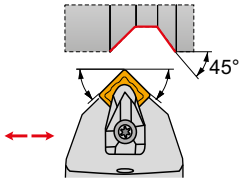
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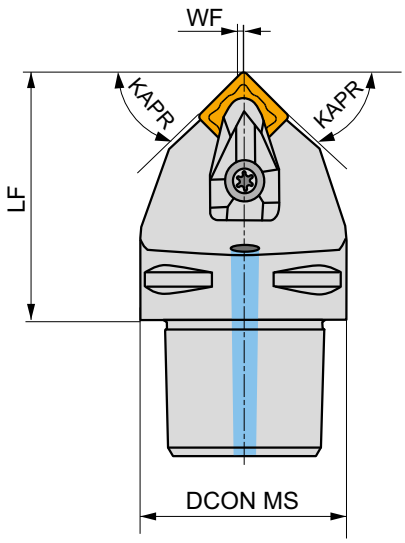
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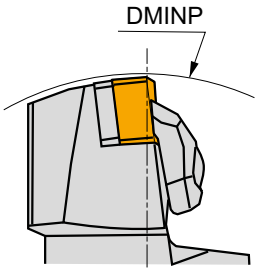


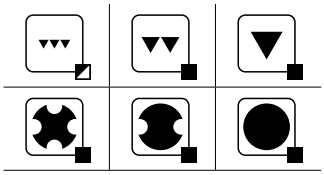
Ferramenta Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 45 °, para Pastilhas SN ..

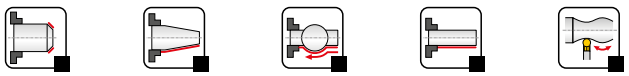
Porta-ferramentas de exterior neutro de fixação dupla, com refrigeração interna, com ângulo de corte de 45° para torneamento longitudinal sem esquadria, torneamento de cópia, cónico e de chanfro com pastilhas negativas SN .. 12 ou 19. Disponível com haste poligonal PSC (Polygon Shank Coupling) C4 até C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
N	C4-DSDNN-00050-12	40	140	0.3	50	45	-6	-6	✓	0.39	GI029	C-DS12-2	AT003
	C5-DSDNN-00060-12	50	165	0.3	60	45	-6	-6	✓	0.69	GI029	C-DS12-2	AT003
	C6-DSDNN-00070-19	63	195	0.5	70	45	-6	-6	✓	1.28	GI026	C-DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..

C-DS12-2	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–	CN 045-01
C-DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P	CN 045-01

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

NEW

C.-DSKN(RL) EXT

P M K N S H

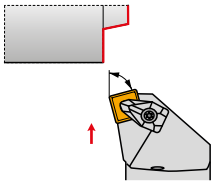
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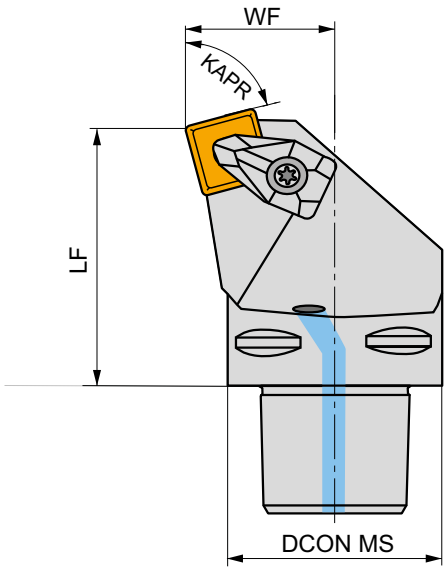
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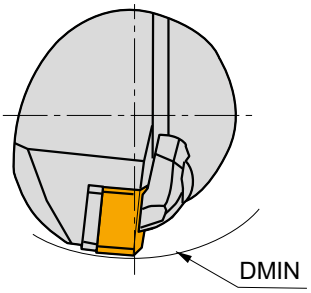


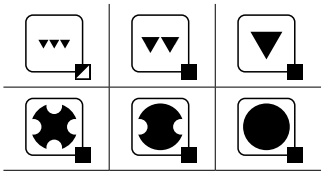
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 75 ° (Frontal), Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla , com refrigeração interna e ângulo de corte de 75°, para torneamento frontal sem esquadria e chanfrar com pastilhas negativas de SN .. 12 ... Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanho C4. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	C4-DSKNR-27050-12	40	110	27	50	75	-6	-6	✓	0.46	GI029	C-DS12-1	AT003
L	C4-DSKNL-27050-12	40	110	27	50	75	-6	-6	✓	0.46	GI029	C-DS12-1	AT003

GI029	SN.. 1204..

		Nm				
C-DS12-1	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	CN 034-01

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

NEW

C.-DSRN(RL) EXT

P M K N S H

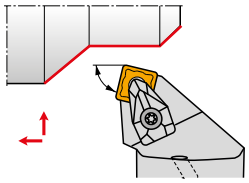
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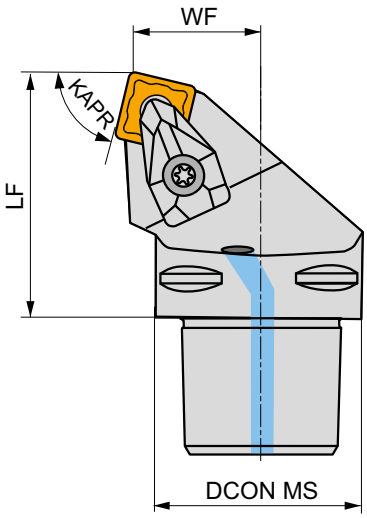
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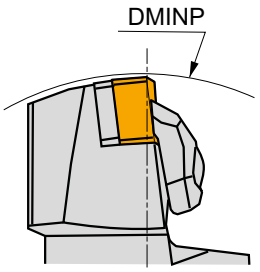


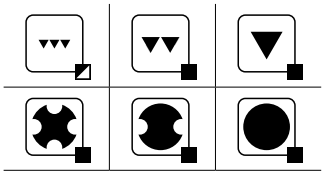
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 75 °, para Pastilhas SN ..

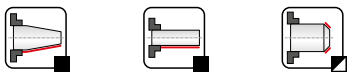
Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla , com refrigeração interna e ângulo de corte de 75°, para torneamento longitudinal sem esquadria, torneamento cónico e de chanfro com pastilhas negativas SN .. 12 ou 19. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 até C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	C4-DSRNR-22050-12	40	140	22	50	75	-6	-6	✓	0.40	GI029	C-DS12-1	AT003
	C6-DSRNR-35065-19	63	190	35	65	75	-6	-6	✓	1.30	GI026	C-DS19	–
L	C4-DSRNL-22050-12	40	140	22	50	75	-6	-6	✓	0.42	GI029	C-DS12-1	AT003
	C6-DSRNL-35065-19	63	190	35	65	75	-6	-6	✓	1.30	GI026	C-DS19	–

GI026	SN.. 1906..
GI029	SN.. 1204..

C-DS12-1	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	–	CN 034-01
C-DS19	DCS 19	6.4	DSS 425-04	US 2007-T20P	–	LK T20P	CN 045-01

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

NEW

C.-DSSN(RL) EXT

P M K N S H

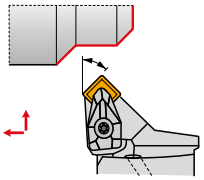
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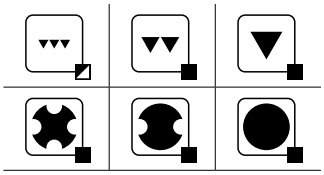
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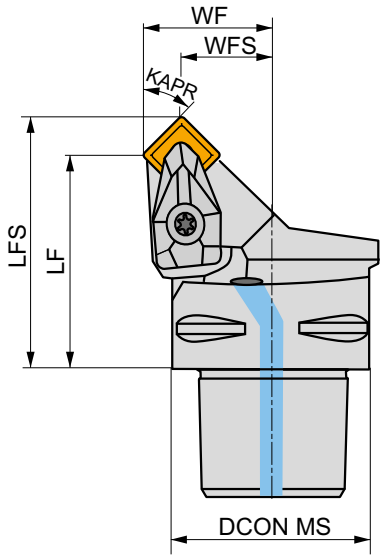


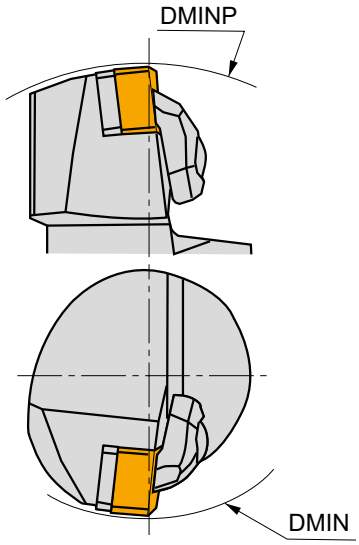
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 45 °, para Pastilhas SN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla , com refrigeração interna e ângulo de corte de 45°, para torneamento longitudinal e frontal sem esquadria, torneamento cónico, de cópia e de chanfro com pastilhas negativas SN .. 12. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 e C5. Corpo tratado para maior tempo de vida útil da ferramenta.
















	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	WFS (mm)	LF (mm)	LFS (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	**C4-DSSNR-27042-12**	40	110	140	27	18.7	42	50.3	45	0	-8	✓	0.38	GI029	C-DS12-1	AT003
	C5-DSSNR-35052-12	50	110	165	35	26.7	52	60.3	45	0	-8	✓	0.68	GI029	C-DS12-3	AT003
L	**C4-DSSNL-27042-12**	40	110	140	27	18.7	42	50.3	45	0	-8	✓	0.36	GI029	C-DS12-1	AT003
	C5-DSSNL-35052-12	50	110	165	35	26.7	52	60.3	45	0	-8	✓	0.69	GI029	C-DS12-3	AT003

GI029	SN.. 1204..

		Nm				
C-DS12-1	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	CN 034-01
C-DS12-3	DCS 12	3.9	DSS 425-01	US 2002-T15P	FLAG T15P/3,5	CN 034-02

AT003a	SN.. 1207..	–	DSS 425-02
AT003b	CER SN.N 1204..	DCS 12C4	–
AT003c	CER SN.A 1204..	DCS 12C2	–

KHP-SBN(RL)

P M K

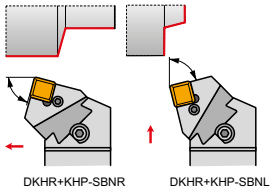
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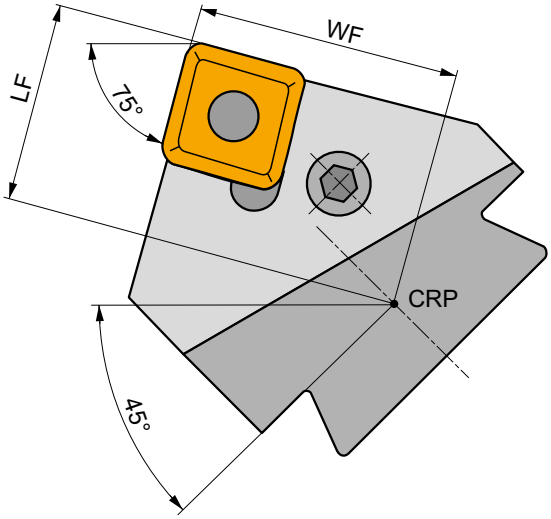
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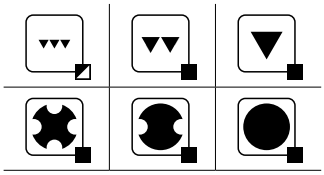


Cartucho Modular p/ Torneamento KHP, Fixação por Alavanca, Ângulo de Corte de 75º, para Pastilhas SN…

Cartucho de torneamento de fixação por alavanca à direita ou à esquerda com cauda de andorinha, ângulo de corte de 75 °, para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado sem esquadria, torneamento frontal, torneamento cónico e de chanfro com pastilhas negativas SN .. 19 ou 25. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.









	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	KHP-SBNR 19	47	36	-6	-6	1.51	GI026	PS50
	KHP-SBNR 25	47	36	-6	-6	1.47	GI027	PS60
	KHP-SBNR 2509	47	36	-6	-6	1.45	GI040	PS70
	KHP-SBNR 2512-A	47	36	-6	-6	1.71	GI162	PS72
L	KHP-SBNL 19	47	36	-6	-6	1.96	GI026	PS50
	KHP-SBNL 25	47	36	-6	-6	1.48	GI027	PS60
	KHP-SBNL 2509	47	36	-6	-6	1.46	GI040	PS70
	KHP-SBNL 2512-A	47	36	-6	-6	1.45	GI162	PS72

GI026	SN.. 1906..
GI027	SN.. 2507..
GI040	SN.. 2509..
GI162	SN.. 2512..

				Nm					
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5
PS70	SNU 250624	PU 06	US 47	8.0	M 12x1	36	NT 08	MT 08	HXK 5
PS72	SNU 250624	PU 10-N	PS 12040	8.0	M 12x1	40	NT 08	MT 08	HXK 5

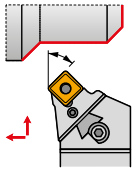
KHP-SSN(RL)

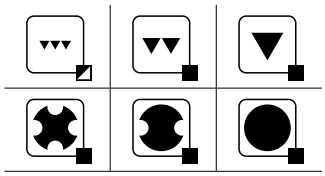
P M K

PRAMET

P

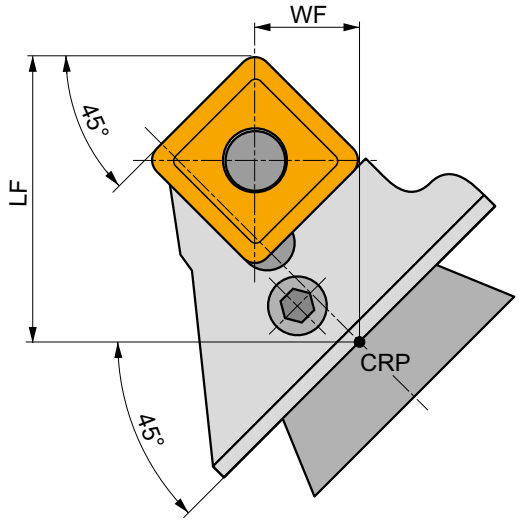


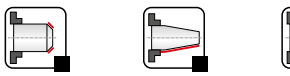




Cartucho Modular para Torneamento KHP, Fixação por Alavanca, Ângulo de Corte 45º, para Pastilhas SN...

Cartucho para torneamento de fixação por alavanca à direita ou à esquerda com cauda de andorinha, ângulo de corte de 45 °, para montagem na haste do porta-ferramentas DKH. Adequado para torneamento longitudinal pesado sem esquadria, torneamento frontal, de cópia, cónico e de chanfro com pastilhas negativas SN .. 19 ou 25. Porta-ferramentas tratado para maior tempo de vida útil da ferramenta.





	Produto	WF (mm)	LF (mm)	LAMS (°)	GAMO (°)	kg		
R	KHP-SSNR 19	15	45	-6	-6	1.28	GI026	PS50
R	KHP-SSNR 25	15	45	-6	-6	0.98	GI027	PS60
L	KHP-SSNL 19	15	45	-6	-6	1.03	GI026	PS50
L	KHP-SSNL 25	15	45	-6	-6	1.30	GI027	PS60

GI026	SN.. 1906..
GI027	SN.. 2507..

				Nm					
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5
PS60	SNU 250624	PU 06	US 39	8.0	M 10x1	33	NT 08	MT 08	HXK 5

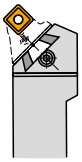
DKH(RL)

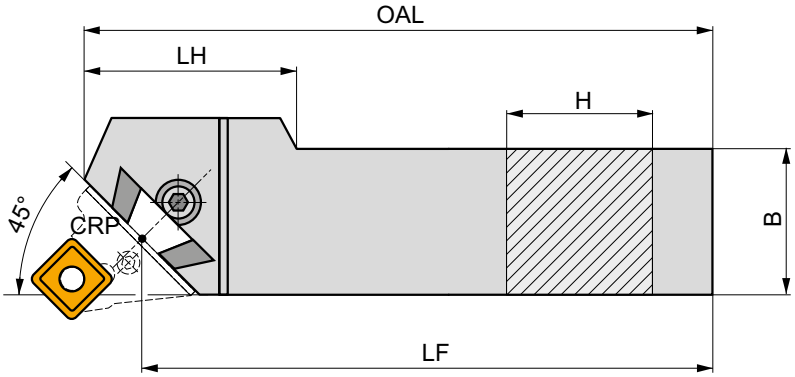
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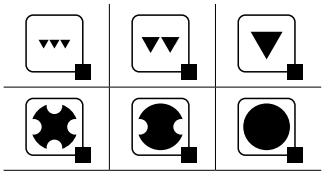


Porta-Ferramentas de Exterior para Cartuchos de Torneamento Pesado KHP/KHS

Porta-ferramentas modular à direita ou à esquerda com cauda de andorinha para cartuchos KHP / KHS. Adequado para aplicações de torneamento pesado. Disponível com hastes de 40x50 até 60x80 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







	Produto	H (mm)	B (mm)	LF (mm)	OAL (mm)	LH (mm)	kg		
R	**DKHR 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHR 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHR 6080 W-A	60	80	450	485	90	19.65	GI098	DKH10
L	**DKHL 4050 V**	40	50	400	425	100	7.10	GI098	DKH10
	DKHL 5060 W	50	60	450	475	110	11.30	GI098	DKH10
	DKHL 6080 W-A	60	80	450	485	90	19.28	GI098	DKH10

GI098	KHP	KHS

DKH10	SR 14	HXK 10

PSKN(RL) INT

P M K N S H

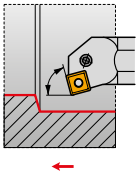
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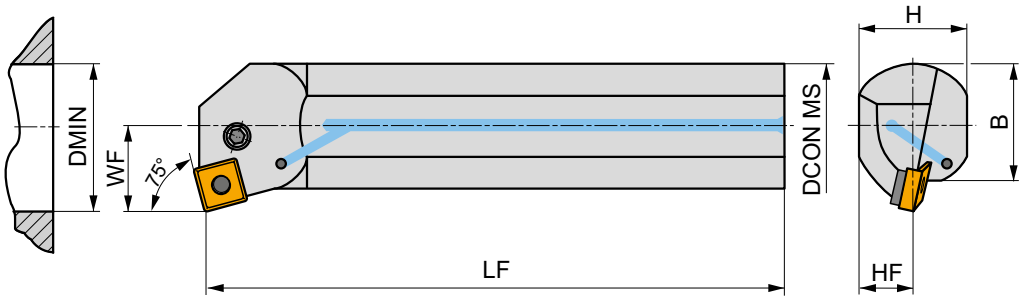
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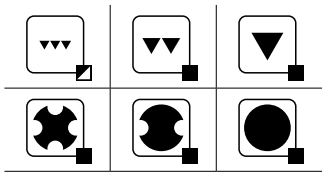


Porta-Ferramentas de Interior, Fixação por Alavanca, Ângulo de 75 °, para Pastilhas SN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por alavanca e refrigeração interna, e ângulo de corte de 75° para pastilhas SN .. 12, 15 e 19. Diâmetro interno mínimo de torneamento Ø40 mm. Para torneamento cónico interno e torneamento longitudinal sem esquadria, e chanfrar. Disponível com hastes de Ø32 até Ø60 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	**A32S-PSKNR 12**	32	40	22	30	30	250	-12	-6	✓	1.50	GI029	PS21
	A40T-PSKNR 15	40	50	27	38	38	300	-12	-6	✓	2.90	GI082	PS41
	A50U-PSKNR 15	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI082	PS40
	A50U-PSKNR 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI026	PS50
	A60V-PSKNR 19	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI026	PS50
L	**A32S-PSKNL 12**	32	40	22	30	30	250	-12	-6	✓	1.40	GI029	PS21
	A40T-PSKNL 15	40	50	27	38	38	300	-12	-6	✓	2.90	GI082	PS41
	A50U-PSKNL 15	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI082	PS40
	A50U-PSKNL 19	50	63	35	47	48.5	350	-12	-6	✓	5.20	GI026	PS50

GI026	SN.. 1906..
GI029	SN.. 1204..
GI082	SN.. 1506..

				Nm					
PS21	SNU 120312	PU 02	US 41	6.0	M 8x1	17	NT 05	MT 05	HXK 4
PS40	SNU 150312	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4
PS41	SNU 150312	PU 04	US 40	6.0	M 8x1	20.5	NT 07	MT 07	HXK 4
PS50	SNU 190416	PU 05	US 38	8.0	M 10x1	29	NT 06	MT 06	HXK 5

TN

16/ 22/ 27/ 33

PASTILHAS DE METAL DURO

TNMA



334

TNMG



335

TNMM



342

PASTILHAS CER E CBN

TNGA CER



343

TNGN CER



344

TNGA CBN



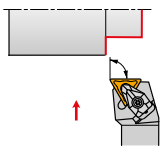
344

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
TNMM 160412E-OR	DTFNR 2525 M 16

TORNEAMENTO ISO - EXTERIOR

DTFN(RL) EXT

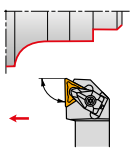
90°



	TN..
20×20 25×25	16 22
345	334 – 344

DTGN(RL) EXT

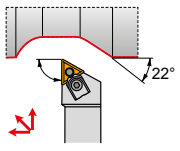
90°



	TN..
20×20 32×25	16 22
346	334 – 344

MTJN(RL) EXT

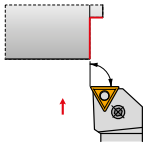
93°



	TN..
16×16 32×32	16 22
347	334 – 344

PTFN(RL) EXT

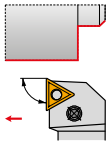
90°



	TN..
16×16 40×40	16 22 27
348	334 – 344

PTGN(RL) EXT

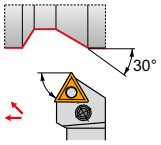
90°



	TN..
16×16 40×40	16 22 27
349	334 – 344

PTTN(RL) EXT

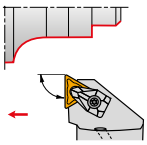
60°



	TN..
20×20 32×25	16 22
350	334 – 344

C.-DTJN(RL) EXT NEW

93°



	TN..
C4 C5	16
351	334 – 344

TN

16/ 22/ 27/ 33

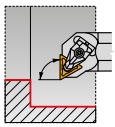
TORNEAMENTO ISO - INTERIOR

DTFN(RL) INT

90°

TN..

16
22



ØDmin 32/50

352

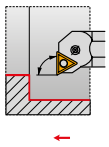
334 – 344

PTFN(RL) INT

90°

TN..

16
22



ØDmin 32/50

353

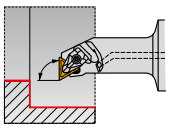
334 – 344

C.-DTFN(RL) INT NEW

91°

TN..

16



ØDmin 32

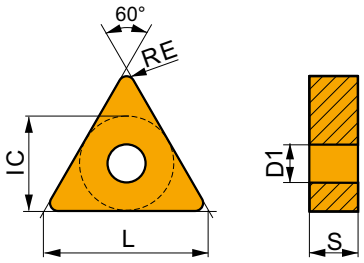
354

334 – 344

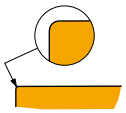
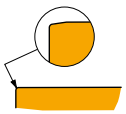
TNMA

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.50	4.76
2204	12.700	5.16	22.00	4.76



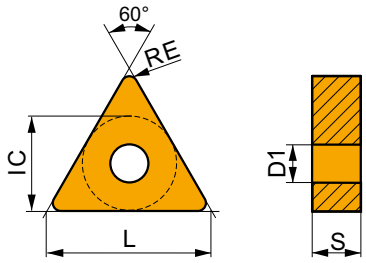
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			E																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
TNMA 160404	**T5305**	0.4	–	–	–	–	–	–	220	0.10	1.5	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	190	0.10	1.5	–	–	–	–	–	–	40	0.15	1.0
TNMA 160408	**T5305**	0.8	–	–	–	–	–	–	205	0.20	1.5	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	180	0.20	1.5	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	90	0.20	1.5	–	–	–	–	–	–	20	0.15	1.0
TNMA 160412	**T5305**	1.2	–	–	–	–	–	–	215	0.20	1.5	–	–	–	–	–	–	45	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	190	0.20	1.5	–	–	–	–	–	–	40	0.15	1.0
TNMA 220408	**T5305**	0.8	–	–	–	–	–	–	195	0.20	2.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	175	0.20	2.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	90	0.20	2.0	–	–	–	–	–	–	20	0.15	1.0
TNMA 220412	**T5305**	1.2	–	–	–	–	–	–	205	0.20	2.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	185	0.20	2.0	–	–	–	–	–	–	35	0.15	1.0
			S																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a ligeiramente interrompidos.																				
TNMA 160408S	**T5305**	0.8	–	–	–	–	–	–	205	0.20	1.5	–	–	–	–	–	–	40	0.15	1.0

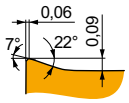
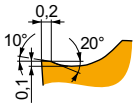
TNMG

PRAMET

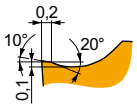
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.50	4.76
2204	12.700	5.16	22.00	4.76
2706	15.875	6.35	27.50	6.35
3309	19.050	7.94	33.00	9.525



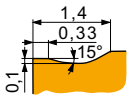
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
TNMG 160404E-FF	**T7325**	0.4	200	0.12	1.0	155	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	185	0.12	1.0	110	0.11	1.0	175	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	175	0.12	1.0	105	0.11	1.0	165	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	210	0.12	1.0	115	0.11	1.0	175	0.12	1.0	–	–	–	–	–	–	–	–	–
TNMG 160408E-FF	**T7325**	0.8	225	0.15	1.0	175	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	205	0.15	1.0	120	0.14	1.0	190	0.15	1.0	–	–	–	–	–	–	–	–	–
																				
			Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
TNMG 160404E-FM	**T7325**	0.4	160	0.20	1.7	120	0.18	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T7335	0.4	160	0.20	1.7	120	0.18	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8315	0.4	150	0.20	1.7	90	0.18	1.7	140	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T8330	0.4	145	0.20	1.7	85	0.18	1.7	135	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T8430	0.4	165	0.20	1.7	90	0.18	1.7	135	0.20	1.7	–	–	–	35	0.14	1.4	–	–	–
	T9310	0.4	245	0.20	1.7	–	–	–	230	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.4	220	0.20	1.7	–	–	–	205	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	200	0.20	1.7	120	0.18	1.7	190	0.20	1.7	–	–	–	45	0.20	1.4	–	–	–
	TT310	0.4	225	0.20	1.7	135	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160408E-FM	**T7325**	0.8	195	0.20	1.7	150	0.18	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T7335	0.8	190	0.20	1.7	145	0.18	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.8	180	0.20	1.7	105	0.18	1.7	170	0.20	1.7	–	–	–	45	0.16	1.4	–	–	–
	T8330	0.8	170	0.20	1.7	100	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T8430	0.8	195	0.20	1.7	105	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T9310	0.8	290	0.20	1.7	–	–	–	275	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9315	0.8	265	0.20	1.7	–	–	–	250	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.20	1.7	140	0.18	1.7	220	0.20	1.7	–	–	–	50	0.16	1.4	–	–	–
	TT310	0.8	270	0.20	1.7	160	0.18	1.7	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160412E-FM	**T7325**	1.2	190	0.25	1.7	145	0.23	1.7	–	–	–	–	–	–	60	0.18	1.4	–	–	–
	T8330	1.2	165	0.25	1.7	95	0.23	1.7	155	0.25	1.7	–	–	–	40	0.18	1.4	–	–	–
	T8430	1.2	185	0.25	1.7	100	0.23	1.7	150	0.25	1.7	–	–	–	40	0.18	1.4	–	–	–
	T9310	1.2	280	0.25	1.7	–	–	–	265	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9315	1.2	255	0.25	1.7	–	–	–	240	0.25	1.7	–	–	–	–	–	–	–	–	–
	T9325	1.2	225	0.25	1.7	135	0.23	1.7	210	0.25	1.7	–	–	–	50	0.18	1.4	–	–	–
TNMG 220404E-FM	**T8330**	0.4	145	0.20	1.7	85	0.18	1.7	135	0.20	1.7	–	–	–	35	0.20	1.4	–	–	–
	T8430	0.4	150	0.24	1.7	80	0.22	1.7	125	0.24	1.7	–	–	–	30	0.22	1.4	–	–	–
	T9315	0.4	220	0.20	1.7	–	–	–	205	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	200	0.20	1.7	120	0.18	1.7	190	0.20	1.7	–	–	–	45	0.20	1.4	–	–	–

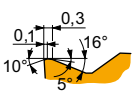
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				

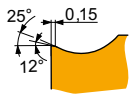
Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.

TNMG 220408E-FM	**T8330**	0.8	170	0.20	1.7	100	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T8430	0.8	195	0.20	1.7	105	0.18	1.7	160	0.20	1.7	–	–	–	40	0.16	1.4	–	–	–
	T9315	0.8	265	0.20	1.7	–	–	–	250	0.20	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	235	0.20	1.7	140	0.18	1.7	220	0.20	1.7	–	–	–	50	0.16	1.4	–	–	–
																				

Geometria KR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.

TNMG 160408E-KR	**T5305**	0.8	220	0.35	3.0	–	–	–	205	0.35	3.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	200	0.35	3.0	–	–	–	190	0.35	3.0	–	–	–	–	–	–	40	0.15	1.0
																				

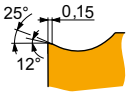
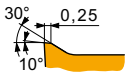
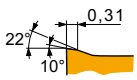
Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.

TNMG 160404E-M	**T5315**	0.4	215	0.20	1.6	–	–	–	200	0.20	1.6	–	–	–	–	–	–	40	0.15	1.0
	T9315	0.4	205	0.20	1.6	–	–	–	190	0.20	1.6	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.4	180	0.20	1.6	–	–	–	170	0.20	1.6	–	–	–	–	–	–	–	–	–
	T9335	0.4	155	0.20	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160408E-M	**T5305**	0.8	250	0.30	1.6	–	–	–	235	0.30	1.6	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	225	0.30	1.6	–	–	–	210	0.30	1.6	–	–	–	–	–	–	45	0.15	1.0
	T9310	0.8	220	0.30	1.6	–	–	–	205	0.30	1.6	–	–	–	–	–	–	40	0.15	1.0
	T9315	0.8	205	0.30	1.6	–	–	–	190	0.30	1.6	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	185	0.30	1.6	–	–	–	175	0.30	1.6	–	–	–	–	–	–	–	–	–
	T9335	0.8	160	0.30	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160412E-M	**T5315**	1.2	215	0.40	1.6	–	–	–	200	0.40	1.6	–	–	–	–	–	–	40	0.15	1.0
	T9315	1.2	190	0.40	1.6	–	–	–	180	0.40	1.6	–	–	–	–	–	–	35	0.15	1.0
	T9325	1.2	170	0.40	1.6	–	–	–	160	0.40	1.6	–	–	–	–	–	–	–	–	–
	T9335	1.2	145	0.40	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220408E-M	**T5305**	0.8	245	0.30	2.1	–	–	–	230	0.30	2.1	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	215	0.30	2.1	–	–	–	200	0.30	2.1	–	–	–	–	–	–	40	0.15	1.0
	T9310	0.8	215	0.30	2.1	–	–	–	200	0.30	2.1	–	–	–	–	–	–	40	0.15	1.0
	T9315	0.8	200	0.30	2.1	–	–	–	190	0.30	2.1	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.8	180	0.30	2.1	–	–	–	170	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.8	155	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220412E-M	**T5315**	1.2	205	0.40	2.1	–	–	–	190	0.40	2.1	–	–	–	–	–	–	40	0.15	1.0
	T9315	1.2	185	0.40	2.1	–	–	–	175	0.40	2.1	–	–	–	–	–	–	35	0.15	1.0
	T9325	1.2	165	0.40	2.1	–	–	–	155	0.40	2.1	–	–	–	–	–	–	–	–	–
	T9335	1.2	140	0.40	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				

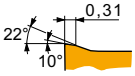
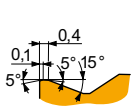
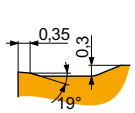
Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.

TNMG 160404E-NF	**HF7**	0.4	–	–	–	90	0.14	1.4	140	0.15	1.4	450	0.18	1.4	–	–	–	–	–	–
	T6310	0.4	150	0.17	1.4	105	0.15	1.4	120	0.17	1.4	450	0.20	1.4	45	0.15	1.1	–	–	–
	T7325	0.4	170	0.18	1.4	130	0.16	1.4	–	–	–	–	–	–	55	0.16	1.1	–	–	–
	T7335	0.4	165	0.18	1.4	125	0.16	1.4	–	–	–	–	–	–	50	0.16	1.1	–	–	–
	T8315	0.4	160	0.17	1.4	95	0.15	1.4	150	0.17	1.4	480	0.20	1.4	40	0.15	1.1	–	–	–
	T8330	0.4	155	0.17	1.4	90	0.15	1.4	145	0.17	1.4	465	0.20	1.4	35	0.15	1.1	–	–	–
	T8430	0.4	175	0.17	1.4	95	0.15	1.4	140	0.17	1.4	480	0.20	1.4	35	0.15	1.1	–	–	–
	T9315	0.4	255	0.15	1.4	–	–	–	240	0.15	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	215	0.18	1.4	125	0.16	1.4	200	0.18	1.4	–	–	–	45	0.16	1.1	–	–	–

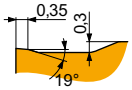
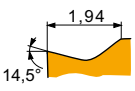
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																				
TNMG 160408E-NF	**HF7**	0.8	–	–	–	100	0.15	1.4	160	0.17	1.4	510	0.20	1.4	–	–	–	–	–	–
	T6310	0.8	180	0.18	1.4	125	0.16	1.4	145	0.18	1.4	540	0.22	1.4	50	0.16	1.1	–	–	–
	T7325	0.8	200	0.18	1.4	155	0.16	1.4	–	–	–	–	–	–	65	0.16	1.1	–	–	–
	T7335	0.8	195	0.18	1.4	150	0.16	1.4	–	–	–	–	–	–	60	0.16	1.1	–	–	–
	T8315	0.8	190	0.18	1.4	110	0.16	1.4	180	0.18	1.4	570	0.22	1.4	45	0.16	1.1	–	–	–
	T8330	0.8	180	0.18	1.4	105	0.16	1.4	170	0.18	1.4	540	0.22	1.4	45	0.16	1.1	–	–	–
	T8430	0.8	205	0.18	1.4	110	0.16	1.4	170	0.18	1.4	570	0.22	1.4	45	0.16	1.1	–	–	–
	T9315	0.8	290	0.17	1.4	–	–	–	275	0.17	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	255	0.18	1.4	150	0.16	1.4	240	0.18	1.4	–	–	–	55	0.16	1.1	–	–	–
																				
Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, em cortes contínuos.																				
TNMG 160404E-NM	**T7325**	0.4	170	0.20	1.9	130	0.18	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T7335	0.4	160	0.20	1.9	120	0.18	1.9	–	–	–	–	–	–	50	0.20	1.5	–	–	–
	T8315	0.4	160	0.20	1.9	95	0.18	1.9	–	–	–	480	0.24	1.9	40	0.20	1.5	–	–	–
	T8330	0.4	145	0.20	1.9	85	0.18	1.9	–	–	–	435	0.24	1.9	35	0.20	1.5	–	–	–
	T8430	0.4	170	0.20	1.9	90	0.18	1.9	–	–	–	465	0.24	1.9	35	0.20	1.5	–	–	–
	T9325	0.4	210	0.20	1.9	125	0.18	1.9	–	–	–	–	–	–	45	0.20	1.5	–	–	–
TNMG 160408E-NM	**T7325**	0.8	190	0.25	1.9	145	0.23	1.9	–	–	–	–	–	–	60	0.20	1.5	–	–	–
	T7335	0.8	180	0.25	1.9	140	0.23	1.9	–	–	–	–	–	–	55	0.20	1.5	–	–	–
	T8315	0.8	175	0.25	1.9	105	0.23	1.9	–	–	–	525	0.30	1.9	40	0.20	1.5	–	–	–
	T8330	0.8	165	0.25	1.9	95	0.23	1.9	–	–	–	495	0.30	1.9	40	0.20	1.5	–	–	–
	T8430	0.8	185	0.25	1.9	100	0.23	1.9	–	–	–	510	0.30	1.9	40	0.20	1.5	–	–	–
	T9315	0.8	250	0.25	1.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.25	1.9	135	0.23	1.9	–	–	–	–	–	–	50	0.20	1.5	–	–	–
TNMG 220408E-NM	**T7325**	0.8	190	0.25	1.7	145	0.23	1.7	–	–	–	–	–	–	60	0.20	1.4	–	–	–
	T7335	0.8	185	0.25	1.7	140	0.23	1.7	–	–	–	–	–	–	60	0.20	1.4	–	–	–
	T8315	0.8	175	0.25	1.7	105	0.23	1.7	–	–	–	525	0.30	1.7	40	0.20	1.4	–	–	–
	T8330	0.8	165	0.25	1.7	95	0.23	1.7	–	–	–	495	0.30	1.7	40	0.20	1.4	–	–	–
	T8430	0.8	185	0.25	1.7	100	0.23	1.7	–	–	–	510	0.30	1.7	40	0.20	1.4	–	–	–
	T9315	0.8	255	0.25	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	225	0.25	1.7	135	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
TNMG 220412E-NM	**T7325**	1.2	190	0.30	1.7	145	0.27	1.7	–	–	–	–	–	–	60	0.24	1.4	–	–	–
	T7335	1.2	180	0.30	2.1	140	0.27	2.1	–	–	–	–	–	–	55	0.24	1.7	–	–	–
	T9325	1.2	215	0.30	2.1	125	0.27	2.1	–	–	–	–	–	–	45	0.24	1.7	–	–	–
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
TNMG 160404E-NMR	**T6310**	0.4	130	0.20	1.7	90	0.18	1.7	–	–	–	–	–	–	35	0.18	1.4	–	–	–
	T7325	0.4	145	0.20	1.7	110	0.18	1.7	–	–	–	–	–	–	45	0.18	1.4	–	–	–
	T7335	0.4	145	0.20	1.7	110	0.18	1.7	–	–	–	–	–	–	45	0.18	1.4	–	–	–
	T8330	0.4	130	0.20	1.7	75	0.18	1.7	–	–	–	–	–	–	30	0.18	1.4	–	–	–
	T8430	0.4	145	0.20	1.7	80	0.18	1.7	–	–	–	–	–	–	30	0.18	1.4	–	–	–
	T9315	0.4	200	0.20	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	180	0.20	1.7	105	0.18	1.7	–	–	–	–	–	–	40	0.18	1.4	–	–	–
TNMG 160408E-NMR	**T6310**	0.8	140	0.30	1.7	100	0.27	1.7	–	–	–	–	–	–	40	0.24	1.4	–	–	–
	T7325	0.8	155	0.30	1.7	120	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T7335	0.8	145	0.30	1.7	110	0.27	1.7	–	–	–	–	–	–	45	0.24	1.4	–	–	–
	T8330	0.8	140	0.30	1.7	80	0.27	1.7	–	–	–	–	–	–	35	0.24	1.4	–	–	–
	T8430	0.8	150	0.30	1.7	80	0.27	1.7	–	–	–	–	–	–	30	0.24	1.4	–	–	–
	T9315	0.8	205	0.30	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.30	1.7	110	0.27	1.7	–	–	–	–	–	–	40	0.24	1.4	–	–	–

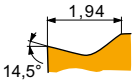
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																				
TNMG 160412E-NMR	**T7325**	1.2	◪ 165	0.30	1.7	■ 125	0.27	1.7	–	–	–	–	–	–	■ 50	0.24	1.4	–	–	–
	T9315	1.2	■ 215	0.30	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 195	0.30	1.7	■ 115	0.27	1.7	–	–	–	–	–	–	◪ 40	0.24	1.4	–	–	–
TNMG 220408E-NMR	**T6310**	0.8	■ 135	0.30	2.1	■ 95	0.27	2.1	–	–	–	–	–	–	■ 40	0.24	1.7	–	–	–
	T7325	0.8	◪ 150	0.30	2.1	■ 115	0.27	2.1	–	–	–	–	–	–	■ 45	0.24	1.7	–	–	–
	T7335	0.8	◪ 145	0.30	2.1	■ 110	0.27	2.1	–	–	–	–	–	–	■ 45	0.24	1.7	–	–	–
	T8330	0.8	■ 135	0.30	2.1	■ 80	0.27	2.1	–	–	–	–	–	–	◪ 30	0.24	1.7	–	–	–
	T8430	0.8	■ 145	0.30	2.1	■ 80	0.27	2.1	–	–	–	–	–	–	◪ 30	0.24	1.7	–	–	–
	T9315	0.8	■ 200	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 180	0.30	2.1	■ 105	0.27	2.1	–	–	–	–	–	–	◪ 40	0.24	1.7	–	–	–
TNMG 220412E-NMR	**T6310**	1.2	■ 140	0.30	2.1	■ 100	0.27	2.1	–	–	–	–	–	–	■ 40	0.24	1.7	–	–	–
	T7325	1.2	◪ 160	0.30	2.1	■ 120	0.27	2.1	–	–	–	–	–	–	■ 50	0.24	1.7	–	–	–
	T9315	1.2	■ 210	0.30	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 190	0.30	2.1	■ 110	0.27	2.1	–	–	–	–	–	–	◪ 40	0.24	1.7	–	–	–
																				
Geometria R para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TNMG 160408E-R	**T5305**	0.8	◪ 210	0.40	3.0	–	–	–	■ 195	0.40	3.0	–	–	–	–	–	–	◪ 40	0.15	1.0
	T5315	0.8	◪ 185	0.40	3.0	–	–	–	■ 175	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9310	0.8	■ 185	0.40	3.0	–	–	–	◪ 175	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	0.8	■ 165	0.40	3.0	–	–	–	◪ 155	0.40	3.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.8	■ 150	0.40	3.0	–	–	–	◪ 140	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 130	0.40	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 160412E-R	**T5315**	1.2	◪ 195	0.40	3.0	–	–	–	■ 185	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9310	1.2	■ 195	0.40	3.0	–	–	–	◪ 185	0.40	3.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.2	■ 160	0.40	3.0	–	–	–	◪ 150	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 140	0.40	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220408E-R	**T9315**	0.8	■ 165	0.40	4.0	–	–	–	◪ 155	0.40	4.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.8	■ 145	0.40	4.0	–	–	–	◪ 135	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 125	0.40	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220412E-R	**T9310**	1.2	■ 185	0.40	4.0	–	–	–	◪ 175	0.40	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9315	1.2	■ 170	0.40	4.0	–	–	–	◪ 160	0.40	4.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	1.2	■ 155	0.40	4.0	–	–	–	◪ 145	0.40	4.0	–	–	–	–	–	–	–	–	–
TNMG 220416E-R	**T9315**	1.6	■ 180	0.40	4.0	–	–	–	◪ 170	0.40	4.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	1.6	■ 165	0.40	4.0	–	–	–	◪ 155	0.40	4.0	–	–	–	–	–	–	–	–	–
																				
Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TNMG 160408E-RM	**T5305**	0.8	◪ 245	0.40	3.0	–	–	–	◪ 230	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 215	0.40	3.0	–	–	–	◪ 200	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 155	0.40	3.0	◪ 120	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 145	0.40	3.0	◪ 110	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 210	0.40	3.0	–	–	–	◪ 195	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 195	0.40	3.0	–	–	–	◪ 185	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 175	0.40	3.0	◪ 105	0.36	3.0	◪ 165	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 150	0.40	3.0	◪ 90	0.36	3.0	–	–	–	–	–	–	–	–	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

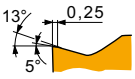
Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			 Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
TNMG 160412E-RM	**T5305**	1.2	◪ 255	0.40	3.0		–	–	–	◪ 240	0.40	3.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 225	0.40	3.0		–	–	–	◪ 210	0.40	3.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 165	0.40	3.0	◪ 125	0.36	3.0		–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 155	0.40	3.0	◪ 120	0.36	3.0		–	–	–	–	–	–	–	–	–	–	–	–
	T8330	1.2	■ 145	0.40	3.0	◪ 85	0.36	3.0	◪ 135	0.40	3.0	–	–	–	–	–	–	–	–	–	–
	T8430	1.2	■ 150	0.40	3.0	◪ 80	0.36	3.0	◪ 125	0.40	3.0	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 205	0.40	3.0		–	–	–	◪ 190	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 185	0.40	3.0	◪ 110	0.36	3.0	◪ 175	0.40	3.0	–	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 160	0.40	3.0	◪ 95	0.36	3.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220408E-RM	**T5305**	0.8	◪ 235	0.40	4.0		–	–	–	◪ 220	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	◪ 210	0.40	4.0		–	–	–	◪ 195	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	◪ 150	0.40	4.0	◪ 115	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	◪ 140	0.40	4.0	◪ 105	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T9310	0.8	■ 200	0.40	4.0		–	–	–	◪ 190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 190	0.40	4.0		–	–	–	◪ 180	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 170	0.40	4.0	◪ 100	0.36	4.0	◪ 160	0.40	4.0	–	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 145	0.40	4.0	◪ 85	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220412E-RM	**T5305**	1.2	◪ 245	0.40	4.0		–	–	–	◪ 230	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	◪ 220	0.40	4.0		–	–	–	◪ 205	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	◪ 160	0.40	4.0	◪ 120	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	◪ 150	0.40	4.0	◪ 115	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 200	0.40	4.0		–	–	–	◪ 190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 180	0.40	4.0	◪ 105	0.36	4.0	◪ 170	0.40	4.0	–	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 155	0.40	4.0	◪ 90	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 220416E-RM	**T7325**	1.6	◪ 165	0.40	4.0	◪ 125	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 210	0.40	4.0		–	–	–	◪ 195	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 185	0.40	4.0	◪ 110	0.36	4.0	◪ 175	0.40	4.0	–	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 160	0.40	4.0	◪ 95	0.36	4.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 270612E-RM	**T7325**	1.2	◪ 110	0.40	6.0	◪ 85	0.36	6.0		–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 120	0.40	6.0	◪ 70	0.36	6.0	◪ 110	0.40	6.0	–	–	–	–	–	–	–	–	–	–
TNMG 270616E-RM	**T7325**	1.6	◪ 115	0.40	6.0	◪ 85	0.36	6.0		–	–	–	–	–	–	–	–	–	–	–	–
	T9226	1.6	■ 115	0.40	6.0	◪ 65	0.36	6.0	◪ 105	0.40	6.0	–	–	–	–	–	–	–	–	–	–
	T9315	1.6	■ 135	0.40	6.0		–	–	–	◪ 125	0.40	6.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	■ 125	0.40	6.0	◪ 75	0.36	6.0	◪ 115	0.40	6.0	–	–	–	–	–	–	–	–	–	–
	T9335	1.6	■ 100	0.40	6.0	◪ 60	0.36	6.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 270624E-RM	**T7325**	2.4	◪ 115	0.50	6.0	◪ 85	0.45	6.0		–	–	–	–	–	–	–	–	–	–	–	–
	T9325	2.4	■ 120	0.50	6.0	◪ 70	0.45	6.0	◪ 110	0.50	6.0	–	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 95	0.50	6.0	◪ 55	0.45	6.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 270632E-RM	**T9335**	3.2	■ 90	0.60	6.0	◪ 50	0.54	6.0		–	–	–	–	–	–	–	–	–	–	–	–
TNMG 330924E-RM	**T9226**	2.4	■ 100	0.50	10.0	◪ 60	0.45	10.0	◪ 95	0.50	10.0	–	–	–	–	–	–	–	–	–	–
	T9335	2.4	■ 90	0.50	10.0	◪ 50	0.45	10.0		–	–	–	–	–	–	–	–	–	–	–	–
			 Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.																	
TNMG 160404E-SF	**H07**	0.4	–	–	–	◪ 75	0.14	1.3	■ 120	0.15	1.3	◪ 390	0.18	1.3	■ 35	0.12	1.0	–	–	–	–
	T6310	0.4	■ 150	0.15	1.3	■ 105	0.14	1.3	■ 120	0.15	1.3	◪ 450	0.18	1.3	■ 45	0.12	1.0	■ 30	0.15	1.0	–
	T7325	0.4	◪ 170	0.17	1.3	■ 130	0.15	1.3		–	–	–	–	–	–	■ 55	0.15	1.0	–	–	–
	T7335	0.4	◪ 165	0.17	1.3	■ 125	0.15	1.3		–	–	–	–	–	–	■ 50	0.15	1.0	–	–	–
	T8315	0.4	◪ 160	0.15	1.3	■ 95	0.14	1.3	■ 150	0.15	1.3	◪ 480	0.18	1.3	◪ 40	0.12	1.0	■ 30	0.15	1.0	–
	T8330	0.4	■ 150	0.15	1.3	■ 90	0.14	1.3	■ 140	0.15	1.3	◪ 450	0.18	1.3	◪ 35	0.12	1.0	◪ 30	0.15	1.0	–
	T8430	0.4	■ 180	0.15	1.3	■ 95	0.14	1.3	◪ 145	0.15	1.3	◪ 495	0.18	1.3	◪ 35	0.12	1.0	◪ 30	0.15	1.0	–
	T9315	0.4	■ 245	0.15	1.3		–	–	–	◪ 230	0.15	1.3	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	0.4	■ 210	0.17	1.3	■ 125	0.15	1.3	◪ 195	0.17	1.3	–	–	–	◪ 45	0.15	1.0	–	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				

Geometria SF com desenho positivo para operações de maquinação de acabamento fino de paredes finas e cortes contínuos.

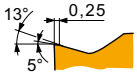
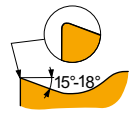
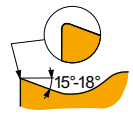
TNMG 160408E-SF	**H07**	0.8	–	–	–	85	0.15	1.3	140	0.17	1.3	445	0.20	1.3	45	0.14	1.0	–	–	–
	T6310	0.8	175	0.17	1.3	125	0.15	1.3	140	0.17	1.3	525	0.20	1.3	50	0.14	1.0	35	0.15	1.0
	T7325	0.8	200	0.17	1.3	155	0.15	1.3	–	–	–	–	–	–	65	0.15	1.0	–	–	–
	T7335	0.8	195	0.17	1.3	150	0.15	1.3	–	–	–	–	–	–	60	0.15	1.0	–	–	–
	T8315	0.8	185	0.17	1.3	110	0.15	1.3	175	0.17	1.3	555	0.20	1.3	45	0.14	1.0	35	0.15	1.0
	T8330	0.8	175	0.17	1.3	105	0.15	1.3	165	0.17	1.3	525	0.20	1.3	40	0.14	1.0	35	0.15	1.0
	T8430	0.8	205	0.17	1.3	110	0.15	1.3	170	0.17	1.3	570	0.20	1.3	45	0.14	1.0	35	0.15	1.0
	T9315	0.8	275	0.17	1.3	–	–	–	260	0.17	1.3	–	–	–	–	–	–	55	0.15	1.0
	T9325	0.8	250	0.17	1.3	150	0.15	1.3	235	0.17	1.3	–	–	–	55	0.15	1.0	–	–	–
TNMG 160412E-SF	**T6310**	1.2	160	0.30	1.3	115	0.27	1.3	125	0.30	1.3	480	0.36	1.3	45	0.21	1.0	30	0.15	1.0
	T7325	1.2	175	0.30	1.3	135	0.27	1.3	–	–	–	–	–	–	55	0.21	1.0	–	–	–
	T9325	1.2	205	0.30	1.3	120	0.27	1.3	190	0.30	1.3	–	–	–	45	0.21	1.0	–	–	–
TNMG 220404E-SF	**T6310**	0.4	145	0.17	1.7	100	0.15	1.7	115	0.17	1.7	435	0.20	1.7	40	0.15	1.4	25	0.15	1.0
	T7325	0.4	160	0.17	1.7	120	0.15	1.7	–	–	–	–	–	–	50	0.15	1.4	–	–	–
	T9325	0.4	205	0.17	1.7	120	0.15	1.7	190	0.17	1.7	–	–	–	45	0.15	1.4	–	–	–
TNMG 220408E-SF	**T6310**	0.8	170	0.17	1.7	120	0.15	1.7	135	0.17	1.7	510	0.20	1.7	50	0.15	1.4	30	0.15	1.0
	T8315	0.8	180	0.17	1.7	105	0.15	1.7	170	0.17	1.7	540	0.20	1.7	45	0.15	1.4	35	0.15	1.0
	T8430	0.8	195	0.17	1.7	105	0.15	1.7	160	0.17	1.7	540	0.20	1.7	40	0.15	1.4	30	0.15	1.0
TNMG 220412E-SF	**T6310**	1.2	155	0.30	1.7	110	0.27	1.7	125	0.30	1.7	465	0.36	1.7	45	0.21	1.4	30	0.15	1.0
	T7325	1.2	170	0.30	1.7	130	0.27	1.7	–	–	–	–	–	–	55	0.21	1.4	–	–	–
	T9325	1.2	205	0.30	1.7	120	0.27	1.7	190	0.30	1.7	–	–	–	45	0.21	1.4	–	–	–

Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.

TNMG 160404E-SM	**T6310**	0.4	135	0.22	1.7	95	0.20	1.7	105	0.22	1.7	405	0.26	1.7	40	0.20	1.4	25	0.15	1.0
	T7325	0.4	150	0.22	1.7	115	0.20	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T7335	0.4	145	0.22	1.7	110	0.20	1.7	–	–	–	–	–	–	45	0.20	1.4	–	–	–
	T8330	0.4	135	0.22	1.7	80	0.20	1.7	125	0.22	1.7	405	0.26	1.7	30	0.20	1.4	25	0.15	1.0
	T8430	0.4	145	0.22	1.7	80	0.20	1.7	120	0.22	1.7	405	0.26	1.7	30	0.20	1.4	25	0.15	1.0
	T9315	0.4	210	0.20	1.7	–	–	–	195	0.20	1.7	–	–	–	–	–	–	40	0.15	1.0
	T9325	0.4	185	0.22	1.7	110	0.20	1.7	175	0.22	1.7	–	–	–	40	0.20	1.4	–	–	–
TNMG 160408E-SM	**T6310**	0.8	150	0.25	1.7	105	0.23	1.7	120	0.25	1.7	450	0.30	1.7	45	0.20	1.4	30	0.15	1.0
	T7325	0.8	170	0.25	1.7	130	0.23	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T7335	0.8	165	0.25	1.7	125	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8330	0.8	150	0.25	1.7	90	0.23	1.7	140	0.25	1.7	450	0.30	1.7	35	0.20	1.4	30	0.15	1.0
	T8430	0.8	170	0.25	1.7	90	0.23	1.7	135	0.25	1.7	465	0.30	1.7	35	0.20	1.4	25	0.15	1.0
	T9315	0.8	230	0.25	1.7	–	–	–	215	0.25	1.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.25	1.7	120	0.23	1.7	190	0.25	1.7	–	–	–	45	0.20	1.4	–	–	–
TNMG 160412E-SM	**T6310**	1.2	155	0.30	1.7	110	0.27	1.7	125	0.30	1.7	465	0.36	1.7	45	0.24	1.4	30	0.15	1.0
	T7325	1.2	170	0.30	1.7	130	0.27	1.7	–	–	–	–	–	–	55	0.24	1.4	–	–	–
	T7335	1.2	165	0.30	1.7	125	0.27	1.7	–	–	–	–	–	–	50	0.24	1.4	–	–	–
	T9325	1.2	205	0.30	1.7	120	0.27	1.7	190	0.30	1.7	–	–	–	45	0.24	1.4	–	–	–
TNMG 220404E-SM	**T6310**	0.4	130	0.24	1.7	90	0.22	1.7	100	0.24	1.7	390	0.29	1.7	35	0.22	1.4	25	0.15	1.0
	T7325	0.4	145	0.24	1.7	110	0.22	1.7	–	–	–	–	–	–	45	0.22	1.4	–	–	–
	T8330	0.4	130	0.24	1.7	75	0.22	1.7	120	0.24	1.7	390	0.29	1.7	30	0.22	1.4	25	0.15	1.0
	T8430	0.4	145	0.24	1.7	80	0.22	1.7	120	0.24	1.7	405	0.29	1.7	30	0.22	1.4	25	0.15	1.0
	T9325	0.4	175	0.24	1.7	105	0.22	1.7	165	0.24	1.7	–	–	–	35	0.22	1.4	–	–	–
TNMG 220408E-SM	**T6310**	0.8	150	0.25	1.7	105	0.23	1.7	120	0.25	1.7	450	0.30	1.7	45	0.20	1.4	30	0.15	1.0
	T7325	0.8	170	0.25	1.7	130	0.23	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T7335	0.8	165	0.25	1.7	125	0.23	1.7	–	–	–	–	–	–	50	0.20	1.4	–	–	–
	T8330	0.8	150	0.25	1.7	90	0.23	1.7	140	0.25	1.7	450	0.30	1.7	35	0.20	1.4	30	0.15	1.0
	T8430	0.8	170	0.25	1.7	90	0.23	1.7	135	0.25	1.7	465	0.30	1.7	35	0.20	1.4	25	0.15	1.0
	T9315	0.8	230	0.25	1.7	–	–	–	215	0.25	1.7	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.25	1.7	120	0.23	1.7	190	0.25	1.7	–	–	–	45	0.20	1.4	–	–	–

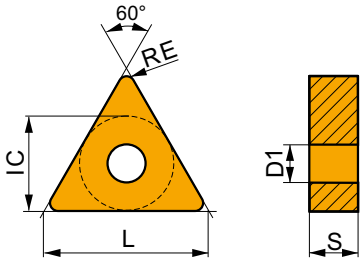
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
		(mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
TNMG 220412E-SM	**T6310**	1.2	■ 155	0.30	1.7	■ 110	0.27	1.7	■ 125	0.30	1.7	◪ 465	0.36	1.7	■ 45	0.24	1.4	◪ 30	0.15	1.0
	T7325	1.2	◪ 170	0.30	1.7	■ 130	0.27	1.7	–	–	–	–	–	–	■ 55	0.24	1.4	–	–	–
	T7335	1.2	◪ 165	0.30	1.7	■ 125	0.27	1.7	–	–	–	–	–	–	■ 50	0.24	1.4	–	–	–
	T9315	1.2	■ 225	0.30	1.7	–	–	–	◪ 210	0.30	1.7	–	–	–	–	–	–	◪ 45	0.15	1.0
	T9325	1.2	■ 205	0.30	1.7	■ 120	0.27	1.7	◪ 190	0.30	1.7	–	–	–	◪ 45	0.24	1.4	–	–	–
																				
			Geometria ER-SI com desenho positivo à direita para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																	
TNMG 160404ER-SI	**T7325**	0.4	◪ 190	0.20	1.5	■ 145	0.18	1.5	–	–	–	–	–	–	◪ 60	0.18	1.2	–	–	–
	T7335	0.4	◪ 180	0.20	1.5	■ 140	0.18	1.5	–	–	–	–	–	–	◪ 55	0.18	1.2	–	–	–
	T8315	0.4	◪ 175	0.20	1.5	■ 105	0.18	1.5	–	–	–	◪ 525	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8330	0.4	■ 165	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 495	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8430	0.4	■ 185	0.20	1.5	■ 100	0.18	1.5	–	–	–	◪ 510	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T9325	0.4	■ 230	0.20	1.5	■ 135	0.18	1.5	–	–	–	–	–	–	◪ 50	0.18	1.2	–	–	–
	T9335	0.4	■ 195	0.20	1.5	■ 115	0.18	1.5	–	–	–	–	–	–	◪ 40	0.18	1.2	–	–	–
TNMG 160408ER-SI	**T7325**	0.8	◪ 190	0.35	1.5	■ 145	0.32	1.5	–	–	–	–	–	–	◪ 60	0.25	1.2	–	–	–
	T7335	0.8	◪ 180	0.35	1.5	■ 140	0.32	1.5	–	–	–	–	–	–	◪ 55	0.25	1.2	–	–	–
	T8315	0.8	◪ 175	0.35	1.5	■ 105	0.32	1.5	–	–	–	◪ 525	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8330	0.8	■ 170	0.35	1.5	■ 100	0.32	1.5	–	–	–	◪ 510	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8430	0.8	■ 180	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 495	0.42	1.5	◪ 35	0.25	1.2	–	–	–
	T9325	0.8	■ 215	0.35	1.5	■ 125	0.32	1.5	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	T9335	0.8	■ 190	0.35	1.5	■ 110	0.32	1.5	–	–	–	–	–	–	◪ 40	0.25	1.2	–	–	–
																				
			Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos.																	
TNMG 160404EL-SI	**T7325**	0.4	◪ 190	0.20	1.5	■ 145	0.18	1.5	–	–	–	–	–	–	◪ 60	0.18	1.2	–	–	–
	T7335	0.4	◪ 180	0.20	1.5	■ 140	0.18	1.5	–	–	–	–	–	–	◪ 55	0.18	1.2	–	–	–
	T8315	0.4	◪ 175	0.20	1.5	■ 105	0.18	1.5	–	–	–	◪ 525	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8330	0.4	■ 165	0.20	1.5	■ 95	0.18	1.5	–	–	–	◪ 495	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T8430	0.4	■ 185	0.20	1.5	■ 100	0.18	1.5	–	–	–	◪ 510	0.24	1.5	◪ 40	0.18	1.2	–	–	–
	T9325	0.4	■ 230	0.20	1.5	■ 135	0.18	1.5	–	–	–	–	–	–	◪ 50	0.18	1.2	–	–	–
	T9335	0.4	■ 195	0.20	1.5	■ 115	0.18	1.5	–	–	–	–	–	–	◪ 40	0.18	1.2	–	–	–
TNMG 160408EL-SI	**T7325**	0.8	◪ 190	0.35	1.5	■ 145	0.32	1.5	–	–	–	–	–	–	◪ 60	0.25	1.2	–	–	–
	T7335	0.8	◪ 180	0.35	1.5	■ 140	0.32	1.5	–	–	–	–	–	–	◪ 55	0.25	1.2	–	–	–
	T8315	0.8	◪ 175	0.35	1.5	■ 105	0.32	1.5	–	–	–	◪ 525	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8330	0.8	■ 170	0.35	1.5	■ 100	0.32	1.5	–	–	–	◪ 510	0.42	1.5	◪ 40	0.25	1.2	–	–	–
	T8430	0.8	■ 180	0.35	1.5	■ 95	0.32	1.5	–	–	–	◪ 495	0.42	1.5	◪ 35	0.25	1.2	–	–	–
	T9325	0.8	■ 215	0.35	1.5	■ 125	0.32	1.5	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	T9335	0.8	■ 190	0.35	1.5	■ 110	0.32	1.5	–	–	–	–	–	–	◪ 40	0.25	1.2	–	–	–

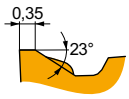
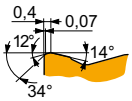
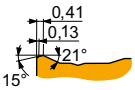
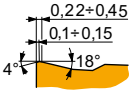
TNMM

PRAMET

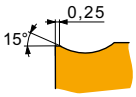
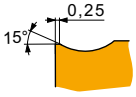
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.50	4.76
2204	12.700	5.16	22.00	4.76
2706	15.875	6.35	27.50	6.35



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
Geometria DR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TNMM 160408E-DR	**T9325**	0.8	175	0.40	4.0	105	0.36	4.0	165	0.40	4.0	–	–	–	–	–	–	–	–	–
TNMM 220408E-DR	**T9325**	0.8	175	0.40	4.0	105	0.36	4.0	165	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	155	0.40	4.0	90	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMM 220412E-DR	**T9315**	1.2	205	0.40	4.0	–	–	–	190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	185	0.40	4.0	110	0.36	4.0	175	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	160	0.40	4.0	95	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMM 220416E-DR	**T9325**	1.6	195	0.40	4.0	115	0.36	4.0	185	0.40	4.0	–	–	–	–	–	–	–	–	–
TNMM 270616E-DR	**T9325**	1.6	135	0.40	4.0	80	0.36	4.0	125	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	110	0.40	4.0	65	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria HR para operações de maquinação de desbaste a desbaste pesado, e cortes contínuos a interrompidos.																				
TNMM 270616E-HR	**T9325**	1.6	90	0.60	7.0	50	0.54	7.0	85	0.60	7.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	75	0.60	7.0	45	0.54	7.0	–	–	–	–	–	–	–	–	–	–	–	–
TNMM 270624E-HR	**T9226**	2.4	80	0.65	7.0	45	0.59	7.0	75	0.65	7.0	–	–	–	–	–	–	–	–	–
																				
Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TNMM 160408E-NR2	**T9325**	0.8	165	0.40	3.0	95	0.36	3.0	155	0.40	3.0	–	–	–	35	0.28	2.4	–	–	–
TNMM 220408E-NR2	**T7325**	0.8	145	0.40	4.0	110	0.36	4.0	–	–	–	–	–	–	45	0.28	3.2	–	–	–
	T9325	0.8	160	0.40	4.0	95	0.36	4.0	150	0.40	4.0	–	–	–	35	0.28	3.2	–	–	–
TNMM 220412E-NR2	**T7325**	1.2	150	0.40	4.0	115	0.36	4.0	–	–	–	–	–	–	45	0.32	3.2	–	–	–
	T8330	1.2	135	0.40	4.0	80	0.36	4.0	125	0.40	4.0	–	–	–	30	0.32	3.2	–	–	–
	T8430	1.2	140	0.40	4.0	75	0.36	4.0	115	0.40	4.0	–	–	–	30	0.32	3.2	–	–	–
	T9325	1.2	170	0.40	4.0	100	0.36	4.0	160	0.40	4.0	–	–	–	35	0.32	3.2	–	–	–
																				
Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
TNMM 160408E-OR	**T9315**	0.8	185	0.40	3.0	–	–	–	175	0.40	3.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	165	0.40	3.0	95	0.36	3.0	155	0.40	3.0	–	–	–	35	0.28	2.4	–	–	–
TNMM 160412E-OR	**T9325**	1.2	175	0.40	3.0	105	0.36	3.0	165	0.40	3.0	–	–	–	35	0.32	2.4	–	–	–
TNMM 220408E-OR	**T9315**	0.8	180	0.40	4.0	–	–	–	170	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	160	0.40	4.0	95	0.36	4.0	150	0.40	4.0	–	–	–	35	0.32	3.2	–	–	–
	T9335	0.8	140	0.40	4.0	80	0.36	4.0	–	–	–	–	–	–	30	0.32	3.2	–	–	–
TNMM 220412E-OR	**T9325**	1.2	175	0.40	3.0	105	0.36	3.0	165	0.40	3.0	–	–	–	35	0.32	2.4	–	–	–
	T9335	1.2	150	0.40	3.0	90	0.36	3.0	–	–	–	–	–	–	30	0.32	2.4	–	–	–

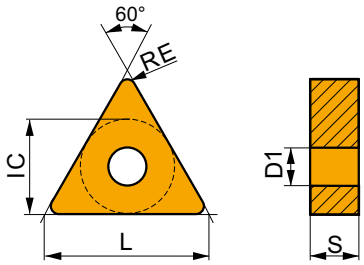
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
																				
			Geometria ER com desenho à direita para operações de maquinação média a semi-desbaste e cortes contínuos.																	
TNMM 220412ER	**T9335**	1.2	■ 190	0.35	2.1	■ 110	0.32	2.1	–	–	–	–	–	–	◪ 40	0.25	1.7	–	–	–
																				
																				
			Geometria EL com desenho à esquerda para operações de maquinação média a semi-desbaste, e cortes contínuos.																	
TNMM 220412EL	**T9335**	1.2	■ 190	0.35	2.1	■ 110	0.32	2.1	–	–	–	–	–	–	◪ 40	0.25	1.7	–	–	–

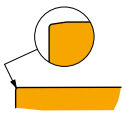
TNGA CER

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.50	4.76



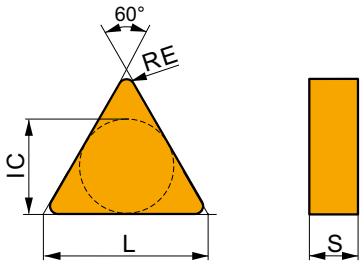
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
																				
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
TNGA 160408 T01020	**TC100**	0.8	–	–	–	–	–	–	◪ 475	0.20	1.5	–	–	–	–	–	–	–	–	–
TNGA 160412 T01020	**TC100**	1.2	–	–	–	–	–	–	◪ 500	0.20	1.5	–	–	–	–	–	–	–	–	–

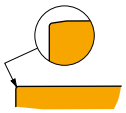
TNGN CER

PRAMET

	IC (mm)	L (mm)	S (mm)
1604	9.525	16.50	4.76
1607	9.525	16.50	7.94



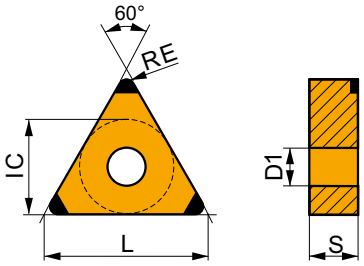
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
  HSC T																				
Para operações de maquinação com altas velocidades e cortes contínuos.																				
TNGN 160408 T01020	**TC100**	0.8	–	–	–	–	–	–	475	0.20	1.5	–	–	–	–	–	–	–	–	–
TNGN 160412 T01020	**TC100**	1.2	–	–	–	–	–	–	500	0.20	1.5	–	–	–	–	–	–	–	–	–
TNGN 160708 T02020	**TC100**	0.8	–	–	–	–	–	–	475	0.20	1.5	–	–	–	–	–	–	–	–	–

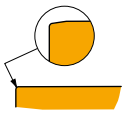
TNGA CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.50	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
  HSC S																				
Para operações de maquinação de acabamento, e cortes contínuos.																				
TNGA 160408S01020C	**TB310**	0.8	–	–	–	–	–	–	450	0.15	0.6	–	–	–	115	0.11	0.5	95	0.15	1.0

DTFN(RL) EXT

P M K N S H

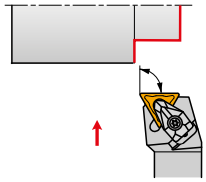
PRAMET

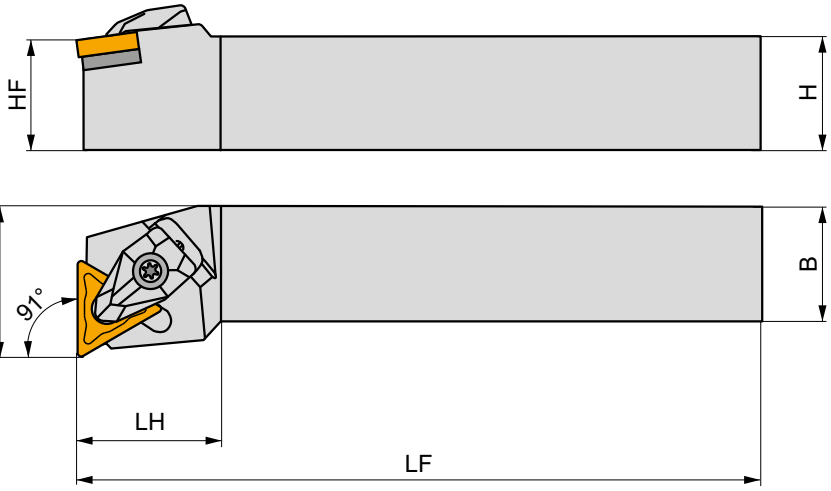
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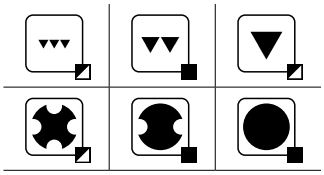


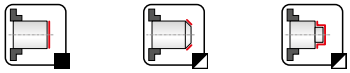
Porta-Ferramenta de Exterior, Fixação Dupla, Ângulo de 91 ° (Frontal), para Pastilhas TN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de corte de 91 °. Adequado para torneamento frontal com esquadria e chanfrar com pastilhas negativas TN .. de tamanho 16 ou 22. Disponível nas hastes 20x20 e 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**DTFNR 2020 K 16**	20	20	20	25	125	23.6	-6	-6	0.43	GI024	DT16
	DTFNR 2525 M 16	25	25	25	32	150	23.6	-6	-6	0.77	GI024	DT16
	DTFNR 2525 M 22	25	25	25	32	150	30.5	-6	-6	0.79	GI025	DT22
L	**DTFNL 2020 K 16**	20	20	20	25	125	23.6	-6	-6	0.43	GI024	DT16
	DTFNL 2525 M 16	25	25	25	32	150	23.6	-6	-6	0.76	GI024	DT16
	DTFNL 2525 M 22	25	25	25	32	150	30.5	-6	-6	0.79	GI025	DT22

GI024	TN.. 1604..
GI025	TN.. 2204..

		Nm			
DT16	DCS 09	1.7	DTS 315-02	US 2004-T09P	FLAG T09P
DT22	DCS 12	3.9	DTS 315-04	US 2002-T15P	FLAG T15P/3,5

DTGN(RL) EXT

P M K N S H

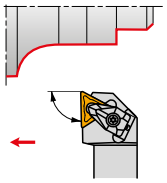
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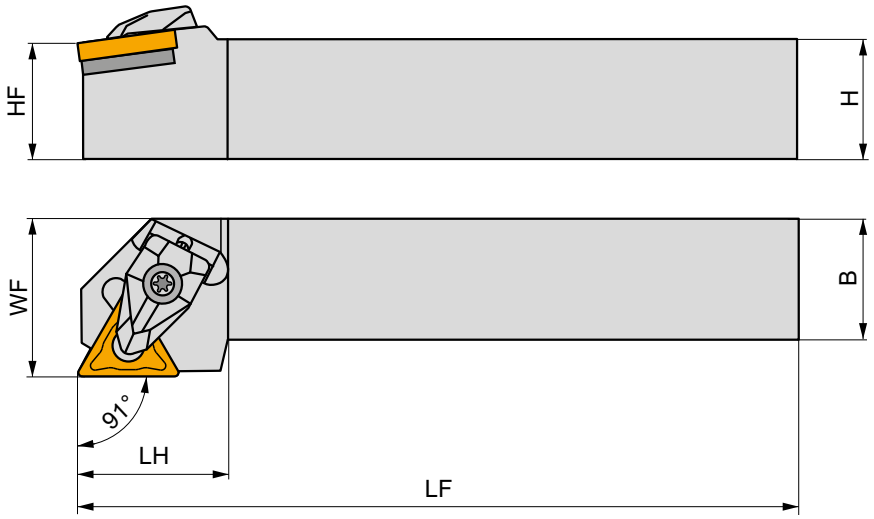
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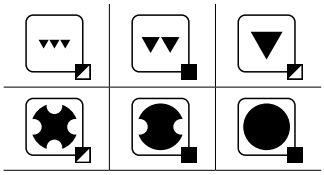


Porta-Ferramenta de Exterior, Fixação Dupla, Ângulo de 91 °, para Pastilhas TN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de corte de 91 °. Adequado para torneamento longitudinal com esquadria, torneamento cónico e chanfrar com pastilhas negativas TN...de tamanho 16 ou 22. Disponível em hastes de 20x20 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	DTGNR 2020 K 16	20	20	20	25	125	25.4	-6	-6	0.43	GI024	DT16
	DTGNR 2525 M 16	25	25	25	32	150	24.6	-6	-6	0.76	GI024	DT16
	DTGNR 2525 M 22	25	25	25	32	150	32.1	-6	-6	0.83	GI025	DT22
	DTGNR 3232 P 22	32	32	32	40	170	33.1	-6	-6	1.42	GI025	DT22
L	DTGNL 2020 K 16	20	20	20	25	125	25.4	-6	-6	0.44	GI024	DT16
	DTGNL 2525 M 16	25	25	25	32	150	24.6	-6	-6	0.78	GI024	DT16
	DTGNL 2525 M 22	25	25	25	32	150	32.1	-6	-6	0.78	GI025	DT22
	DTGNL 3232 P 22	32	32	32	40	170	33.1	-6	-6	1.42	GI025	DT22

GI024	TN.. 1604..
GI025	TN.. 2204..

		Nm			
DT16	DCS 09	1.7	DTS 315-02	US 2004-T09P	FLAG T09P
DT22	DCS 12	3.9	DTS 315-04	US 2002-T15P	FLAG T15P/3,5

MTJN(RL) EXT

P M K N S H

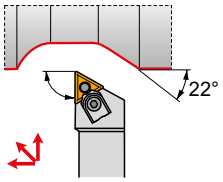
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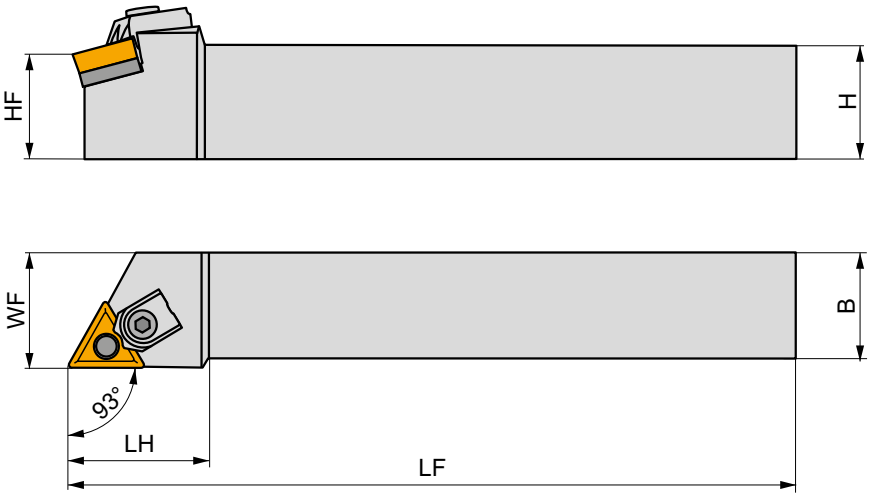
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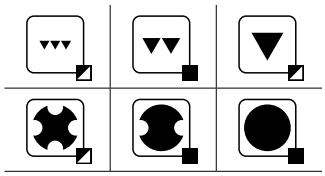


Porta-Ferramentas de Exterior, Fixação Múltipla, Ângulo de 93 ° para Pastilhas TN ..

Porta-ferramentas de exterior à direita ou à esquerda de com fixação múltipla e ângulo de corte de 93 °. Adequado para torneamento longitudinal com esquadria, torneamento cónico, de cópia até 22 °, e chanfrar com pastilhas negativas TN .. 16 ou 22. Disponível em hastes de 20x20 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**MTJNR 2020 K 16**	20	20	20	25	125	34	-6	-6	0.42	GI024	MT16
	MTJNR 2525 M 16	25	25	25	32	150	34	-6	-6	0.73	GI024	MT16
	MTJNR 3232 P 22	32	32	32	40	175	42	-6	-6	1.37	GI025	MT22
L	**MTJNL 2020 K 16**	20	20	20	25	125	34	-6	-6	0.43	GI024	MT16
	MTJNL 2525 M 16	25	25	25	32	150	34	-6	-6	0.75	GI024	MT16
	MTJNL 3232 P 22	32	32	32	40	175	42	-6	-6	1.38	GI025	MT22

GI024	TN.. 1604..
GI025	TN.. 2204..

		Nm				
MT16	UE 16	3.0	MTN 160312	UC 52	HS 93	HXK 5
MT22	UE 22	5.0	MTN 220612	UC 53	HS 94	HXK 5

PTFN(RL) EXT

P M K N S H

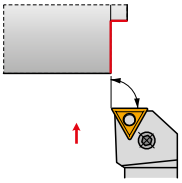
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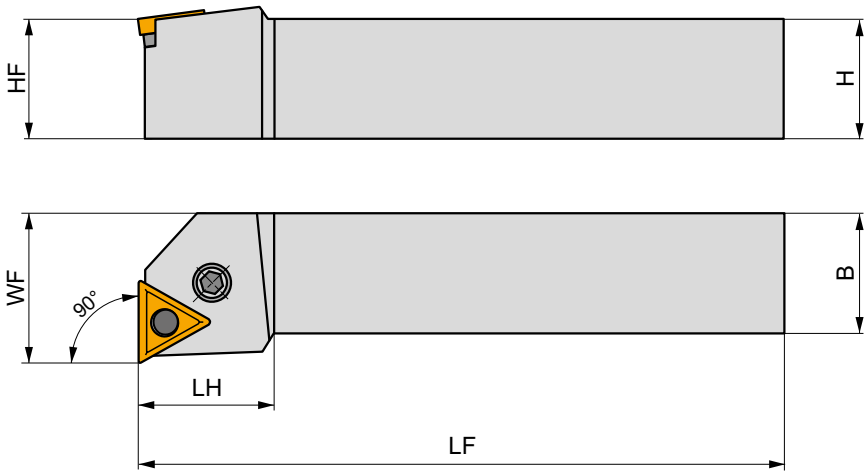
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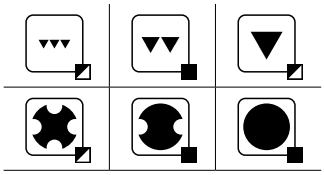


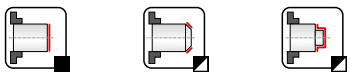
Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 90 ° (Frontal), para Pastilhas TN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 90 °. Adequado para torneamento frontal com esquadria e chanfrar com pastilhas negativas TN ... tamanhos 16, 22 ou 27. Disponível em hastes de 16x16 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PTFNR 1616 H 16**	16	16	16	20	100	32	-6	-6	0.23	GI024	PT11
	PTFNR 2020 K 16	20	20	20	25	125	32	-6	-6	0.44	GI024	PT10
	PTFNR 2525 M 16	25	25	25	32	150	32	-6	-6	0.76	GI024	PT10
	PTFNR 2525 M 22	25	25	25	32	150	36	-6	-6	0.79	GI025	PT20
	PTFNR 3225 P 22	32	25	32	32	170	36	-6	-6	1.05	GI025	PT20
	PTFNR 4040 R 27	40	40	40	50	200	40	-6	-6	2.55	GI077	PT40
L	**PTFNL 1616 H 16**	16	16	16	20	100	32	-6	-6	0.24	GI024	PT11
	PTFNL 2020 K 16	20	20	20	25	125	32	-6	-6	0.43	GI024	PT10
	PTFNL 2525 M 16	25	25	25	32	150	32	-6	-6	0.65	GI024	PT10
	PTFNL 2525 M 22	25	25	25	32	150	36	-6	-6	0.79	GI025	PT20
	PTFNL 3225 P 22	32	25	32	32	170	36	-6	-6	1.14	GI025	PT20
	PTFNL 4040 R 27	40	40	40	50	200	40	-6	-6	2.55	GI077	PT40

GI024	TN.. 1604..
GI025	TN.. 2204..
GI077	TN.. 2706..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT11	TNU 160308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PT40	TNU 270416	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

PTGN(RL) EXT

P M K N S H

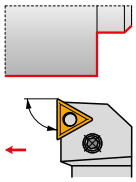
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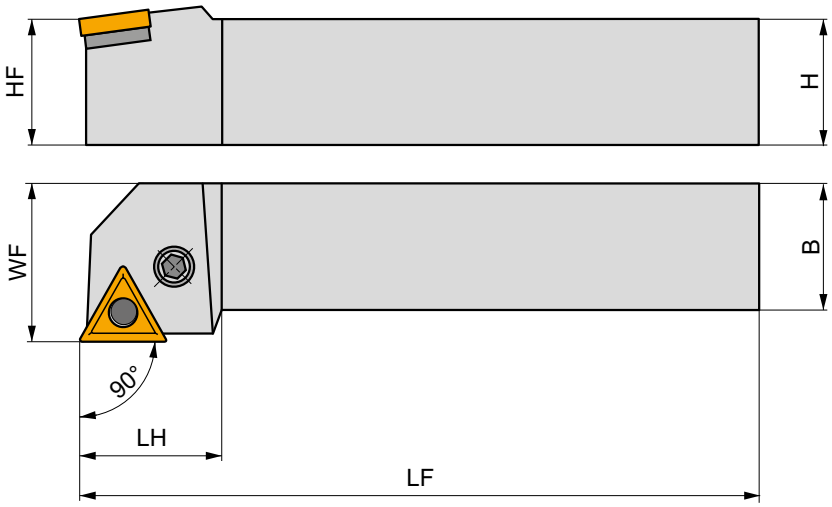
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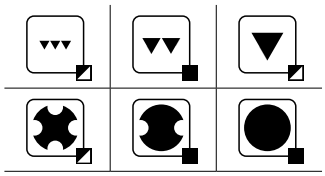


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 90 °, para Pastilhas TN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 90 °. Adequado para torneamento longitudinal com esquadria, torneamento cónico e chanfrar com pastilhas negativas TN ... tamanhos 16, 22 ou 27. Disponível em hastes de 16x16 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	PTGNR 1616 H 16	16	16	16	20	100	32	-6	-6	0.24	GI024	PT11
	PTGNR 2020 K 16	20	20	20	25	125	32	-6	-6	0.40	GI024	PT10
	PTGNR 2525 M 16	25	25	25	32	150	32	-6	-6	0.73	GI024	PT10
	PTGNR 2525 M 22	25	25	25	32	150	36	-6	-6	0.75	GI025	PT20
	PTGNR 3225 P 22	32	25	32	32	170	36	-6	-6	1.11	GI025	PT20
	PTGNR 3232 P 22	32	32	32	40	170	36	-6	-6	1.39	GI025	PT20
	PTGNR 4040 R 27	40	40	40	50	200	40	-6	-6	2.55	GI077	PT40
L	PTGNL 1616 H 16	16	16	16	20	100	32	-6	-6	0.25	GI024	PT11
	PTGNL 2020 K 16	20	20	20	25	125	32	-6	-6	0.40	GI024	PT10
	PTGNL 2525 M 16	25	25	25	32	150	32	-6	-6	0.77	GI024	PT10
	PTGNL 2525 M 22	25	25	25	32	150	36	-6	-6	0.79	GI025	PT20
	PTGNL 3225 P 22	32	25	32	32	170	36	-6	-6	1.11	GI025	PT20
	PTGNL 3232 P 22	32	32	32	40	170	36	-6	-6	1.40	GI025	PT20
	PTGNL 4040 R 27	40	40	40	50	200	40	-6	-6	2.40	GI077	PT40

GI024	TN.. 1604..
GI025	TN.. 2204..
GI077	TN.. 2706..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT11	TNU 160308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PT40	TNU 270416	PU 04	US 36	6.0	M 8x1	26	NT 07	MT 07	HXK 4

PTTN(RL) EXT

P M K N S H

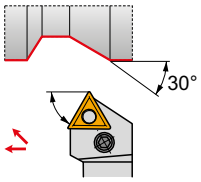
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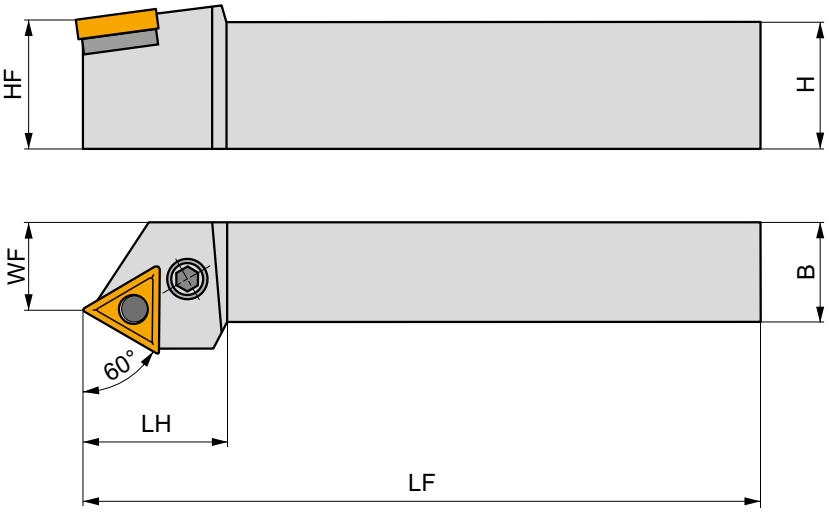
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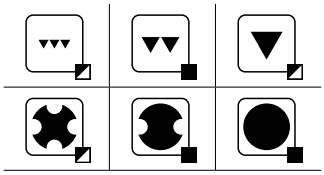


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 60 °, para Pastilhas TN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca e ângulo de corte de 60 °. Adequado para torneamento longitudinal com esquadria, torneamento cónico e de cópia até 30 ° e chanfrar com pastilhas negativas TN .. 16 e 22. Disponível em hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PTTNR 2020 K 16**	20	20	20	17	125	32	-6	-6	0.43	GI024	PT10
	PTTNR 2525 M 16	25	25	25	22	150	32	-6	-6	0.63	GI024	PT10
	PTTNR 2525 M 22	25	25	25	22	150	36	-6	-6	0.73	GI025	PT20
	PTTNR 3225 P 22	32	25	32	22	170	36	-6	-6	1.07	GI025	PT20
L	**PTTNL 2020 K 16**	20	20	20	17	125	32	-6	-6	0.38	GI024	PT10
	PTTNL 3225 P 22	32	25	32	22	170	36	-6	-6	1.04	GI025	PT20

GI024	TN.. 1604..
GI025	TN.. 2204..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4

NEW

C.-DTJN(RL) EXT

P M K N S H

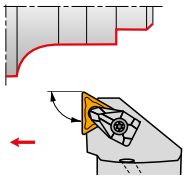
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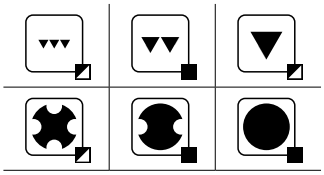
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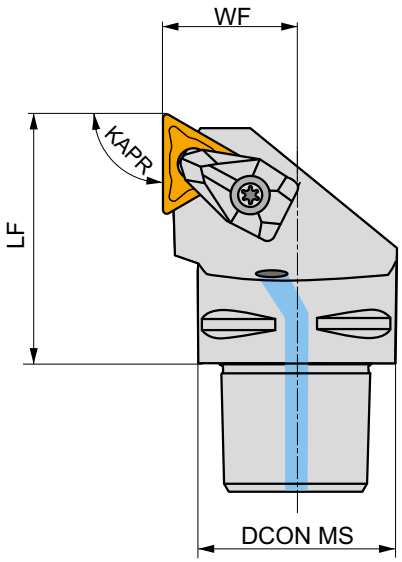


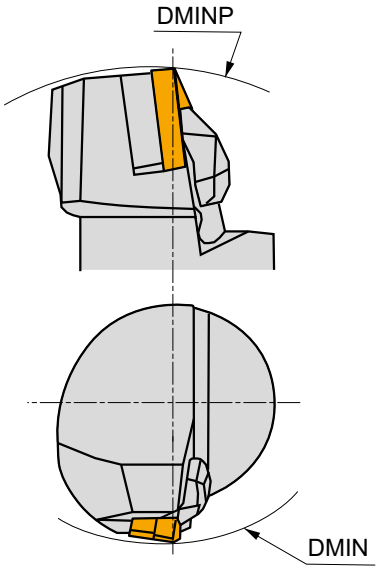
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 93 °, para Pastilhas TN ...

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla, com refrigeração interna e ângulo de corte de 93°, para torneamento longitudinal com esquadria, torneamento cónico e de chanfro com pastilhas negativas TN ... 16. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 e C5. Corpo tratado para maior tempo vida útil da ferramenta.














	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	**C4-DTJNR-27050-16**	40	110	140	27	50	93	-6	-6	✓	0.43	GI024	C-DT16
R	**C5-DTJNR-35060-16**	50	110	165	35	60	93	-6	-6	✓	0.79	GI024	C-DT16
L	**C4-DTJNL-27050-16**	40	110	140	27	50	93	-6	-6	✓	0.44	GI024	C-DT16
L	**C5-DTJNL-35060-16**	50	110	165	35	60	93	-6	-6	✓	0.79	GI024	C-DT16

GI024	TN.. 1604..

C-DT16	DCS 09	1.7	DTS 315-02	US 2004-T09P	FLAG T09P	CN 045-01

DTFN(RL) INT

P M K N S H

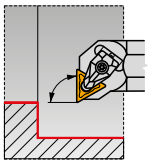
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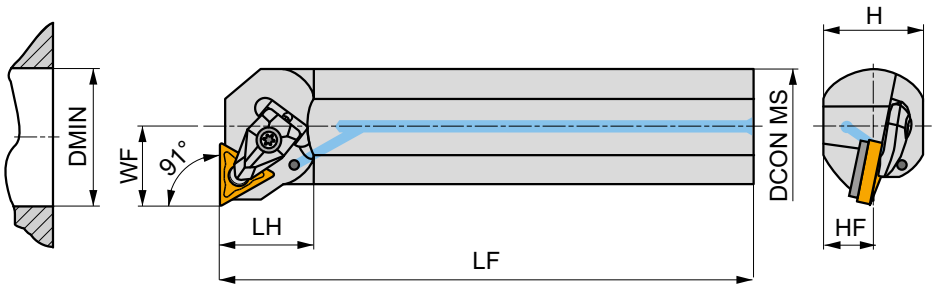
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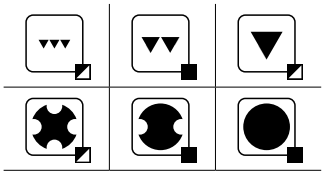


Porta-Ferramentas de Interior, Fixação Dupla, Ângulo de 91 °, para Pastilhas TN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação dupla e refrigeração interna, ângulo de corte de 91° para pastilhas TN .. 16 e 22. Diâmetro mínimo de torneamento Ø32 mm. Para torneamento cónico e longitudinal com esquadria, e chanfrar. Disponível com hastes de Ø25 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	A25T-DTFNR 16	25	32	17	23	11.5	300	32	-12	-6	✓	0.96	GI024	DTI16
	A32T-DTFNR 16	32	40	22	30	15	300	33	-10	-6	✓	1.67	GI024	DTI16
	A40T-DTFNR 22	40	50	27	37	18.5	300	36	-13	-6	✓	2.58	GI025	DT22
L	A25T-DTFNL 16	25	32	17	23	11.5	300	32	-12	-6	✓	0.96	GI024	DTI16
	A32T-DTFNL 16	32	40	22	30	15	300	33	-10	-6	✓	1.67	GI024	DTI16
	A40T-DTFNL 22	40	50	27	37	18.5	300	36	-13	-6	✓	2.58	GI025	DT22

GI024	TN.. 1604..
GI025	TN.. 2204..

		Nm			
DT22	DCS 12	3.9	DTS 315-04	US 2002-T15P	FLAG T15P/3,5
DTI16	DCS 09	1.7	DTS 316-01	US 2004-T09P	FLAG T09P

PTFN(RL) INT

P M K N S H

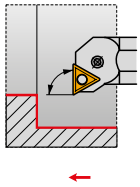
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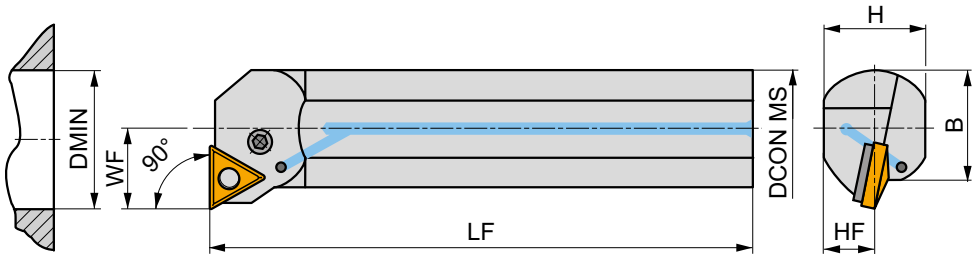
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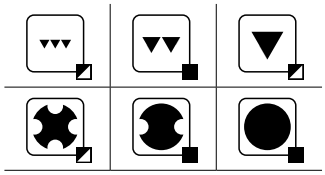


Porta-Ferramentas de Interior, Fixação por Alavanca, Ângulo de 90 °, para Pastilhas TN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por alavanca e refrigeração interna, e ângulo de corte de 90° para pastilhas TN .. 16 e 22. Diâmetro interno mínimo de torneamento Ø32 mm. Para torneamento cónico interno e longitudinal com esquadria, e chanfrar. Disponíveis hastes de Ø25 a Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	**A25R-PTFNR 16**	25	32	17	23	23	200	-12	-6	✓	0.74	GI024	PT11
	A32S-PTFNR 16	32	40	22	30	30	250	-12	-6	✓	1.49	GI024	PT10
	A40T-PTFNR 22	40	50	27	38	38	300	-12	-6	✓	2.58	GI025	PT20
L	**A25R-PTFNL 16**	25	32	17	23	23	200	-12	-6	✓	0.74	GI024	PT11
	A32S-PTFNL 16	32	40	22	30	30	250	-12	-6	✓	1.48	GI024	PT10
	A40T-PTFNL 22	40	50	27	38	38	300	-12	-6	✓	2.90	GI025	PT20

GI024	TN.. 1604..
GI025	TN.. 2204..

				Nm					
PT10	TNU 160308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PT11	TNU 160308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PT20	TNU 220312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4

NEW

C.-DTFN(RL) INT

P M K N S H

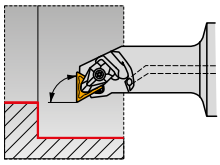
PRAMET

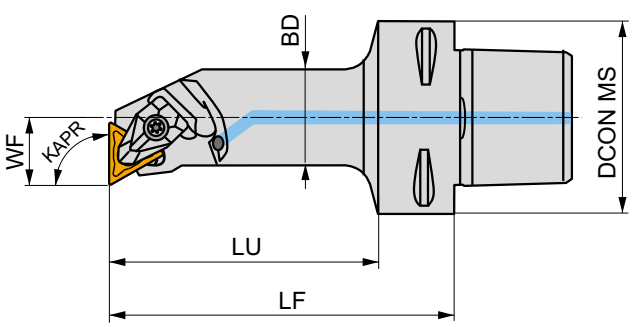
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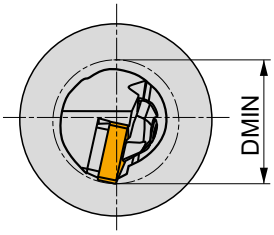


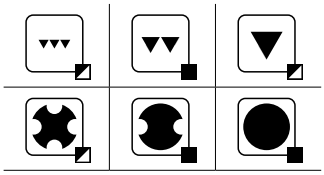
Ferramenta de Interior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 91 °, para Pastilhas TN ..

Porta-ferramentas de interior interna à direita ou à esquerda, com fixação dupla e refrigeração interna, com ângulo de corte de 91° para uma ampla gama de aplicações de torneamento interno com pastilhas TN .. 16. Diâmetro mínimo de torneamento de Ø32mm. Haste poligonal PSC (Polygon Shank Coupling) tamanho C4 com comprimento de torneamento de 68 mm. Corpo tratado para maior tempo vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-DTFNR-17090-16	40	32	17	90	68	25	91	-12	-6	✓	0.51	GI024	DTI16

GI024	TN.. 1604..

DTI16	DCS 09	1.7	DTS 316-01	US 2004-T09P	FLAG T09P

VN 16

PASTILHAS DE METAL DURO

VNMG



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PASTILHAS CER E CBN

VNGA CER



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VNGA CBN



359

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
VNMG 160404E-SF	DVJNL 2020 K 16

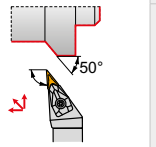
TORNEAMENTO ISO - EXTERIOR

DVJN(RL) EXT

93°

VN..

16



20×20 / 32×25

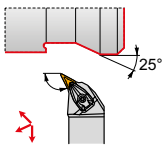
360 | 356 – 359

DVPN(RL) EXT

62°30´

VN..

16



20×20 / 32×25

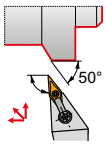
361 | 356 – 359

MVJN(RL) EXT

93°

VN..

16



20×20 / 32×25

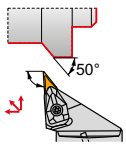
362 | 356 – 359

C.-DVJN(RL) EXT NEW

93°

VN..

16



C4 / C6

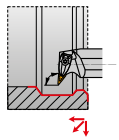
363 | 356 – 359

TORNEAMENTO ISO - INTERIOR

DVUN(RL) INT

VN..

16





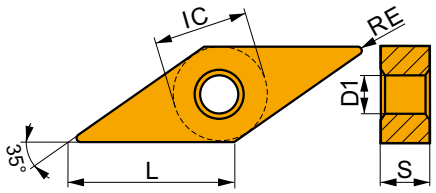
50

364 | 356 – 359

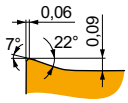
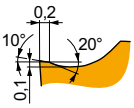
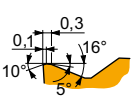
VNMG

PRAMET

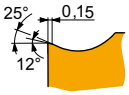
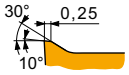
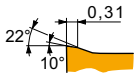
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.60	4.76



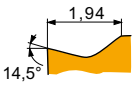
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
VNMG 160404E-FF	**T7325**	0.4	165	0.12	1.0	125	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	150	0.12	1.0	90	0.11	1.0	140	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8330	0.4	140	0.12	1.0	80	0.11	1.0	130	0.12	1.0	–	–	–	–	–	–	–	–	–
	T8430	0.4	175	0.12	1.0	95	0.11	1.0	140	0.12	1.0	–	–	–	–	–	–	–	–	–
																				
			Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
VNMG 160404E-FM	**T7325**	0.4	140	0.20	1.2	105	0.18	1.2	–	–	–	–	–	–	45	0.20	1.0	–	–	–
	T8330	0.4	120	0.20	1.2	70	0.18	1.2	110	0.20	1.2	–	–	–	30	0.14	1.0	–	–	–
	T8430	0.4	135	0.20	1.2	75	0.18	1.2	110	0.20	1.2	–	–	–	25	0.14	1.0	–	–	–
	T9310	0.4	210	0.20	1.2	–	–	–	195	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.4	190	0.20	1.2	–	–	–	180	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	170	0.20	1.2	100	0.18	1.2	160	0.20	1.2	–	–	–	35	0.20	1.0	–	–	–
VNMG 160408E-FM	**T7325**	0.8	160	0.20	1.4	120	0.18	1.4	–	–	–	–	–	–	50	0.16	1.1	–	–	–
	T8330	0.8	145	0.20	1.4	85	0.18	1.4	135	0.20	1.4	–	–	–	35	0.16	1.1	–	–	–
	T8430	0.8	165	0.20	1.4	90	0.18	1.4	135	0.20	1.4	–	–	–	35	0.16	1.1	–	–	–
	T9310	0.8	245	0.20	1.4	–	–	–	230	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9315	0.8	220	0.20	1.4	–	–	–	205	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.20	1.4	120	0.18	1.4	190	0.20	1.4	–	–	–	45	0.16	1.1	–	–	–
VNMG 160412E-FM	**T7325**	1.2	165	0.22	1.4	125	0.20	1.4	–	–	–	–	–	–	50	0.18	1.1	–	–	–
	T8330	1.2	150	0.22	1.4	90	0.20	1.4	140	0.22	1.4	–	–	–	35	0.18	1.1	–	–	–
	T8430	1.2	165	0.22	1.4	90	0.20	1.4	135	0.22	1.4	–	–	–	35	0.18	1.1	–	–	–
	T9315	1.2	225	0.22	1.4	–	–	–	210	0.22	1.4	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.22	1.4	120	0.20	1.4	190	0.22	1.4	–	–	–	45	0.18	1.1	–	–	–
																				
			Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																	
VNMG 160404E-M	**T5315**	0.4	180	0.20	1.2	–	–	–	170	0.20	1.2	–	–	–	–	–	–	35	0.15	1.0
	T9315	0.4	170	0.20	1.2	–	–	–	160	0.20	1.2	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.4	155	0.20	1.2	–	–	–	145	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9335	0.4	130	0.20	1.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VNMG 160408E-M	**T5305**	0.8	205	0.30	1.4	–	–	–	190	0.30	1.4	–	–	–	–	–	–	40	0.15	1.0
	T5315	0.8	185	0.30	1.4	–	–	–	175	0.30	1.4	–	–	–	–	–	–	35	0.15	1.0
	T9310	0.8	185	0.30	1.4	–	–	–	175	0.30	1.4	–	–	–	–	–	–	35	0.15	1.0
	T9315	0.8	170	0.30	1.4	–	–	–	160	0.30	1.4	–	–	–	–	–	–	30	0.15	1.0
	T9325	0.8	150	0.30	1.4	–	–	–	140	0.30	1.4	–	–	–	–	–	–	–	–	–
	T9335	0.8	130	0.30	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
VNMG 160412E-M	**T9325**	1.2	140	0.40	1.4	–	–	–	130	0.40	1.4	–	–	–	–	–	–	–	–	–

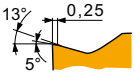
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																	
VNMG 160404E-NF	**T6310**	0.4	■ 140	0.12	1.2	■ 100	0.11	1.2	◪ 110	0.12	1.2	◪ 420	0.14	1.2	◪ 40	0.11	1.0	–	–	–
	T7325	0.4	◪ 140	0.18	1.2	■ 105	0.16	1.2	–	–	–	–	–	–	◪ 45	0.16	1.0	–	–	–
	T7335	0.4	◪ 140	0.18	1.2	■ 105	0.16	1.2	–	–	–	–	–	–	◪ 45	0.16	1.0	–	–	–
	T8315	0.4	◪ 150	0.12	1.2	■ 90	0.11	1.2	◪ 140	0.12	1.2	◪ 450	0.14	1.2	◪ 35	0.11	1.0	–	–	–
	T8330	0.4	■ 140	0.12	1.2	■ 80	0.11	1.2	◪ 130	0.12	1.2	◪ 420	0.14	1.2	◪ 35	0.11	1.0	–	–	–
	T8430	0.4	■ 175	0.12	1.2	■ 95	0.11	1.2	◪ 140	0.12	1.2	◪ 480	0.14	1.2	◪ 35	0.11	1.0	–	–	–
	T9315	0.4	■ 235	0.12	1.2	–	–	–	◪ 220	0.12	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 180	0.18	1.2	■ 105	0.16	1.2	◪ 170	0.18	1.2	–	–	–	◪ 40	0.16	1.0	–	–	–
VNMG 160408E-NF	**T6310**	0.8	■ 145	0.17	1.4	■ 100	0.15	1.4	◪ 115	0.17	1.4	◪ 435	0.20	1.4	◪ 40	0.14	1.1	–	–	–
	T7325	0.8	◪ 165	0.18	1.4	■ 125	0.16	1.4	–	–	–	–	–	–	◪ 50	0.16	1.1	–	–	–
	T7335	0.8	◪ 160	0.18	1.4	■ 120	0.16	1.4	–	–	–	–	–	–	◪ 50	0.16	1.1	–	–	–
	T8315	0.8	◪ 160	0.17	1.4	■ 95	0.15	1.4	◪ 150	0.17	1.4	◪ 480	0.20	1.4	◪ 40	0.14	1.1	–	–	–
	T8330	0.8	■ 150	0.17	1.4	■ 90	0.15	1.4	◪ 140	0.17	1.4	◪ 450	0.20	1.4	◪ 35	0.14	1.1	–	–	–
	T8430	0.8	■ 175	0.17	1.4	■ 95	0.15	1.4	◪ 140	0.17	1.4	◪ 480	0.20	1.4	◪ 35	0.14	1.1	–	–	–
	T9315	0.8	■ 240	0.17	1.4	–	–	–	◪ 225	0.17	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 210	0.18	1.4	■ 125	0.16	1.4	◪ 195	0.18	1.4	–	–	–	◪ 45	0.16	1.1	–	–	–
																				
			Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, com cortes contínuos.																	
VNMG 160404E-NM	**T7325**	0.4	◪ 145	0.20	1.2	■ 110	0.18	1.2	–	–	–	–	–	–	■ 45	0.20	1.0	–	–	–
	T7335	0.4	◪ 140	0.20	1.2	■ 105	0.18	1.2	–	–	–	–	–	–	■ 45	0.20	1.0	–	–	–
	T8315	0.4	◪ 135	0.20	1.2	■ 80	0.18	1.2	–	–	–	◪ 405	0.24	1.2	◪ 30	0.20	1.0	–	–	–
	T8330	0.4	■ 125	0.20	1.2	■ 75	0.18	1.2	–	–	–	◪ 375	0.24	1.2	◪ 30	0.20	1.0	–	–	–
	T8430	0.4	■ 145	0.20	1.2	■ 80	0.18	1.2	–	–	–	◪ 405	0.24	1.2	◪ 30	0.20	1.0	–	–	–
	T9325	0.4	■ 180	0.20	1.2	■ 105	0.18	1.2	–	–	–	–	–	–	◪ 40	0.20	1.0	–	–	–
VNMG 160408E-NM	**T7325**	0.8	◪ 160	0.25	1.4	■ 120	0.23	1.4	–	–	–	–	–	–	■ 50	0.20	1.1	–	–	–
	T7335	0.8	◪ 155	0.25	1.4	■ 120	0.23	1.4	–	–	–	–	–	–	■ 50	0.20	1.1	–	–	–
	T8315	0.8	◪ 145	0.25	1.4	■ 85	0.23	1.4	–	–	–	◪ 435	0.30	1.4	◪ 35	0.20	1.1	–	–	–
	T8330	0.8	■ 140	0.25	1.4	■ 80	0.23	1.4	–	–	–	◪ 420	0.30	1.4	◪ 35	0.20	1.1	–	–	–
	T8430	0.8	■ 155	0.25	1.4	■ 85	0.23	1.4	–	–	–	◪ 435	0.30	1.4	◪ 30	0.20	1.1	–	–	–
	T9325	0.8	■ 190	0.25	1.4	■ 110	0.23	1.4	–	–	–	–	–	–	◪ 40	0.20	1.1	–	–	–
																				
			Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																	
VNMG 160404E-NMR	**T7325**	0.4	◪ 125	0.20	1.2	■ 95	0.18	1.2	–	–	–	–	–	–	■ 40	0.18	1.0	–	–	–
	T7335	0.4	◪ 120	0.20	1.2	■ 90	0.18	1.2	–	–	–	–	–	–	■ 35	0.18	1.0	–	–	–
	T9325	0.4	■ 155	0.20	1.2	■ 90	0.18	1.2	–	–	–	–	–	–	◪ 30	0.18	1.0	–	–	–
VNMG 160408E-NMR	**T7325**	0.8	◪ 130	0.30	1.4	■ 100	0.27	1.4	–	–	–	–	–	–	■ 40	0.24	1.1	–	–	–
	T7335	0.8	◪ 125	0.30	1.4	■ 95	0.27	1.4	–	–	–	–	–	–	■ 40	0.24	1.1	–	–	–
	T8430	0.8	■ 125	0.30	1.4	■ 65	0.27	1.4	–	–	–	–	–	–	◪ 25	0.24	1.1	–	–	–
	T9315	0.8	■ 170	0.30	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 150	0.30	1.4	■ 90	0.27	1.4	–	–	–	–	–	–	◪ 30	0.24	1.1	–	–	–
VNMG 160412E-NMR	**T7325**	1.2	◪ 140	0.30	1.4	■ 105	0.27	1.4	–	–	–	–	–	–	■ 45	0.24	1.1	–	–	–
	T8330	1.2	■ 120	0.30	1.4	■ 70	0.27	1.4	–	–	–	–	–	–	◪ 30	0.24	1.1	–	–	–
	T8430	1.2	■ 130	0.30	1.4	■ 70	0.27	1.4	–	–	–	–	–	–	◪ 25	0.24	1.1	–	–	–
	T9325	1.2	■ 160	0.30	1.4	■ 95	0.27	1.4	–	–	–	–	–	–	◪ 35	0.24	1.1	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				

Geometria SF com desenho positivo para operações de maquinação de acabamento fino e para maquinação de paredes finas, com cortes contínuos.

VNMG 160404E-SF	**T6310**	0.4	■	135	0.12	1.2	■	95	0.11	1.2	■	105	0.12	1.2	◪	405	0.14	1.2	■	40	0.11	1.0	■	25	0.15	1.0
	T7325	0.4	◪	140	0.17	1.2	■	105	0.15	1.2		–	–	–		–	–	–	■	45	0.15	1.0		–	–	–
	T8315	0.4	◪	140	0.12	1.2	■	80	0.11	1.2	■	130	0.12	1.2	◪	420	0.14	1.2	◪	35	0.11	1.0	■	25	0.15	1.0
	T8330	0.4	■	135	0.12	1.2	■	80	0.11	1.2	■	125	0.12	1.2	◪	405	0.14	1.2	◪	30	0.11	1.0	◪	25	0.15	1.0
	T8430	0.4	■	165	0.12	1.2	■	90	0.11	1.2	◪	135	0.12	1.2	◪	450	0.14	1.2	◪	35	0.11	1.0	◪	25	0.15	1.0
	T9315	0.4	■	225	0.12	1.2		–	–	–	◪	210	0.12	1.2		–	–	–		–	–	–	◪	45	0.15	1.0
	T9325	0.4	■	175	0.17	1.2	■	105	0.15	1.2	◪	165	0.17	1.2		–	–	–	◪	35	0.15	1.0		–	–	–
VNMG 160408E-SF	**T6310**	0.8	■	140	0.17	1.4	■	100	0.15	1.4	■	110	0.17	1.4	◪	420	0.20	1.4	■	40	0.14	1.1	■	25	0.15	1.0
	T8315	0.8	◪	150	0.17	1.4	■	90	0.15	1.4	■	140	0.17	1.4	◪	450	0.20	1.4	◪	35	0.14	1.1	■	30	0.15	1.0
	T8330	0.8	■	145	0.17	1.4	■	85	0.15	1.4	■	135	0.17	1.4	◪	435	0.20	1.4	◪	35	0.14	1.1	◪	25	0.15	1.0
	T8430	0.8	■	165	0.17	1.4	■	90	0.15	1.4	◪	135	0.17	1.4	◪	450	0.20	1.4	◪	35	0.14	1.1	◪	25	0.15	1.0
	T9315	0.8	■	230	0.17	1.4		–	–	–	◪	215	0.17	1.4		–	–	–		–	–	–	◪	45	0.15	1.0
	T9325	0.8	■	205	0.17	1.4	■	120	0.15	1.4	◪	190	0.17	1.4		–	–	–	◪	45	0.15	1.1		–	–	–
VNMG 160412E-SF	**T6310**	1.2	■	145	0.20	1.4	■	100	0.18	1.4	■	115	0.20	1.4	◪	435	0.24	1.4	■	40	0.16	1.1	■	25	0.15	1.0
	T7325	1.2	◪	165	0.20	1.4	■	125	0.18	1.4		–	–	–		–	–	–	■	50	0.16	1.1		–	–	–
																				

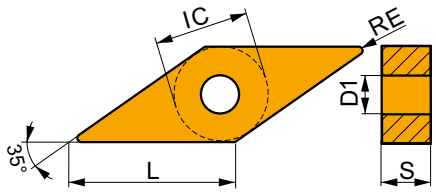
Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.

VNMG 160404E-SM	**T6310**	0.4	■	120	0.18	1.2	■	85	0.16	1.2	■	95	0.18	1.2	◪	360	0.22	1.2	■	35	0.16	1.0	◪	20	0.15	1.0
	T7325	0.4	◪	135	0.18	1.2	■	105	0.16	1.2		–	–	–		–	–	–	■	40	0.16	1.0		–	–	–
	T7335	0.4	◪	135	0.18	1.2	■	105	0.16	1.2		–	–	–		–	–	–	■	40	0.16	1.0		–	–	–
	T8330	0.4	■	120	0.18	1.2	■	70	0.16	1.2	■	110	0.18	1.2	◪	360	0.22	1.2	◪	30	0.16	1.0	◪	20	0.15	1.0
	T8430	0.4	■	135	0.18	1.2	■	75	0.16	1.2	◪	110	0.18	1.2	◪	375	0.22	1.2	◪	25	0.16	1.0	◪	20	0.15	1.0
	T9315	0.4	■	190	0.18	1.2		–	–	–	◪	180	0.18	1.2		–	–	–		–	–	–	◪	35	0.15	1.0
	T9325	0.4	■	170	0.18	1.2	■	100	0.16	1.2	◪	160	0.18	1.2		–	–	–	◪	35	0.16	1.0		–	–	–
VNMG 160408E-SM	**T6310**	0.8	■	125	0.25	1.4	■	90	0.23	1.4	■	100	0.25	1.4	◪	375	0.30	1.4	■	35	0.20	1.1	◪	25	0.15	1.0
	T7325	0.8	◪	145	0.25	1.4	■	110	0.23	1.4		–	–	–		–	–	–	■	45	0.20	1.1		–	–	–
	T8330	0.8	■	125	0.25	1.4	■	75	0.23	1.4	■	115	0.25	1.4	◪	375	0.30	1.4	◪	30	0.20	1.1	◪	25	0.15	1.0
	T8430	0.8	■	140	0.25	1.4	■	75	0.23	1.4	◪	115	0.25	1.4	◪	390	0.30	1.4	◪	30	0.20	1.1	◪	20	0.15	1.0
	T9315	0.8	■	195	0.25	1.4		–	–	–	◪	185	0.25	1.4		–	–	–		–	–	–	◪	35	0.15	1.0
	T9325	0.8	■	170	0.25	1.4	■	100	0.23	1.4	◪	160	0.25	1.4		–	–	–	◪	35	0.20	1.1		–	–	–
VNMG 160412E-SM	**T6310**	1.2	■	125	0.30	1.4	■	90	0.27	1.4	■	100	0.30	1.4	◪	375	0.36	1.4	■	35	0.24	1.1	◪	25	0.15	1.0

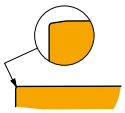
VNGA CER

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.60	4.76



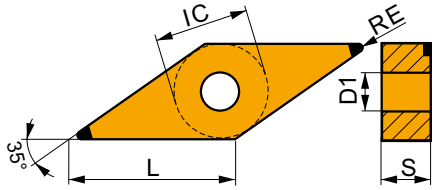
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC T																	
			Para operações de maquinação com altas velocidades e cortes contínuos.																	
VNGA 160404 T01020	TC100	0.4	–	–	–	–	–	–	425	0.10	1.0	–	–	–	–	–	–	–	–	–
VNGA 160408 T01020	TC100	0.8	–	–	–	–	–	–	395	0.20	1.0	–	–	–	–	–	–	–	–	–

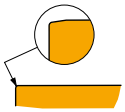
VNGA CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1604	9.525	3.81	16.00	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			HSC S																	
			Para operações de maquinação de acabamento, e cortes contínuos.																	
VNGA 160404S01020B	TB310	0.4	–	–	–	–	–	–	360	0.10	0.4	–	–	–	95	0.07	0.3	75	0.15	1.0
VNGA 160408S01020B	TB310	0.8	–	–	–	–	–	–	370	0.15	0.6	–	–	–	95	0.11	0.5	75	0.15	1.0

DVJN(RL) EXT

P M K N S H

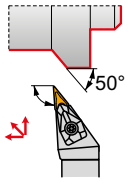
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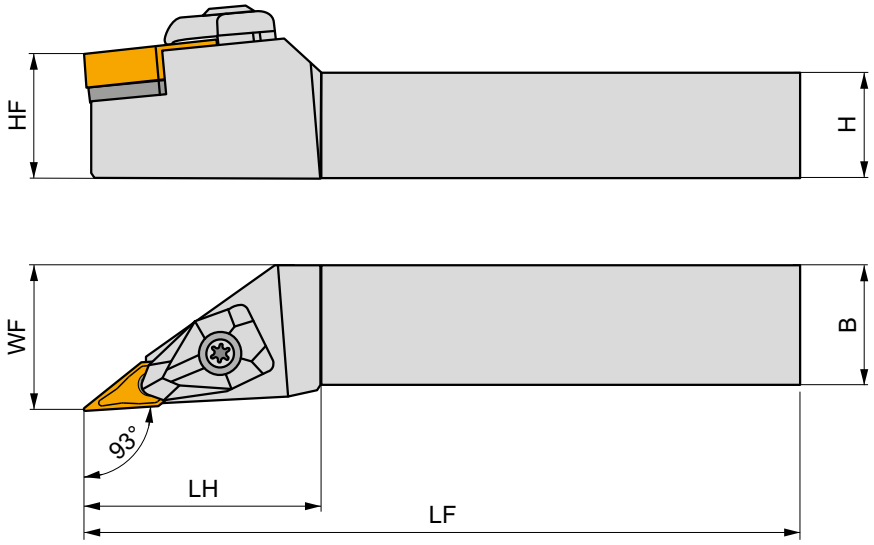
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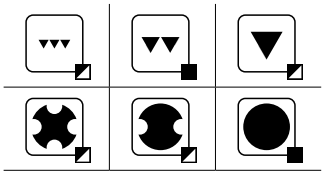


Porta-Ferramenta de Exterior, Fixação Dupla, Ângulo de 93 °, para Pastilhas VN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de corte de 93 °. Adequado para torneamento longitudinal com esquadria, de cópia, cónico e chanfrar com pastilhas negativas VN .. 16. Disponível em hastes de 20x20 até 32x32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**DVJNR 2020 K 16**	20	20	20	25	125	46.4	-13	-4	0.43	GI048	DV16
	DVJNR 2525 M 16	25	25	25	32	150	46.4	-13	-4	0.75	GI048	DV16
	DVJNR 3225 P 16	32	25	32	32	170	46.4	-13	-4	1.05	GI048	DV16
L	**DVJNL 2020 K 16**	20	20	20	25	125	46.4	-13	-4	0.43	GI048	DV16
	DVJNL 2525 M 16	25	25	25	32	150	46.4	-13	-4	0.75	GI048	DV16
	DVJNL 3225 P 16	32	25	32	32	170	46.4	-13	-4	1.06	GI048	DV16

GI048	VN.. 1604..

DV16	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5

DVPN(RL) EXT

P M K N S H

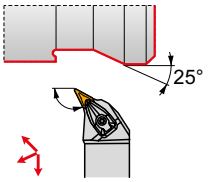
PRAMET

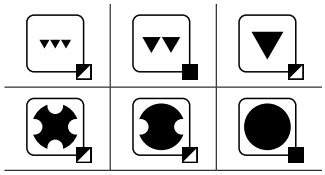
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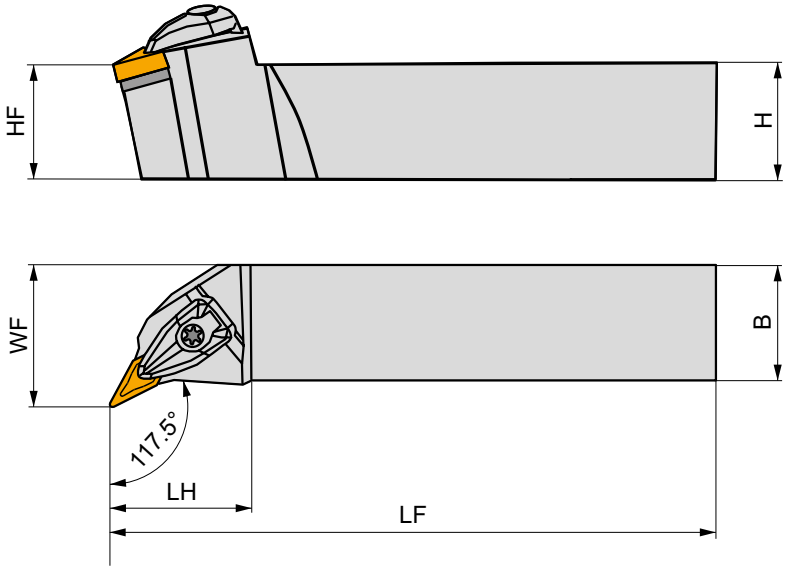


Porta-Ferramentas de Exterior, Fixação Dupla, Ângulo de 117,5 °, para Pastilhas VN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de 117,5 °. Adequado para torneamento longitudinal e frontal com esquadria, de cópia, torneamento cónico e chanfrar com pastilhas negativas VN .. 16. Disponível em hastes de 25x25 e 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	DVPNR 2525 M 16	25	25	25	32	150	39.2	-13	-4	0.75	GI048	DV16
R	DVPNR 3225 P 16	32	25	32	32	170	39.2	-13	-4	1.06	GI048	DV16
L	DVPNL 2525 M 16	25	25	25	32	150	39.2	-13	-4	0.74	GI048	DV16
L	DVPNL 3225 P 16	32	25	32	32	170	39.2	-13	-4	1.06	GI048	DV16

GI048	VN.. 1604..

DV16	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5

MVJN(RL) EXT

P M K N S H

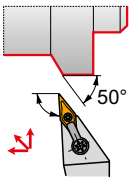
PRAMET

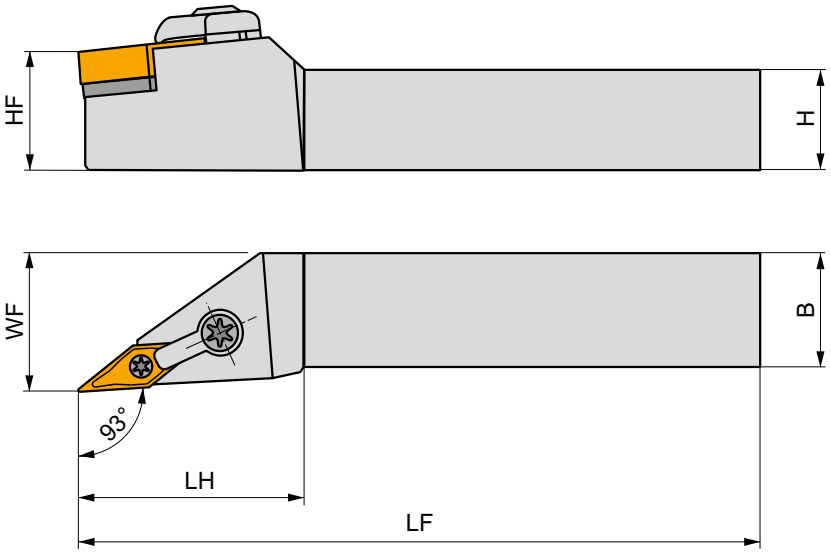
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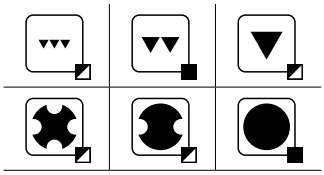


Porta-Ferramentas de Exterior, Fixação Múltipla, Ângulo de 93 °, para Pastilhas VN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação múltipla e ângulo de corte de 93 °. Indicado para torneamento longitudinal com esquadria, torneamento da cópia até 50 °, torneamento cónico e chanfrar com pastilha negativa VN .. 16. Disponível com hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**MVJNR 2020 K 16-A**	20	20	20	25	125	41	-4.5	-13.5	0.40	GI048	MV2
	MVJNR 2525 M 16-A	25	25	25	32	150	41	-4.5	-13.5	0.70	GI048	MV2
	MVJNR 3225 P 16-A	32	25	32	32	170	41	-4.5	-13.5	0.98	GI048	MV2
L	**MVJNL 2020 K 16-A**	20	20	20	25	125	41	-4.5	-13.5	0.40	GI048	MV2
	MVJNL 2525 M 16-A	25	25	25	32	150	41	-4.5	-13.5	0.70	GI048	MV2
	MVJNL 3225 P 16-A	32	25	32	32	170	41	-4.5	-13.5	0.96	GI048	MV2

GI048	VN.. 1604..

MV2	UPC 22	MVN 160316	UP 0909-T09P	2.0	PS 6026-T09P	2.0	FLAG T09P

NEW

C.-DVJN(RL) EXT

P M K N S H

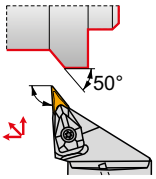
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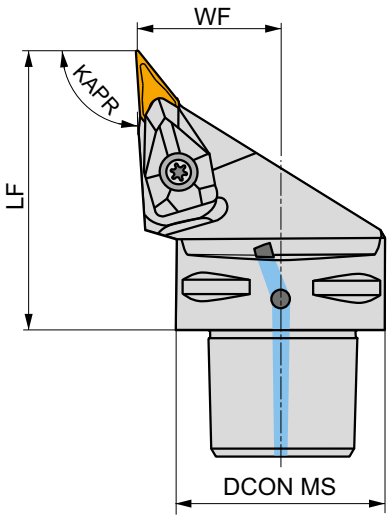
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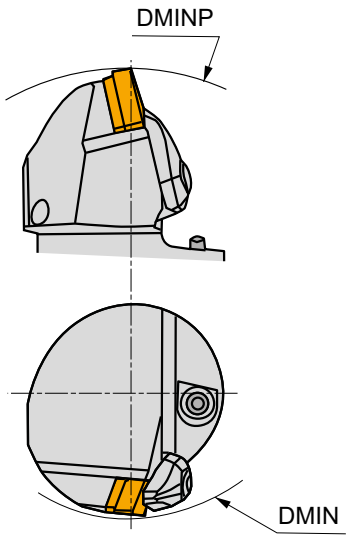


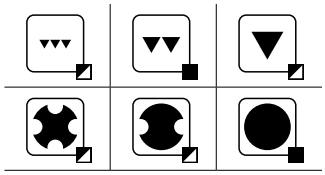
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 93 °, para Pastilhas VN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla , com refrigeração interna e ângulo de corte de 93°, para torneamento longitudinal com esquadria, de cópia, torneamento cónico e de chanfro com pastilhas negativas VN .. 16. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanhos C4 até C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	**C4-DVJNR-27062-16**	40	60	152	27	62	93	-13	-4	✓	0.45	GI048	C-DV16-1
	C5-DVJNR-35065-16	50	65	170	35	65	93	-13	-4	✓	0.47	GI048	C-DV16-2
	C6-DVJNR-45065-16	63	81	190	45	65	93	-13	-4	✓	1.13	GI048	C-DV16-2
L	**C4-DVJNL-27062-16**	40	60	152	27	62	93	-13	-4	✓	0.45	GI048	C-DV16-1
	C5-DVJNL-35065-16	50	65	170	35	65	93	-13	-4	✓	0.72	GI048	C-DV16-2
	C6-DVJNL-45065-16	63	81	190	45	65	93	-13	-4	✓	1.13	GI048	C-DV16-2

GI048	VN.. 1604..

		Nm				
C-DV16-1	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5	CN 034-01
C-DV16-2	DCS 16V	3.0	DVS 269-01	US 2009-T15P	FLAG T15P/3,5	CN 034-02

DVUN(RL) INT

P M K N S H

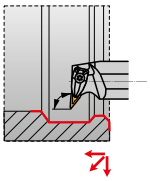
PRAMET

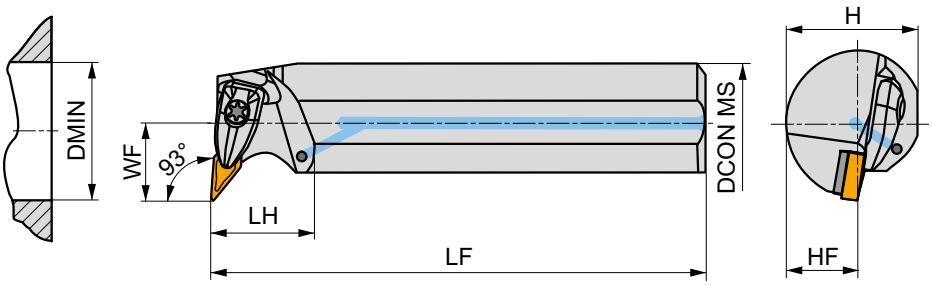
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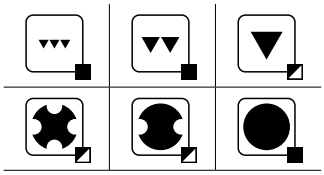


Porta-ferramentas de Interior, Fixação Dupla, Ângulo de 93 °, para Pastilhas VN ..

Porta-ferramentas de interior à direita ou à esquerda com fixação dupla e refrigeração interna, e ângulo de corte de 93° para pastilhas VN .. 16. Diâmetro mínimo de torneamento Ø50 mm. Adequado para torneamento cónico interno e longitudinal com esquadria, de cópia, e chanfrar. Disponível apenas com haste de Ø40 mm. Corpo tratado para maior tempo vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	**A40T-DVUNR 16**	40	50	27	37	18.5	300	36	-9	-6	✓	2.59	GI048	DV16
L	**A40T-DVUNL 16**	40	50	27	37	18.5	300	36	-9	-6	✓	2.59	GI048	DV16

GI048	VN.. 1604..

DV16	DCS 16V	3.0 Nm	DVS 269-01	US 2009-T15P	FLAG T15P/3,5

WN

06/ 08/ 10/ 13

PASTILHAS DE METAL DURO

WNMA



366

WNMG



366

WNMM



375

PASTILHAS CER E CBN

WNGA CBN



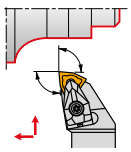
376

CORRESPONDÊNCIA AO TAMANHO CORRECTO (exemplo)	
Pastilha	**Porta-ferramentas**
WNMA **08**0408	DWLNL 2020 K **08**

TORNEAMENTO ISO - EXTERIOR

DWLN(RL) EXT

95°



WN..

06
08
10
13

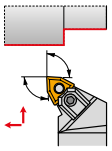
16×16
40×40

377

366 – 376

MWLN(RL) EXT

95°



WN..

08

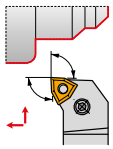
25×25
40×40

379

366 – 376

PWLN(RL) EXT

95°



WN..

06
08

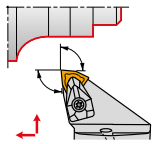
16×16
32×25

380

366 – 376

C.-DWLN(RL) EXT NEW

95°



WN..

06
08

C4
C6

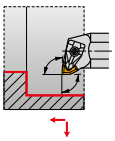
381

366 – 376

TORNEAMENTO ISO - INTERIOR

DWLN(RL) INT

95°



WN..

06
08

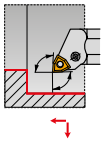
32
63

382

366 – 376

PWLN(RL) INT

95°



WN..

06
08

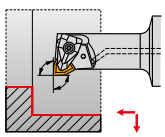
20
80

383

366 – 376

C.-DWLN(RL) INT NEW

95°



WN..

06
08

27
33

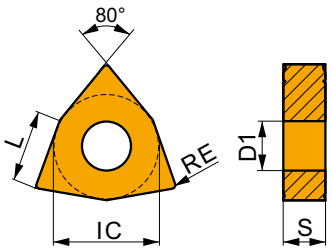
385

366 – 376

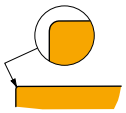
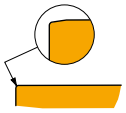
WNMA

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0804	12.700	5.16	8.70	4.76



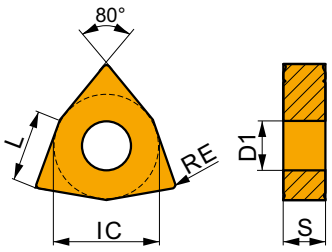
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			E																	
Para operações de maquinação de acabamento fino a semi-desbaste e cortes contínuos a lligeiramente interrompidos.																				
WNMA 080404	**T5305**	0.4	–	–	–	–	–	–	235	0.10	4.0	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.4	–	–	–	–	–	–	200	0.10	4.0	–	–	–	–	–	–	40	0.15	1.0
WNMA 080408	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	–	–	–	–	–	–	190	0.20	4.0	–	–	–	–	–	–	40	0.15	1.0
	T6310	0.8	–	–	–	–	–	–	100	0.20	4.0	–	–	–	–	–	–	25	0.15	1.0
WNMA 080412	**T5305**	1.2	–	–	–	–	–	–	195	0.30	4.0	–	–	–	–	–	–	40	0.15	1.0
	T5315	1.2	–	–	–	–	–	–	180	0.30	4.0	–	–	–	–	–	–	35	0.15	1.0
	T6310	1.2	–	–	–	–	–	–	95	0.30	4.0	–	–	–	–	–	–	20	0.15	1.0
			S																	
Para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																				
WNMA 080408S	**T5305**	0.8	–	–	–	–	–	–	220	0.20	4.0	–	–	–	–	–	–	45	0.15	1.0

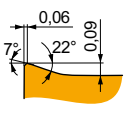
WNMG

PRAMET

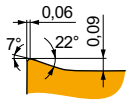
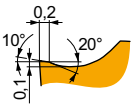
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0604	9.525	3.81	6.50	4.76
06T3	9.525	3.81	6.50	3.97
0804	12.700	5.16	8.70	4.76



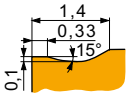
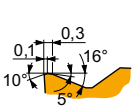
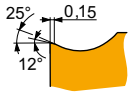
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			U	S																
Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																				
WNMG 060402E-FF	**T8315**	0.2	215	0.10	1.0	125	0.09	1.0	200	0.10	1.0	–	–	–	–	–	–	–	–	–
WNMG 060404E-FF	**T8315**	0.4	220	0.12	1.0	130	0.11	1.0	205	0.12	1.0	–	–	–	–	–	–	–	–	–

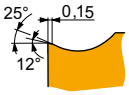
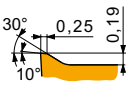
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
			Geometria FF com desenho altamente positivo para operações de maquinação de acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
WNMG 080404E-FF	**T7325**	0.4	◪ 235	0.12	1.0	■ 180	0.11	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.4	◪ 220	0.12	1.0	■ 130	0.11	1.0	◪ 205	0.12	1.0	–	–	–	–	–	–	–	–	–
WNMG 080408E-FF	**T7325**	0.8	◪ 265	0.15	1.0	■ 205	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	◪ 245	0.15	1.0	■ 145	0.14	1.0	◪ 230	0.15	1.0	–	–	–	–	–	–	–	–	–
			Geometria FM com desenho positivo para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a ligeiramente interrompidos.																	
WNMG 060404E-FM	**T7325**	0.4	◪ 195	0.20	1.4	◪ 150	0.18	1.4	–	–	–	–	–	–	◪ 60	0.16	1.1	–	–	–
	T8315	0.4	◪ 180	0.20	1.4	◪ 105	0.18	1.4	■ 170	0.20	1.4	–	–	–	◪ 45	0.14	1.1	–	–	–
	T8330	0.4	■ 175	0.20	1.4	◪ 105	0.18	1.4	■ 165	0.20	1.4	–	–	–	◪ 40	0.14	1.1	–	–	–
	T8430	0.4	■ 195	0.20	1.4	◪ 105	0.18	1.4	◪ 160	0.20	1.4	–	–	–	◪ 40	0.14	1.1	–	–	–
	T9315	0.4	■ 265	0.20	1.4	–	–	–	◪ 250	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.20	1.4	◪ 140	0.18	1.4	◪ 225	0.20	1.4	–	–	–	◪ 50	0.16	1.1	–	–	–
	TT310	0.4	■ 275	0.20	1.4	◪ 165	0.18	1.4	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 060408E-FM	**T7325**	0.8	◪ 235	0.20	1.4	◪ 180	0.18	1.4	–	–	–	–	–	–	◪ 75	0.16	1.1	–	–	–
	T8330	0.8	■ 205	0.20	1.4	◪ 120	0.18	1.4	■ 190	0.20	1.4	–	–	–	◪ 50	0.14	1.1	–	–	–
	T8430	0.8	■ 235	0.20	1.4	◪ 125	0.18	1.4	◪ 190	0.20	1.4	–	–	–	◪ 50	0.14	1.1	–	–	–
	T9315	0.8	■ 315	0.20	1.4	–	–	–	◪ 295	0.20	1.4	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 285	0.20	1.4	◪ 170	0.18	1.4	◪ 270	0.20	1.4	–	–	–	◪ 60	0.16	1.1	–	–	–
WNMG 060412E-FM	**T9315**	1.2	■ 300	0.27	1.2	–	–	–	◪ 285	0.27	1.2	–	–	–	–	–	–	–	–	–
WNMG 06T304E-FM	**T7325**	0.4	◪ 195	0.20	1.4	◪ 150	0.18	1.4	–	–	–	–	–	–	◪ 60	0.16	1.1	–	–	–
	T8330	0.4	■ 175	0.20	1.4	◪ 105	0.18	1.4	■ 165	0.20	1.4	–	–	–	◪ 40	0.14	1.1	–	–	–
	T8430	0.4	■ 195	0.20	1.4	◪ 105	0.18	1.4	◪ 160	0.20	1.4	–	–	–	◪ 40	0.14	1.1	–	–	–
	T9325	0.4	■ 240	0.20	1.4	◪ 140	0.18	1.4	◪ 225	0.20	1.4	–	–	–	◪ 50	0.16	1.1	–	–	–
WNMG 06T308E-FM	**T8330**	0.8	■ 205	0.20	1.4	◪ 120	0.18	1.4	■ 190	0.20	1.4	–	–	–	◪ 50	0.14	1.1	–	–	–
	T8430	0.8	■ 235	0.20	1.4	◪ 125	0.18	1.4	◪ 190	0.20	1.4	–	–	–	◪ 50	0.14	1.1	–	–	–
	T9325	0.8	■ 285	0.20	1.4	◪ 170	0.18	1.4	◪ 270	0.20	1.4	–	–	–	◪ 60	0.16	1.1	–	–	–
WNMG 080404E-FM	**T7325**	0.4	◪ 190	0.20	1.9	◪ 145	0.18	1.9	–	–	–	–	–	–	◪ 60	0.16	1.5	–	–	–
	T7335	0.4	◪ 180	0.20	1.9	◪ 140	0.18	1.9	–	–	–	–	–	–	◪ 55	0.16	1.5	–	–	–
	T8315	0.4	◪ 180	0.20	1.9	◪ 105	0.18	1.9	■ 170	0.20	1.9	–	–	–	◪ 45	0.14	1.5	–	–	–
	T8330	0.4	■ 165	0.20	1.9	◪ 95	0.18	1.9	■ 155	0.20	1.9	–	–	–	◪ 40	0.14	1.5	–	–	–
	T8430	0.4	■ 190	0.20	1.9	◪ 105	0.18	1.9	◪ 155	0.20	1.9	–	–	–	◪ 40	0.14	1.5	–	–	–
	T9310	0.4	■ 285	0.20	1.9	–	–	–	◪ 270	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9315	0.4	■ 270	0.20	1.2	–	–	–	◪ 255	0.20	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 245	0.20	1.2	◪ 145	0.18	1.2	◪ 230	0.20	1.2	–	–	–	◪ 55	0.16	1.0	–	–	–
WNMG 080408E-FM	**T7325**	0.8	◪ 225	0.20	1.9	◪ 175	0.18	1.9	–	–	–	–	–	–	◪ 70	0.16	1.5	–	–	–
	T7335	0.8	◪ 215	0.20	1.9	◪ 165	0.18	1.9	–	–	–	–	–	–	◪ 65	0.16	1.5	–	–	–
	T8315	0.8	◪ 210	0.20	1.9	◪ 125	0.18	1.9	■ 195	0.20	1.9	–	–	–	◪ 50	0.16	1.5	–	–	–
	T8330	0.8	■ 195	0.20	1.9	◪ 115	0.18	1.9	■ 185	0.20	1.9	–	–	–	◪ 45	0.16	1.5	–	–	–
	T8430	0.8	■ 225	0.20	1.9	◪ 120	0.18	1.9	◪ 185	0.20	1.9	–	–	–	◪ 45	0.16	1.5	–	–	–
	T9310	0.8	■ 335	0.20	1.9	–	–	–	◪ 315	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9315	0.8	■ 310	0.20	1.9	–	–	–	◪ 290	0.20	1.9	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 280	0.20	1.9	◪ 165	0.18	1.9	◪ 265	0.20	1.9	–	–	–	◪ 60	0.16	1.5	–	–	–
WNMG 080412E-FM	**T7325**	1.2	◪ 220	0.27	1.9	◪ 170	0.24	1.9	–	–	–	–	–	–	◪ 70	0.19	1.5	–	–	–
	T7335	1.2	◪ 205	0.27	1.9	◪ 155	0.24	1.9	–	–	–	–	–	–	◪ 65	0.19	1.5	–	–	–
	T8330	1.2	■ 190	0.27	1.9	◪ 110	0.24	1.9	■ 180	0.27	1.9	–	–	–	◪ 45	0.19	1.5	–	–	–
	T8430	1.2	■ 210	0.27	1.9	◪ 115	0.24	1.9	◪ 175	0.27	1.9	–	–	–	◪ 45	0.19	1.5	–	–	–
	T9310	1.2	■ 310	0.27	1.9	–	–	–	◪ 290	0.27	1.9	–	–	–	–	–	–	–	–	–
	T9315	1.2	■ 285	0.27	1.9	–	–	–	◪ 270	0.27	1.9	–	–	–	–	–	–	–	–	–
	T9325	1.2	■ 255	0.27	1.9	◪ 150	0.24	1.9	◪ 240	0.27	1.9	–	–	–	◪ 55	0.19	1.5	–	–	–

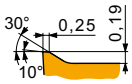
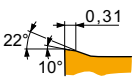
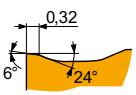
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
Geometria KR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
WNMG 080408E-KR	**T5305**	0.8	255	0.35	3.5	–	–	–	240	0.35	3.5	–	–	–	–	–	–	50	0.15	1.0
	T5315	0.8	230	0.35	3.5	–	–	–	215	0.35	3.5	–	–	–	–	–	–	45	0.15	1.0
WNMG 080412E-KR	**T5305**	1.2	260	0.40	3.5	–	–	–	245	0.40	3.5	–	–	–	–	–	–	50	0.15	1.0
	T5315	1.2	235	0.40	3.5	–	–	–	220	0.40	3.5	–	–	–	–	–	–	45	0.15	1.0
																				
Geometria M para operações de maquinação de acabamento a semi-desbaste, e cortes contínuos a interrompidos.																				
WNMG 060404E-M	**T5315**	0.4	250	0.20	1.8	–	–	–	235	0.20	1.8	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.4	240	0.20	1.8	–	–	–	225	0.20	1.8	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	215	0.20	1.8	–	–	–	200	0.20	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.4	180	0.20	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 060408E-M	**T5315**	0.8	255	0.32	1.8	–	–	–	240	0.32	1.8	–	–	–	–	–	–	50	0.15	1.0
	T9310	0.8	250	0.32	1.8	–	–	–	235	0.32	1.8	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.8	230	0.32	1.8	–	–	–	215	0.32	1.8	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	205	0.32	1.8	–	–	–	190	0.32	1.8	–	–	–	–	–	–	–	–	–
	T9335	0.8	180	0.32	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080404E-M	**T5315**	0.4	260	0.20	1.2	–	–	–	245	0.20	1.2	–	–	–	–	–	–	50	0.15	1.0
	T9315	0.4	235	0.20	2.1	–	–	–	220	0.20	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.4	210	0.20	2.1	–	–	–	195	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.4	180	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080408E-M	**T5305**	0.8	280	0.32	2.1	–	–	–	265	0.32	2.1	–	–	–	–	–	–	55	0.15	1.0
	T5315	0.8	250	0.32	2.1	–	–	–	235	0.32	2.1	–	–	–	–	–	–	50	0.15	1.0
	T8330	0.8	155	0.32	2.1	–	–	–	145	0.32	2.1	–	–	–	–	–	–	30	0.15	1.0
	T8430	0.8	170	0.32	2.1	–	–	–	135	0.32	2.1	–	–	–	–	–	–	25	0.15	1.0
	T9310	0.8	245	0.32	2.1	–	–	–	230	0.32	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9315	0.8	225	0.32	2.1	–	–	–	210	0.32	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9325	0.8	200	0.32	2.1	–	–	–	190	0.32	2.1	–	–	–	–	–	–	–	–	–
	T9335	0.8	180	0.32	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080412E-M	**T5305**	1.2	275	0.40	2.1	–	–	–	260	0.40	2.1	–	–	–	–	–	–	55	0.15	1.0
	T5315	1.2	245	0.40	2.1	–	–	–	230	0.40	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9310	1.2	235	0.40	2.1	–	–	–	220	0.40	2.1	–	–	–	–	–	–	45	0.15	1.0
	T9315	1.2	220	0.40	2.1	–	–	–	205	0.40	2.1	–	–	–	–	–	–	40	0.15	1.0
	T9325	1.2	195	0.40	2.1	–	–	–	185	0.40	2.1	–	–	–	–	–	–	–	–	–
	T9335	1.2	170	0.40	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																				
WNMG 060404E-NF	**T6310**	0.4	190	0.17	0.8	135	0.15	0.8	150	0.17	0.8	570	0.20	0.8	55	0.12	0.6	–	–	–
	T7325	0.4	215	0.18	0.8	165	0.16	0.8	–	–	–	–	–	–	65	0.16	0.6	–	–	–
	T7335	0.4	210	0.18	0.8	160	0.16	0.8	–	–	–	–	–	–	65	0.16	0.6	–	–	–
	T8315	0.4	200	0.17	0.8	120	0.15	0.8	190	0.17	0.8	600	0.20	0.8	50	0.12	0.6	–	–	–
	T8330	0.4	190	0.17	0.8	110	0.15	0.8	180	0.17	0.8	570	0.20	0.8	45	0.12	0.6	–	–	–
	T8430	0.4	225	0.17	0.8	120	0.15	0.8	185	0.17	0.8	615	0.20	0.8	45	0.12	0.6	–	–	–
	T9315	0.4	305	0.17	0.8	–	–	–	285	0.17	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.4	265	0.18	0.8	155	0.16	0.8	250	0.18	0.8	–	–	–	55	0.16	0.6	–	–	–
WNMG 060408E-NF	**T6310**	0.8	215	0.19	1.0	150	0.17	1.0	170	0.19	1.0	645	0.23	1.0	60	0.15	0.8	–	–	–
	T7325	0.8	245	0.19	1.0	190	0.17	1.0	–	–	–	–	–	–	75	0.15	0.8	–	–	–
	T8330	0.8	215	0.19	1.0	125	0.17	1.0	200	0.19	1.0	645	0.23	1.0	50	0.15	0.8	–	–	–
	T8430	0.8	245	0.19	1.0	135	0.17	1.0	200	0.19	1.0	675	0.23	1.0	50	0.15	0.8	–	–	–
	T9315	0.8	335	0.19	1.0	–	–	–	315	0.19	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	300	0.19	1.0	180	0.17	1.0	285	0.19	1.0	–	–	–	65	0.15	0.8	–	–	–

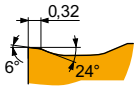
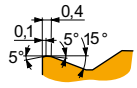
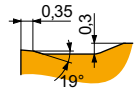
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
			Geometria NF com desenho altamente positivo para operações de maquinação de acabamento fino a médio, e cortes contínuos.																	
WNMG 080404E-NF	**HF7**	0.4	–	–	–	95	0.15	1.7	155	0.17	1.7	495	0.20	1.7	–	–	–	–	–	–
	T6310	0.4	180	0.17	1.7	125	0.15	1.7	145	0.17	1.7	540	0.20	1.7	50	0.14	1.4	–	–	–
	T7325	0.4	200	0.18	1.7	155	0.16	1.7	–	–	–	–	–	–	65	0.16	1.4	–	–	–
	T7335	0.4	195	0.18	1.7	150	0.16	1.7	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.4	185	0.17	1.7	110	0.15	1.7	175	0.17	1.7	555	0.20	1.7	45	0.14	1.4	–	–	–
	T8330	0.4	180	0.17	1.7	105	0.15	1.7	170	0.17	1.7	540	0.20	1.7	45	0.14	1.4	–	–	–
	T8430	0.4	200	0.17	1.7	110	0.15	1.7	165	0.17	1.7	555	0.20	1.7	40	0.14	1.4	–	–	–
	T9315	0.4	285	0.17	1.7	–	–	–	270	0.17	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.4	250	0.18	1.7	150	0.16	1.7	235	0.18	1.7	–	–	–	55	0.16	1.4	–	–	–
WNMG 080408E-NF	**HF7**	0.8	–	–	–	110	0.17	1.7	180	0.19	1.7	570	0.23	1.7	–	–	–	–	–	–
	T6310	0.8	200	0.19	1.7	140	0.17	1.7	160	0.19	1.7	600	0.23	1.7	60	0.15	1.4	–	–	–
	T7325	0.8	235	0.19	1.7	180	0.17	1.7	–	–	–	–	–	–	75	0.15	1.4	–	–	–
	T7335	0.8	225	0.19	1.7	175	0.17	1.7	–	–	–	–	–	–	70	0.15	1.4	–	–	–
	T8315	0.8	215	0.19	1.7	125	0.17	1.7	200	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T8330	0.8	200	0.19	1.7	120	0.17	1.7	190	0.19	1.7	600	0.23	1.7	50	0.15	1.4	–	–	–
	T8430	0.8	235	0.19	1.7	125	0.17	1.7	190	0.19	1.7	645	0.23	1.7	50	0.15	1.4	–	–	–
	T9315	0.8	320	0.19	1.7	–	–	–	300	0.19	1.7	–	–	–	–	–	–	–	–	–
	T9325	0.8	285	0.19	1.7	170	0.17	1.7	270	0.19	1.7	–	–	–	60	0.15	1.4	–	–	–
WNMG 080412E-NF	**T6310**	1.2	185	0.30	2.1	130	0.27	2.1	145	0.30	2.1	555	0.36	2.1	55	0.21	1.7	–	–	–
	T7325	1.2	205	0.30	2.1	155	0.27	2.1	–	–	–	–	–	–	65	0.21	1.7	–	–	–
	T8430	1.2	200	0.30	2.1	110	0.27	2.1	165	0.30	2.1	555	0.36	2.1	40	0.21	1.7	–	–	–
	T9315	1.2	275	0.30	2.1	–	–	–	260	0.30	2.1	–	–	–	–	–	–	–	–	–
	T9325	1.2	245	0.30	2.1	145	0.27	2.1	230	0.30	2.1	–	–	–	55	0.21	1.7	–	–	–
																				
			Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, com cortes contínuos.																	
WNMG 060404E-NM	**T7325**	0.4	200	0.20	1.8	155	0.18	1.8	–	–	–	–	–	–	65	0.16	1.4	–	–	–
	T7335	0.4	195	0.20	1.8	150	0.18	1.8	–	–	–	–	–	–	60	0.16	1.4	–	–	–
	T8315	0.4	185	0.20	1.8	110	0.18	1.8	–	–	–	555	0.24	1.8	45	0.16	1.4	–	–	–
	T8330	0.4	175	0.20	1.8	105	0.18	1.8	–	–	–	525	0.24	1.8	40	0.16	1.4	–	–	–
	T8430	0.4	185	0.25	1.8	100	0.23	1.8	–	–	–	510	0.30	1.8	40	0.20	1.4	–	–	–
	T9325	0.4	245	0.20	1.8	145	0.18	1.8	–	–	–	–	–	–	55	0.16	1.4	–	–	–
WNMG 060408E-NM	**T7325**	0.8	220	0.25	1.8	170	0.23	1.8	–	–	–	–	–	–	70	0.20	1.4	–	–	–
	T7335	0.8	215	0.25	1.8	165	0.23	1.8	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T8315	0.8	205	0.25	1.8	120	0.23	1.8	–	–	–	615	0.30	1.8	50	0.20	1.4	–	–	–
	T8330	0.8	195	0.25	1.8	115	0.23	1.8	–	–	–	585	0.30	1.8	45	0.20	1.4	–	–	–
	T8430	0.8	220	0.25	1.8	120	0.23	1.8	–	–	–	600	0.30	1.8	45	0.20	1.4	–	–	–
	T9315	0.8	290	0.25	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	265	0.25	1.8	155	0.23	1.8	–	–	–	–	–	–	55	0.20	1.4	–	–	–
WNMG 060412E-NM	**T7325**	1.2	220	0.30	1.8	170	0.27	1.8	–	–	–	–	–	–	70	0.24	1.4	–	–	–
	T7335	1.2	220	0.30	1.2	170	0.27	1.2	–	–	–	–	–	–	70	0.24	1.0	–	–	–
	T9315	1.2	285	0.30	1.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	255	0.30	1.8	150	0.27	1.8	–	–	–	–	–	–	55	0.24	1.4	–	–	–
WNMG 080404E-NM	**T7325**	0.4	195	0.20	2.1	150	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T7335	0.4	190	0.20	2.1	145	0.18	2.1	–	–	–	–	–	–	60	0.16	1.7	–	–	–
	T8315	0.4	180	0.20	2.1	105	0.18	2.1	–	–	–	540	0.24	2.1	45	0.16	1.7	–	–	–
	T8330	0.4	170	0.20	2.1	100	0.18	2.1	–	–	–	510	0.24	2.1	40	0.16	1.7	–	–	–
	T8430	0.4	180	0.25	2.1	95	0.23	2.1	–	–	–	495	0.30	2.1	35	0.20	1.7	–	–	–
	T9315	0.4	270	0.20	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	240	0.20	2.1	140	0.18	2.1	–	–	–	–	–	–	50	0.16	1.7	–	–	–

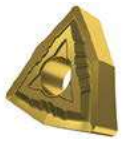
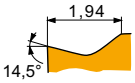
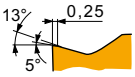
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria NM com desenho altamente positivo para operações de maquinação de acabamento fino, maquinação média e de desbaste, com cortes contínuos.																	
WNMG 080408E-NM	**T7325**	0.8	215	0.25	2.1	165	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T7335	0.8	210	0.25	2.1	160	0.23	2.1	–	–	–	–	–	–	65	0.20	1.7	–	–	–
	T8315	0.8	205	0.25	2.1	120	0.23	2.1	–	–	–	615	0.30	2.1	50	0.20	1.7	–	–	–
	T8330	0.8	195	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T8430	0.8	210	0.25	2.1	115	0.23	2.1	–	–	–	585	0.30	2.1	45	0.20	1.7	–	–	–
	T9315	0.8	290	0.25	2.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	260	0.25	2.1	155	0.23	2.1	–	–	–	–	–	–	55	0.20	1.7	–	–	–
WNMG 080412E-NM	**T7325**	1.2	215	0.30	2.1	165	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T7335	1.2	210	0.30	2.1	160	0.27	2.1	–	–	–	–	–	–	65	0.24	1.7	–	–	–
	T8315	1.2	205	0.30	2.1	120	0.27	2.1	–	–	–	615	0.36	2.1	50	0.24	1.7	–	–	–
	T9325	1.2	255	0.30	2.1	150	0.27	2.1	–	–	–	–	–	–	55	0.24	1.7	–	–	–
																				
			Geometria NMR com desenho positivo para operações de maquinação média a desbaste, e cortes contínuos.																	
WNMG 060404E-NMR	**T6310**	0.4	145	0.25	1.6	100	0.23	1.6	–	–	–	–	–	–	40	0.20	1.3	–	–	–
	T7325	0.4	160	0.25	1.6	120	0.23	1.6	–	–	–	–	–	–	50	0.20	1.3	–	–	–
	T8430	0.4	145	0.31	1.6	80	0.28	1.6	–	–	–	–	–	–	30	0.25	1.3	–	–	–
	T9325	0.4	200	0.25	1.6	120	0.23	1.6	–	–	–	–	–	–	45	0.20	1.3	–	–	–
WNMG 060408E-NMR	**T6310**	0.8	155	0.35	1.6	110	0.32	1.6	–	–	–	–	–	–	45	0.25	1.3	–	–	–
	T7325	0.8	175	0.35	1.6	135	0.32	1.6	–	–	–	–	–	–	55	0.25	1.3	–	–	–
	T7335	0.8	170	0.35	1.6	130	0.32	1.6	–	–	–	–	–	–	55	0.25	1.3	–	–	–
	T9315	0.8	225	0.35	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.35	1.6	120	0.32	1.6	–	–	–	–	–	–	45	0.25	1.3	–	–	–
WNMG 080404E-NMR	**T6310**	0.4	140	0.25	2.7	100	0.23	2.7	–	–	–	–	–	–	40	0.20	2.2	–	–	–
	T7325	0.4	155	0.25	2.7	120	0.23	2.7	–	–	–	–	–	–	50	0.20	2.2	–	–	–
	T7335	0.4	150	0.25	2.7	115	0.23	2.7	–	–	–	–	–	–	45	0.20	2.2	–	–	–
	T8330	0.4	140	0.25	2.7	80	0.23	2.7	–	–	–	–	–	–	35	0.20	2.2	–	–	–
	T8430	0.4	140	0.31	2.7	75	0.28	2.7	–	–	–	–	–	–	30	0.25	2.2	–	–	–
	T9315	0.4	205	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.4	185	0.25	2.7	110	0.23	2.7	–	–	–	–	–	–	40	0.20	2.2	–	–	–
WNMG 080408E-NMR	**T6310**	0.8	150	0.35	2.7	105	0.32	2.7	–	–	–	–	–	–	45	0.25	2.2	–	–	–
	T7325	0.8	170	0.35	2.7	130	0.32	2.7	–	–	–	–	–	–	55	0.25	2.2	–	–	–
	T7335	0.8	160	0.35	2.7	120	0.32	2.7	–	–	–	–	–	–	50	0.25	2.2	–	–	–
	T8330	0.8	150	0.35	2.7	90	0.32	2.7	–	–	–	–	–	–	35	0.25	2.2	–	–	–
	T8430	0.8	155	0.35	2.7	85	0.32	2.7	–	–	–	–	–	–	30	0.25	2.2	–	–	–
	T9315	0.8	210	0.35	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.35	2.7	110	0.32	2.7	–	–	–	–	–	–	40	0.25	2.2	–	–	–
WNMG 080412E-NMR	**T6310**	1.2	150	0.40	2.7	105	0.36	2.7	–	–	–	–	–	–	45	0.28	2.2	–	–	–
	T7325	1.2	170	0.40	2.7	130	0.36	2.7	–	–	–	–	–	–	55	0.28	2.2	–	–	–
	T7335	1.2	160	0.40	2.7	120	0.36	2.7	–	–	–	–	–	–	50	0.28	2.2	–	–	–
	T8330	1.2	150	0.40	2.7	90	0.36	2.7	–	–	–	–	–	–	35	0.28	2.2	–	–	–
	T8430	1.2	155	0.40	2.7	85	0.36	2.7	–	–	–	–	–	–	30	0.28	2.2	–	–	–
	T9315	1.2	215	0.40	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	T9325	1.2	190	0.40	2.7	110	0.36	2.7	–	–	–	–	–	–	40	0.28	2.2	–	–	–
																				
			Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																	
WNMG 080404-NRM	**T7325**	0.4	155	0.25	2.7	120	0.23	2.7	–	–	–	–	–	–	50	0.18	2.2	–	–	–
	T7335	0.4	150	0.25	2.7	115	0.23	2.7	–	–	–	–	–	–	45	0.18	2.2	–	–	–
	T9315	0.4	205	0.25	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080408-NRM	**T7325**	0.8	170	0.35	2.7	130	0.32	2.7	–	–	–	–	–	–	55	0.28	2.2	–	–	–
	T7335	0.8	160	0.35	2.7	120	0.32	2.7	–	–	–	–	–	–	50	0.28	2.2	–	–	–
	T9315	0.8	210	0.35	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

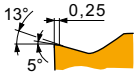
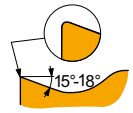
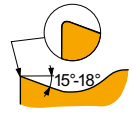
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria NRM com desenho positivo para operações de maquinação de semi-desbaste a desbaste e cortes contínuos a interrompidos moderados.																	
WNMG 080412-NRM	**T7325**	1.2	170	0.40	2.7	130	0.36	2.7	–	–	–	–	–	–	55	0.28	2.2	–	–	–
	T7335	1.2	160	0.40	2.7	120	0.36	2.7	–	–	–	–	–	–	50	0.28	2.2	–	–	–
	T9315	1.2	215	0.40	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria R para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
WNMG 080408E-R	**T5305**	0.8	245	0.40	3.5	–	–	–	230	0.40	3.5	–	–	–	–	–	–	45	0.15	1.0
	T5315	0.8	220	0.40	3.5	–	–	–	205	0.40	3.5	–	–	–	–	–	–	40	0.15	1.0
	T9310	0.8	210	0.40	3.5	–	–	–	195	0.40	3.5	–	–	–	–	–	–	40	0.15	1.0
	T9315	0.8	195	0.40	3.5	–	–	–	185	0.40	3.5	–	–	–	–	–	–	35	0.15	1.0
	T9325	0.8	175	0.40	3.5	–	–	–	165	0.40	3.5	–	–	–	–	–	–	–	–	–
	T9335	0.8	155	0.40	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080412E-R	**T5305**	1.2	250	0.45	3.5	–	–	–	235	0.45	3.5	–	–	–	–	–	–	50	0.15	1.0
	T5315	1.2	225	0.45	3.5	–	–	–	210	0.45	3.5	–	–	–	–	–	–	45	0.15	1.0
	T9310	1.2	215	0.45	3.5	–	–	–	200	0.45	3.5	–	–	–	–	–	–	40	0.15	1.0
	T9315	1.2	200	0.45	3.5	–	–	–	190	0.45	3.5	–	–	–	–	–	–	40	0.15	1.0
	T9325	1.2	180	0.45	3.5	–	–	–	170	0.45	3.5	–	–	–	–	–	–	–	–	–
	T9335	1.2	155	0.45	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
																				
			Geometria RM para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
WNMG 060412E-RM	**T9310**	1.2	245	0.45	3.0	–	–	–	230	0.45	3.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	230	0.45	3.0	–	–	–	215	0.45	3.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	230	0.45	1.2	135	0.41	1.2	215	0.45	1.2	–	–	–	–	–	–	–	–	–
WNMG 080408E-RM	**T5305**	0.8	275	0.40	4.0	–	–	–	260	0.40	4.0	–	–	–	–	–	–	–	–	–
	T5315	0.8	250	0.40	4.0	–	–	–	235	0.40	4.0	–	–	–	–	–	–	–	–	–
	T7325	0.8	180	0.40	4.0	140	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	0.8	165	0.40	4.0	125	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	0.8	165	0.40	4.0	95	0.36	4.0	155	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8330	0.8	155	0.40	4.0	90	0.36	4.0	145	0.40	4.0	–	–	–	–	–	–	–	–	–
	T8430	0.8	165	0.40	4.0	90	0.36	4.0	135	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9310	0.8	240	0.40	4.0	–	–	–	225	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9315	0.8	220	0.40	4.0	–	–	–	205	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	200	0.40	4.0	120	0.36	4.0	190	0.40	4.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	170	0.40	4.0	100	0.36	4.0	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080412E-RM	**T5305**	1.2	280	0.45	4.0	–	–	–	265	0.45	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.2	250	0.45	4.0	–	–	–	235	0.45	4.0	–	–	–	–	–	–	–	–	–
	T7325	1.2	180	0.45	4.0	140	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T7335	1.2	170	0.45	4.0	130	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8315	1.2	170	0.45	4.0	100	0.41	4.0	160	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.2	240	0.45	4.0	–	–	–	225	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.2	220	0.45	4.0	–	–	–	205	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.2	200	0.45	4.0	120	0.41	4.0	190	0.45	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	175	0.45	4.0	105	0.41	4.0	–	–	–	–	–	–	–	–	–	–	–	–
WNMG 080416E-RM	**T5305**	1.6	280	0.50	4.0	–	–	–	265	0.50	4.0	–	–	–	–	–	–	–	–	–
	T5315	1.6	255	0.50	4.0	–	–	–	240	0.50	4.0	–	–	–	–	–	–	–	–	–
	T7335	1.6	175	0.50	4.0	135	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–
	T8430	1.6	170	0.50	4.0	90	0.45	4.0	135	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9310	1.6	240	0.50	4.0	–	–	–	225	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9315	1.6	220	0.50	4.0	–	–	–	205	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9325	1.6	205	0.50	4.0	120	0.45	4.0	190	0.50	4.0	–	–	–	–	–	–	–	–	–
	T9335	1.6	175	0.50	4.0	105	0.45	4.0	–	–	–	–	–	–	–	–	–	–	–	–

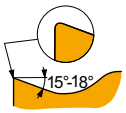
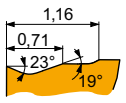
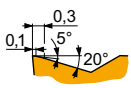
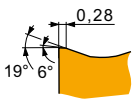
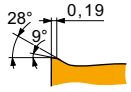
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria SF com desenho positivo para operações de maquinação de acabamento fino e para maquinação de paredes finas, com cortes contínuos.																	
WNMG 060404E-SF	**H07**	0.4	–	–	–	90	0.14	1.0	145	0.15	1.0	470	0.18	1.0	45	0.12	0.8	–	–	–
	T6310	0.4	180	0.15	1.0	125	0.14	1.0	145	0.15	1.0	540	0.18	1.0	50	0.12	0.8	35	0.15	1.0
	T7325	0.4	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T7335	0.4	200	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T8315	0.4	195	0.15	1.0	115	0.14	1.0	185	0.15	1.0	585	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8330	0.4	180	0.15	1.0	105	0.14	1.0	170	0.15	1.0	540	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8430	0.4	220	0.15	1.0	120	0.14	1.0	180	0.15	1.0	600	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T9325	0.4	255	0.17	1.0	150	0.15	1.0	240	0.17	1.0	–	–	–	55	0.15	0.8	–	–	–
WNMG 060408E-SF	**H07**	0.8	–	–	–	95	0.18	1.0	155	0.20	1.0	495	0.24	1.0	50	0.14	0.8	–	–	–
	T6310	0.8	200	0.20	1.0	140	0.18	1.0	160	0.20	1.0	600	0.24	1.0	60	0.14	0.8	40	0.15	1.0
	T7335	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T8315	0.8	210	0.20	1.0	125	0.18	1.0	195	0.20	1.0	630	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8330	0.8	200	0.20	1.0	120	0.18	1.0	190	0.20	1.0	600	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8430	0.8	230	0.20	1.0	125	0.18	1.0	185	0.20	1.0	630	0.24	1.0	45	0.14	0.8	35	0.15	1.0
	T9315	0.8	315	0.20	1.0	–	–	–	295	0.20	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.8	280	0.20	1.0	165	0.18	1.0	265	0.20	1.0	–	–	–	60	0.16	0.8	–	–	–
WNMG 080404E-SF	**H07**	0.4	–	–	–	90	0.14	1.0	145	0.15	1.0	470	0.18	1.0	45	0.12	0.8	–	–	–
	T6310	0.4	180	0.15	1.0	125	0.14	1.0	145	0.15	1.0	540	0.18	1.0	50	0.12	0.8	35	0.15	1.0
	T7325	0.4	205	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T7335	0.4	200	0.17	1.0	155	0.15	1.0	–	–	–	–	–	–	65	0.15	0.8	–	–	–
	T8315	0.4	195	0.15	1.0	115	0.14	1.0	185	0.15	1.0	585	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8330	0.4	180	0.15	1.0	105	0.14	1.0	170	0.15	1.0	540	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T8430	0.4	220	0.15	1.0	120	0.14	1.0	180	0.15	1.0	600	0.18	1.0	45	0.12	0.8	35	0.15	1.0
	T9315	0.4	300	0.15	1.0	–	–	–	285	0.15	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.4	255	0.17	1.0	150	0.15	1.0	240	0.17	1.0	–	–	–	55	0.15	0.8	–	–	–
WNMG 080408E-SF	**H07**	0.8	–	–	–	95	0.18	1.0	155	0.20	1.0	495	0.24	1.0	50	0.14	0.8	–	–	–
	T6310	0.8	200	0.20	1.0	140	0.18	1.0	160	0.20	1.0	600	0.24	1.0	60	0.14	0.8	40	0.15	1.0
	T7325	0.8	230	0.20	1.0	175	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T7335	0.8	220	0.20	1.0	170	0.18	1.0	–	–	–	–	–	–	70	0.16	0.8	–	–	–
	T8315	0.8	210	0.20	1.0	125	0.18	1.0	195	0.20	1.0	630	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8330	0.8	200	0.20	1.0	120	0.18	1.0	190	0.20	1.0	600	0.24	1.0	50	0.14	0.8	40	0.15	1.0
	T8430	0.8	230	0.20	1.0	125	0.18	1.0	185	0.20	1.0	630	0.24	1.0	45	0.14	0.8	35	0.15	1.0
	T9315	0.8	315	0.20	1.0	–	–	–	295	0.20	1.0	–	–	–	–	–	–	60	0.15	1.0
	T9325	0.8	280	0.20	1.0	165	0.18	1.0	265	0.20	1.0	–	–	–	60	0.16	0.8	–	–	–
WNMG 080412E-SF	**T7325**	1.2	220	0.25	1.5	170	0.23	1.5	–	–	–	–	–	–	70	0.18	1.2	–	–	–
																				
			Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
WNMG 060404E-SM	**T7325**	0.4	180	0.22	1.7	140	0.20	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T7335	0.4	175	0.22	1.7	135	0.20	1.7	–	–	–	–	–	–	55	0.20	1.4	–	–	–
	T8330	0.4	155	0.22	1.7	90	0.20	1.7	145	0.22	1.7	465	0.26	1.7	35	0.20	1.4	30	0.15	1.0
	T8430	0.4	175	0.22	1.7	95	0.20	1.7	140	0.22	1.7	480	0.26	1.7	35	0.20	1.4	30	0.15	1.0
	T9315	0.4	250	0.20	1.7	–	–	–	235	0.20	1.7	–	–	–	–	–	–	50	0.15	1.0
	T9325	0.4	215	0.22	1.7	125	0.20	1.7	200	0.22	1.7	–	–	–	45	0.20	1.4	–	–	–
WNMG 060408E-SM	**T6310**	0.8	175	0.25	1.7	125	0.23	1.7	140	0.25	1.7	525	0.30	1.7	50	0.20	1.4	35	0.15	1.0
	T7325	0.8	200	0.25	1.7	155	0.23	1.7	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T7335	0.8	195	0.25	1.7	150	0.23	1.7	–	–	–	–	–	–	60	0.20	1.4	–	–	–
	T8330	0.8	175	0.25	1.7	105	0.23	1.7	165	0.25	1.7	525	0.30	1.7	40	0.20	1.4	35	0.15	1.0
	T8430	0.8	195	0.25	1.7	105	0.23	1.7	160	0.25	1.7	540	0.30	1.7	40	0.20	1.4	30	0.15	1.0
	T9325	0.8	240	0.25	1.7	140	0.23	1.7	225	0.25	1.7	–	–	–	50	0.20	1.4	–	–	–
WNMG 060412E-SM	**T7325**	1.2	200	0.30	1.7	155	0.27	1.7	–	–	–	–	–	–	65	0.24	1.4	–	–	–
	T8330	1.2	180	0.30	1.7	105	0.27	1.7	170	0.30	1.7	540	0.36	1.7	45	0.24	1.4	35	0.15	1.0
	T8430	1.2	195	0.30	1.7	105	0.27	1.7	160	0.30	1.7	540	0.36	1.7	40	0.24	1.4	30	0.15	1.0
	T9325	1.2	240	0.30	1.7	140	0.27	1.7	225	0.30	1.7	–	–	–	50	0.24	1.4	–	–	–

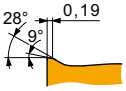
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
			 Geometria SM com desenho positivo para operações de maquinação média, e cortes contínuos a interrompidos.																	
WNMG 080404E-SM	**T6310**	0.4	■	155	0.22	2.0	■	110	0.20	2.0	■	125	0.22	2.0	◪	465	0.26	2.0	■	45	0.20	1.6	◪	30	0.15	1.0
	T7325	0.4	◪	175	0.22	2.0	■	135	0.20	2.0		–	–	–		–	–	–	■	55	0.20	1.6		–	–	–
	T7335	0.4	◪	170	0.22	2.0	■	130	0.20	2.0		–	–	–		–	–	–	■	55	0.20	1.6		–	–	–
	T8330	0.4	■	155	0.22	2.0	■	90	0.20	2.0	■	145	0.22	2.0	◪	465	0.26	2.0	◪	35	0.20	1.6	◪	30	0.15	1.0
	T8430	0.4	■	170	0.22	2.0	■	90	0.20	2.0	◪	135	0.22	2.0	◪	465	0.26	2.0	◪	35	0.20	1.6	◪	25	0.15	1.0
	T9315	0.4	■	245	0.20	2.0		–	–	–	◪	230	0.20	2.0		–	–	–		–	–	–	◪	45	0.15	1.0
	T9325	0.4	■	210	0.22	2.0	■	125	0.20	2.0	◪	195	0.22	2.0		–	–	–	◪	45	0.20	1.6		–	–	–
WNMG 080408E-SM	**T6310**	0.8	■	175	0.25	2.0	■	125	0.23	2.0	■	140	0.25	2.0	◪	525	0.30	2.0	■	50	0.20	1.6	◪	35	0.15	1.0
	T7325	0.8	◪	200	0.25	2.0	■	155	0.23	2.0		–	–	–		–	–	–	■	65	0.20	1.6		–	–	–
	T7335	0.8	◪	190	0.25	2.0	■	145	0.23	2.0		–	–	–		–	–	–	■	60	0.20	1.6		–	–	–
	T8330	0.8	■	175	0.25	2.0	■	105	0.23	2.0	■	165	0.25	2.0	◪	525	0.30	2.0	◪	40	0.20	1.6	◪	35	0.15	1.0
	T8430	0.8	■	195	0.25	2.0	■	105	0.23	2.0	◪	160	0.25	2.0	◪	540	0.30	2.0	◪	40	0.20	1.6	◪	30	0.15	1.0
	T9315	0.8	■	265	0.25	2.0		–	–	–	◪	250	0.25	2.0		–	–	–		–	–	–	◪	50	0.15	1.0
	T9325	0.8	■	235	0.25	2.0	■	140	0.23	2.0	◪	220	0.25	2.0		–	–	–	◪	50	0.20	1.6		–	–	–
WNMG 080412E-SM	**T6310**	1.2	■	175	0.30	2.0	■	125	0.27	2.0	■	140	0.30	2.0	◪	525	0.36	2.0	■	50	0.24	1.6	◪	35	0.15	1.0
	T7325	1.2	◪	195	0.30	2.0	■	150	0.27	2.0		–	–	–		–	–	–	■	60	0.24	1.6		–	–	–
	T7335	1.2	◪	190	0.30	2.0	■	145	0.27	2.0		–	–	–		–	–	–	■	60	0.24	1.6		–	–	–
	T8330	1.2	■	175	0.30	2.0	■	105	0.27	2.0	■	165	0.30	2.0	◪	525	0.36	2.0	◪	40	0.24	1.6	◪	35	0.15	1.0
	T8430	1.2	■	190	0.30	2.0	■	105	0.27	2.0	◪	155	0.30	2.0	◪	525	0.36	2.0	◪	40	0.24	1.6	◪	30	0.15	1.0
	T9315	1.2	■	260	0.30	2.0		–	–	–	◪	245	0.30	2.0		–	–	–		–	–	–	◪	50	0.15	1.0
	T9325	1.2	■	235	0.30	2.0	■	140	0.27	2.0	◪	220	0.30	2.0		–	–	–	◪	50	0.24	1.6		–	–	–
			 Geometria ER-SI com desenho positiva à direita para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																	
WNMG 060404ER-SI	**T8330**	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–
WNMG 080404ER-SI	**T7325**	0.4	◪	220	0.20	1.7	■	170	0.18	1.7		–	–	–		–	–	–	◪	70	0.18	1.4		–	–	–
	T7335	0.4	◪	215	0.20	1.7	■	165	0.18	1.7		–	–	–		–	–	–	◪	65	0.18	1.4		–	–	–
	T8315	0.4	◪	205	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	50	0.18	1.4		–	–	–
	T8330	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–
WNMG 080408ER-SI	**T7325**	0.8	◪	215	0.35	1.7	■	165	0.32	1.7		–	–	–		–	–	–	◪	65	0.25	1.4		–	–	–
	T7335	0.8	◪	205	0.35	1.7	■	155	0.32	1.7		–	–	–		–	–	–	◪	65	0.25	1.4		–	–	–
	T8315	0.8	◪	205	0.35	1.7	■	120	0.32	1.7		–	–	–	◪	615	0.42	1.7	◪	50	0.25	1.4		–	–	–
	T8330	0.8	■	195	0.35	1.7	■	115	0.32	1.7		–	–	–	◪	585	0.42	1.7	◪	45	0.25	1.4		–	–	–
	T8430	0.8	■	210	0.35	1.7	■	115	0.32	1.7		–	–	–	◪	585	0.42	1.7	◪	45	0.25	1.4		–	–	–
	T9325	0.8	■	255	0.35	1.7	■	150	0.32	1.7		–	–	–		–	–	–	◪	55	0.25	1.4		–	–	–
WNMG 080412ER-SI	**T8430**	1.2	■	225	0.35	1.7	■	120	0.32	1.7		–	–	–	◪	615	0.42	1.7	◪	45	0.25	1.4		–	–	–
	T9325	1.2	■	265	0.35	1.7	■	155	0.32	1.7		–	–	–		–	–	–	◪	55	0.25	1.4		–	–	–
			 Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																	
WNMG 060404EL-SI	**T8330**	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–
WNMG 080404EL-SI	**T7325**	0.4	◪	220	0.20	1.7	■	170	0.18	1.7		–	–	–		–	–	–	◪	70	0.18	1.4		–	–	–
	T7335	0.4	◪	215	0.20	1.7	■	165	0.18	1.7		–	–	–		–	–	–	◪	65	0.18	1.4		–	–	–
	T8315	0.4	◪	205	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	50	0.18	1.4		–	–	–
	T8330	0.4	■	195	0.20	1.7	■	115	0.18	1.7		–	–	–	◪	585	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T8430	0.4	■	225	0.20	1.7	■	120	0.18	1.7		–	–	–	◪	615	0.24	1.7	◪	45	0.18	1.4		–	–	–
	T9325	0.4	■	270	0.20	1.7	■	160	0.18	1.7		–	–	–		–	–	–	◪	60	0.18	1.4		–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			E																	
Geometria EL-SI com desenho positivo à esquerda para operações de maquinação de acabamento fino a semi-desbaste, e cortes contínuos.																				
WNMG 080408EL-SI	**T7325**	0.8	215	0.35	1.7	165	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T7335	0.8	205	0.35	1.7	155	0.32	1.7	–	–	–	–	–	–	65	0.25	1.4	–	–	–
	T8315	0.8	205	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	50	0.25	1.4	–	–	–
	T8330	0.8	195	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T8430	0.8	210	0.35	1.7	115	0.32	1.7	–	–	–	585	0.42	1.7	45	0.25	1.4	–	–	–
	T9325	0.8	255	0.35	1.7	150	0.32	1.7	–	–	–	–	–	–	55	0.25	1.4	–	–	–
WNMG 080412EL-SI	**T8430**	1.2	225	0.35	1.7	120	0.32	1.7	–	–	–	615	0.42	1.7	45	0.25	1.4	–	–	–
																				
			W E																	
Geometria W-F Wiper para operações de maquinação de acabamento e acabamento fino com taxas de avanço maiores e acabamento superficial aprimorado.																				
WNMG 060408W-F	**T9315**	0.8	215	0.45	0.8	–	–	–	200	0.45	0.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	0.8	–	–	–	180	0.45	0.8	–	–	–	–	–	–	–	–	–
WNMG 080404W-F	**T9315**	0.4	250	0.25	0.4	–	–	–	235	0.25	0.4	–	–	–	–	–	–	–	–	–
	T9325	0.4	225	0.25	0.4	–	–	–	210	0.25	0.4	–	–	–	–	–	–	–	–	–
																				
			W S																	
Geometria W-M Wiper para operações de maquinação de semi-desbaste a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
WNMG 060408W-M	**T9310**	0.8	220	0.45	1.2	–	–	–	205	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9315	0.8	205	0.45	1.2	–	–	–	190	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	1.2	–	–	–	180	0.45	1.2	–	–	–	–	–	–	–	–	–
WNMG 060412W-M	**T5315**	1.2	235	0.55	1.2	–	–	–	220	0.55	1.2	–	–	–	–	–	–	–	–	–
	T9315	1.2	205	0.55	1.2	–	–	–	190	0.55	1.2	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.55	1.2	–	–	–	170	0.55	1.2	–	–	–	–	–	–	–	–	–
WNMG 080408W-M	**T9315**	0.8	200	0.45	1.5	–	–	–	190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.45	1.5	–	–	–	175	0.45	1.5	–	–	–	–	–	–	–	–	–
WNMG 080412W-M	**T9325**	1.2	180	0.55	1.5	–	–	–	170	0.55	1.5	–	–	–	–	–	–	–	–	–
																				
			W S																	
Geometria W-MR Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
WNMG 060408W-MR	**T9315**	0.8	205	0.45	1.2	–	–	–	190	0.45	1.2	–	–	–	–	–	–	–	–	–
	T9325	0.8	190	0.45	1.2	110	0.41	1.2	180	0.45	1.2	–	–	–	–	–	–	–	–	–
WNMG 080404W-MR	**T9315**	0.4	200	0.30	1.5	–	–	–	190	0.30	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	180	0.30	1.5	105	0.27	1.5	170	0.30	1.5	–	–	–	–	–	–	–	–	–
WNMG 080408W-MR	**T5315**	0.8	230	0.45	1.5	–	–	–	215	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9310	0.8	215	0.45	1.5	–	–	–	200	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9315	0.8	200	0.45	1.5	–	–	–	190	0.45	1.5	–	–	–	–	–	–	–	–	–
	T9325	0.8	185	0.45	1.5	110	0.41	1.5	175	0.45	1.5	–	–	–	–	–	–	–	–	–
WNMG 080412W-MR	**T5315**	1.2	230	0.55	1.5	–	–	–	215	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9310	1.2	210	0.55	1.5	–	–	–	195	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9315	1.2	200	0.55	1.5	–	–	–	190	0.55	1.5	–	–	–	–	–	–	–	–	–
	T9325	1.2	180	0.55	1.5	105	0.50	1.5	170	0.55	1.5	–	–	–	–	–	–	–	–	–
																				
			W S																	
Geometria W-NM Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
WNMG 060408W-NM	**T7325**	0.8	220	0.25	1.8	170	0.23	1.8	–	–	–	–	–	–	70	0.20	1.4	–	–	–
	T7335	0.8	215	0.25	1.8	165	0.23	1.8	–	–	–	–	–	–	65	0.20	1.4	–	–	–
	T9315	0.8	290	0.25	1.8	–	–	–	275	0.25	1.8	–	–	–	–	–	–	–	–	–
	T9325	0.8	265	0.25	1.8	155	0.23	1.8	250	0.25	1.8	–	–	–	55	0.20	1.4	–	–	–

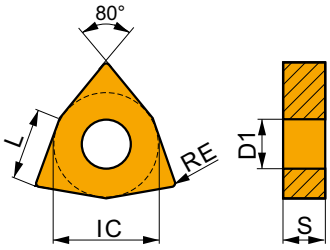
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
Geometria W-NM Wiper para operações de maquinação de acabamento a desbaste com taxas de avanço maiores e acabamento superficial aprimorado.																				
WNMG 080404W-NM	**T7325**	0.4	◪ 195	0.20	2.1	◪ 150	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T7335	0.4	◪ 190	0.20	2.1	◪ 145	0.18	2.1	–	–	–	–	–	–	◪ 60	0.16	1.7	–	–	–
	T9315	0.4	■ 270	0.20	2.1	–	–	–	◪ 255	0.20	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 240	0.20	2.1	◪ 140	0.18	2.1	◪ 225	0.20	2.1	–	–	–	◪ 50	0.16	1.7	–	–	–
WNMG 080408W-NM	**T7325**	0.8	◪ 215	0.25	2.1	◪ 165	0.23	2.1	–	–	–	–	–	–	◪ 65	0.20	1.7	–	–	–
	T7335	0.8	◪ 210	0.25	2.1	◪ 160	0.23	2.1	–	–	–	–	–	–	◪ 65	0.20	1.7	–	–	–
	T9315	0.8	■ 290	0.25	2.1	–	–	–	◪ 275	0.25	2.1	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 260	0.25	2.1	◪ 155	0.23	2.1	◪ 245	0.25	2.1	–	–	–	◪ 55	0.20	1.7	–	–	–
WNMG 080412W-NM	**T7325**	1.2	◪ 215	0.30	2.1	◪ 165	0.27	2.1	–	–	–	–	–	–	◪ 65	0.24	1.7	–	–	–
	T7335	1.2	◪ 210	0.30	2.1	◪ 160	0.27	2.1	–	–	–	–	–	–	◪ 65	0.24	1.7	–	–	–
	T9315	1.2	■ 285	0.30	2.1	–	–	–	◪ 270	0.30	2.1	–	–	–	–	–	–	–	–	–

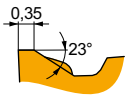
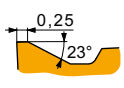
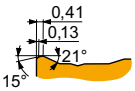
WNMM

PRAMET

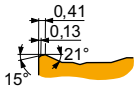
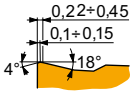
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0804	12.700	5.16	8.70	4.76
1006	15.875	6.35	10.80	6.35
1306	19.050	7.94	13.00	6.35



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
Geometria DR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
WNMM 100608E-DR	**T9325**	0.8	■ 205	0.40	5.0	◪ 120	0.36	5.0	◪ 190	0.40	5.0	–	–	–	–	–	–	–	–	–
	T9335	0.8	■ 175	0.40	5.0	◪ 105	0.36	5.0	–	–	–	–	–	–	–	–	–	–	–	–
WNMM 130612E-DR	**T9325**	1.2	■ 200	0.45	6.0	◪ 120	0.41	6.0	◪ 190	0.45	6.0	–	–	–	–	–	–	–	–	–
	T9335	1.2	■ 170	0.45	6.0	◪ 100	0.41	6.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
Geometria NR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
WNMM 080408E-NR	**T7325**	0.8	◪ 175	0.40	3.0	■ 135	0.36	3.0	–	–	–	–	–	–	◪ 55	0.28	2.4	–	–	–
	T8330	0.8	■ 155	0.40	3.0	■ 90	0.36	3.0	◪ 145	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T8430	0.8	■ 165	0.40	3.0	■ 90	0.36	3.0	◪ 135	0.40	3.0	–	–	–	◪ 35	0.28	2.4	–	–	–
	T9325	0.8	■ 195	0.40	3.0	■ 115	0.36	3.0	◪ 185	0.40	3.0	–	–	–	◪ 40	0.28	2.4	–	–	–
																				
Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																				
WNMM 080408E-NR2	**T7335**	0.8	◪ 160	0.40	4.0	■ 120	0.36	4.0	–	–	–	–	–	–	◪ 50	0.28	3.2	–	–	–
	T9325	0.8	■ 190	0.40	4.0	■ 110	0.36	4.0	◪ 180	0.40	4.0	–	–	–	◪ 40	0.28	3.2	–	–	–

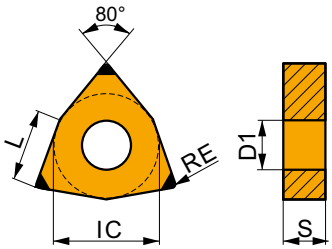
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Geometria NR2 para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
WNMM 080412E-NR2	**T7325**	1.2	175	0.45	4.0	135	0.41	4.0	–	–	–	–	–	–	55	0.32	3.2	–	–	–
	T9325	1.2	190	0.45	4.0	110	0.41	4.0	180	0.45	4.0	–	–	–	40	0.32	3.2	–	–	–
																				
			Geometria OR para operações de maquinação de semi-desbaste a desbaste, e cortes contínuos a interrompidos.																	
WNMM 080408E-OR	**T8330**	0.8	150	0.40	4.0	90	0.36	4.0	140	0.40	4.0	–	–	–	35	0.28	3.2	–	–	–
	T8430	0.8	155	0.40	4.0	85	0.36	4.0	130	0.40	4.0	–	–	–	30	0.28	3.2	–	–	–
	T9325	0.8	190	0.40	4.0	110	0.36	4.0	180	0.40	4.0	–	–	–	40	0.28	3.2	–	–	–
	T9335	0.8	165	0.40	4.0	95	0.36	4.0	–	–	–	–	–	–	35	0.28	3.2	–	–	–
WNMM 080412E-OR	**T9325**	1.2	190	0.45	4.0	110	0.41	4.0	180	0.45	4.0	–	–	–	40	0.36	3.2	–	–	–
	T9335	1.2	170	0.45	4.0	100	0.41	4.0	–	–	–	–	–	–	35	0.36	3.2	–	–	–
WNMM 080416E-OR	**T9325**	1.6	195	0.50	4.0	115	0.45	4.0	185	0.50	4.0	–	–	–	40	0.40	3.2	–	–	–
WNMM 130612E-OR	**T9325**	1.2	185	0.45	6.0	110	0.41	6.0	175	0.45	6.0	–	–	–	40	0.36	4.8	–	–	–
WNMM 130616E-OR	**T9325**	1.6	180	0.50	6.0	105	0.45	6.0	170	0.50	6.0	–	–	–	40	0.40	4.8	–	–	–

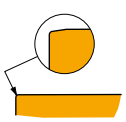
WNGA CBN

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0804	12.700	5.16	8.70	4.76



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
																				
			Para operações de maquinação de acabamento, e cortes contínuos.																	
WNGA 080408S01020C	**TB310**	0.8	–	–	–	–	–	–	530	0.15	0.6	–	–	–	140	0.11	0.5	110	0.15	1.0
																				
			Para operações de maquinação de acabamento, e cortes contínuos.																	
WNGA080408S01020WC	**TB310**	0.8	–	–	–	–	–	–	530	0.15	0.6	–	–	–	140	0.11	0.5	110	0.15	1.0

DWLN(RL) EXT

P M K N S H

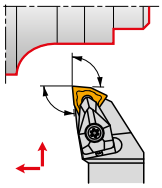
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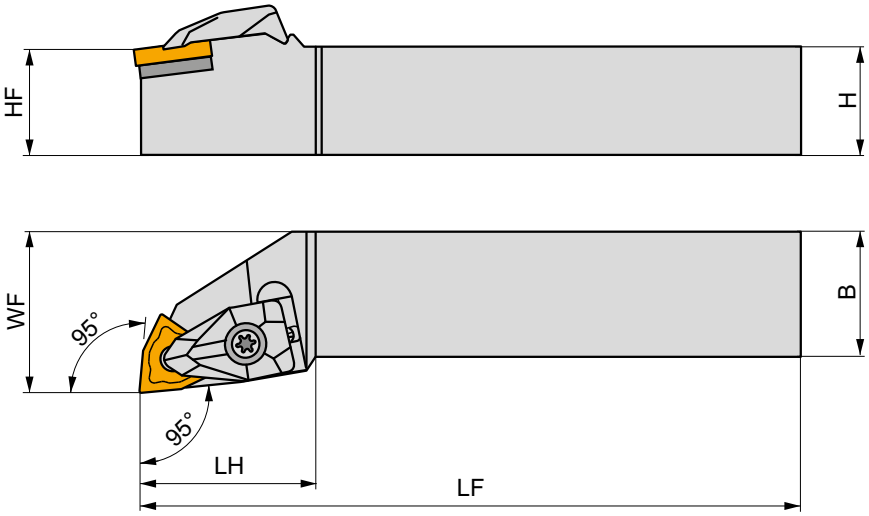
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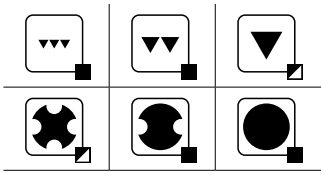


Porta-Ferramentas de Exterior, Fixação Dupla, Ângulo de 95 °, para Pastilhas WN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação dupla e ângulo de corte de 95 °. Adequado para torneamento longitudinal com esquadria, torneamento frontal, cónico e chanfrar com pastilhas negativas WN .. 06 a 13. Disponível com hastes de tamanho 16x16 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg			
R	DWLNR 1616 H 06	16	16	16	20	100	26.4	-6	-6	0.22	GI028	DW06	–
	DWLNR 2020 K 06	20	20	20	25	125	27.1	-6	-6	0.41	GI028	DW06	–
	DWLNR 2525 M 06	25	25	25	32	150	27.1	-6	-6	0.75	GI028	DW06	–
	DWLNR 2020 K 08	20	20	20	25	125	34.3	-6	-6	0.43	GI072	DW08	AT004
	DWLNR 2525 M 08	25	25	25	32	150	35	-6	-6	0.75	GI072	DW08	AT004
	DWLNR 3225 P 08	32	25	32	32	170	35	-6	-6	1.01	GI072	DW08	AT004
	DWLNR 3225 P 10	32	25	32	32	170	38	-6	-6	1.06	GI166	DW10	–
	DWLNR 3232 P 13	32	32	32	40	170	40	-6	-6	1.44	GI167	DW13	–
	DWLNR 4040 S 13	40	40	40	50	250	41	-6	-6	3.19	GI167	DW13	–
L	DWLNL 1616 H 06	16	16	16	20	100	26.4	-6	-6	0.22	GI028	DW06	–
	DWLNL 2020 K 06	20	20	20	25	125	27.1	-6	-6	0.41	GI028	DW06	–
	DWLNL 2525 M 06	25	25	25	32	150	27.1	-6	-6	0.76	GI028	DW06	–
	DWLNL 2020 K 08	20	20	20	25	125	34.3	-6	-6	0.43	GI072	DW08	AT004
	DWLNL 2525 M 08	25	25	25	32	150	35	-6	-6	0.75	GI072	DW08	AT004
	DWLNL 3225 P 08	32	25	32	32	170	35	-6	-6	1.10	GI072	DW08	AT004
	DWLNL 3225 P 10	32	25	32	32	170	38	-6	-6	1.14	GI166	DW10	–
	DWLNL 3232 P 13	32	32	32	40	170	40	-6	-6	1.45	GI167	DW13	–
	DWLNL 4040 S 13	40	40	40	50	250	41	-6	-6	3.17	GI167	DW13	–

GI028	WN.. 0604..
GI072	WN.. 0804..
GI166	WN.. 1006..
GI167	WN.. 1306..

		Nm				
DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P	–
DW08	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5	–
DW10	DCS 16	6.4	DWN 100612	US 5018-T20P	–	LK T20P
DW13	DCS 19	6.4	DWN 130612	US 6013-T20P	–	LK T20P

AT004a	CER WN.N 0804..	DCS 12C4
AT004b	CER WN.A 0804..	DCS 12C2

MWLN(RL) EXT

P M K N S H

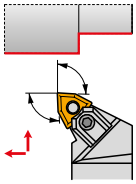
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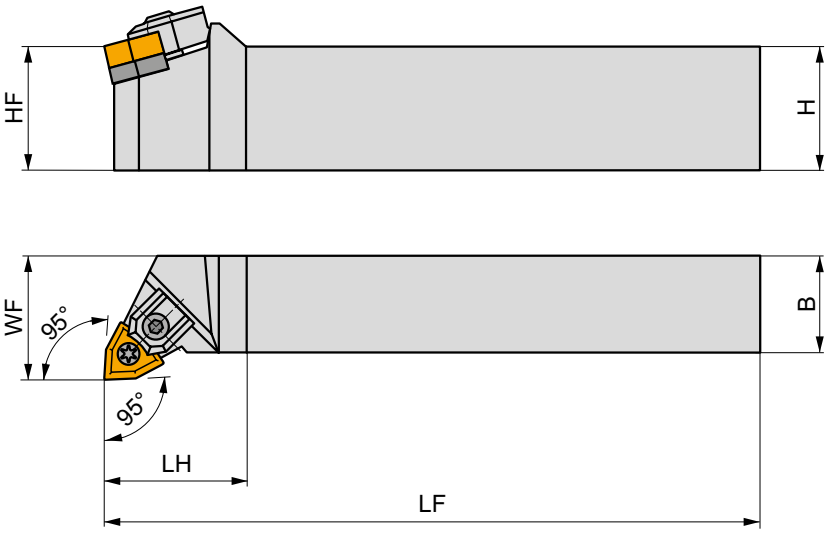
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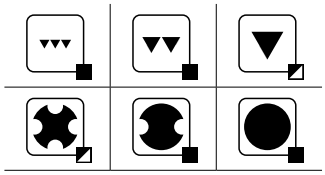


Porta-Ferramentas de Exterior, Fixação Múltipla, Ângulo de 95 °, para Pastilhas WN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação múltipla e ângulo de corte de 95 °. Adequado para torneamento longitudinal com esquadria, torneamento frontal, cónico e chanfrar com pastilhas negativas WN .. 08. Disponível com hastes de 25x25 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**MWLNR 2525 M 08**	25	25	25	32	150	32	-6	-6	0.73	GI072	MW1
	MWLNR 3225 P 08	32	25	32	32	170	32	-6	-6	1.30	GI072	MW1
	MWLNR 4040 R 08	40	40	40	50	200	32	-6	-6	2.50	GI072	MW1
L	**MWLNL 2525 M 08**	25	25	25	32	150	32	-6	-6	0.70	GI072	MW1
	MWLNL 3225 P 08	32	25	32	32	170	32	-6	-6	1.02	GI072	MW1
	MWLNL 4040 R 08	40	40	40	50	200	32	-6	-6	2.50	GI072	MW1

GI072	WN.. 0804..

		Nm				
MW1	UE 05	5.0	WNW 080412	UC 51	HS 0408	HXK 3

PWLN(RL) EXT

P M K N S H

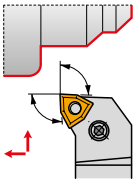
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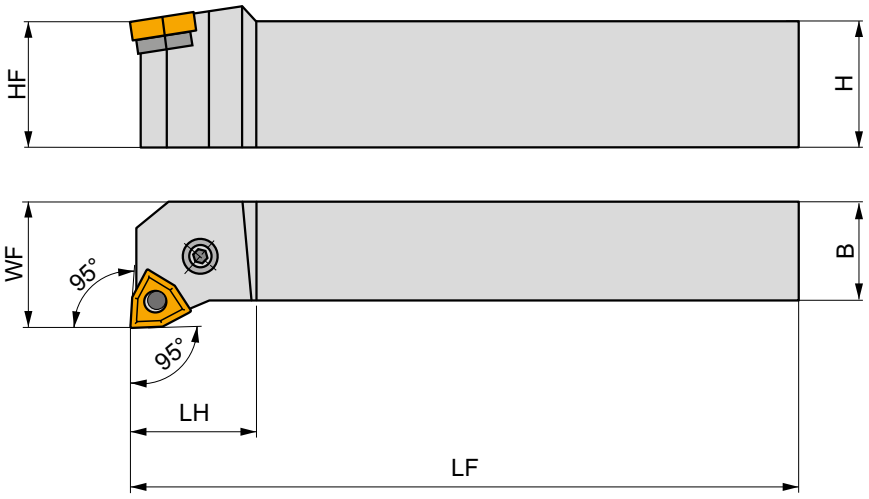
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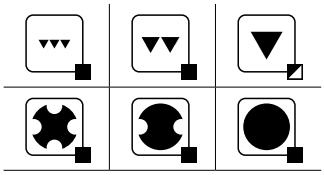


Porta-Ferramentas de Exterior, Fixação por Alavanca, Ângulo de 95 °, para Pastilhas WN ..

Porta-ferramentas de exterior à direita ou à esquerda com fixação por alavanca, com ângulo de corte de 95 °. Adequado para torneamento longitudinal com esquadria, frontal, cónico e chanfrar com pastilhas negativas WN ... 06 e 08. Disponível com hastes de tamanho 16x16 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	B (mm)	HF (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)	kg		
R	**PWLNR 1616 H 0604**	16	16	16	20	100	20	-6	-6	0.23	GI028	PW11
	PWLNR 2020 K 0604	20	20	20	25	125	20	-6	-6	0.40	GI028	PW10
	PWLNR 2525 M 0604	25	25	25	32	150	20	-6	-6	0.78	GI028	PW10
	PWLNR 2020 K 08	20	20	20	25	125	22	-6	-6	0.42	GI072	PW22
	PWLNR 2525 M 08	25	25	25	32	150	22	-6	-6	0.73	GI072	PW20
	PWLNR 3225 P 08	32	25	32	32	170	22	-6	-6	1.05	GI072	PW20
L	**PWLNL 1616 H 0604**	16	16	16	20	100	20	-6	-6	0.21	GI028	PW11
	PWLNL 2020 K 0604	20	20	20	25	125	20	-6	-6	0.40	GI028	PW10
	PWLNL 2525 M 0604	25	25	25	32	150	20	-6	-6	0.75	GI028	PW10
	PWLNL 2020 K 08	20	20	20	25	125	22	-6	-6	0.40	GI072	PW22
	PWLNL 2525 M 08	25	25	25	32	150	22	-6	-6	0.74	GI072	PW20
	PWLNL 3225 P 08	32	25	32	32	170	22	-6	-6	1.05	GI072	PW20

GI028	WN.. 0604..
GI072	WN.. 0804..

				Nm					
PW10	WNU 060308	PU 01	US 34	5.0	M 6x0.75	19	NT 04	MT 04	HXK 3
PW11	WNU 060308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PW20	WNU 080312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PW22	WNU 080312	PU 02	US 42	6.0	M 8x1	21	NT 05	MT 05	HXK 4

NEW

C.-DWLN(RL) EXT

P M K N S H

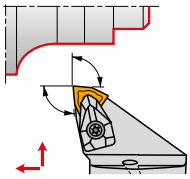
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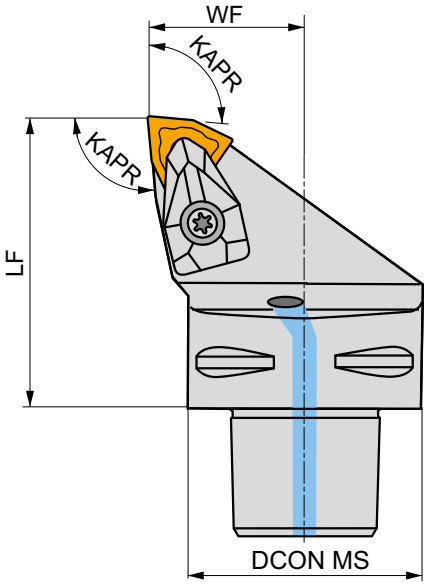
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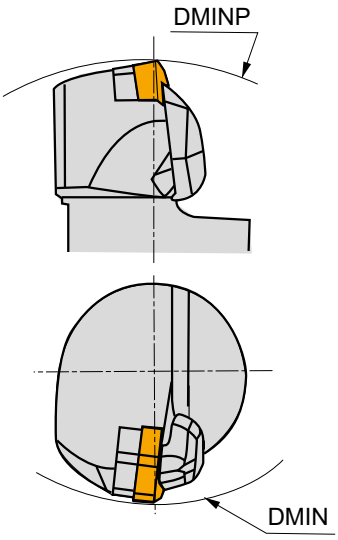


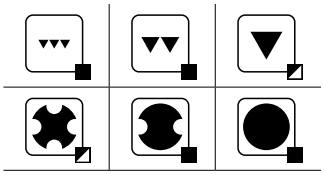
Ferramenta de Exterior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 95 °, para Pastilhas WN ...

Porta-ferramentas de exterior com fixação dupla à direita ou à esquerda com fixação dupla, com refrigeração interna e ângulo de corte de 95 °, para torneamento frontal e longitudinal com esquadria, torneamento cónico e chanfrar com pastilhas negativas WN .. 06 e 08. Disponível com acoplamento PSC (Polygon Shank Coupling) de tamanho C4 a C6. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	DMINP (mm)	WF (mm)	LF (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg			
R	C4-DWLNR-27050-06	40	60	140	27	50	95	-6	-6	✓	0.42	GI028	C-DW06	–
	C4-DWLNR-27050-08	40	110	140	27	50	95	-6	-6	✓	0.42	GI072	C-DW08-1	AT004
	C5-DWLNR-35060-08	50	110	165	35	60	95	-6	-6	✓	0.74	GI072	C-DW08-2	AT004
	C6-DWLNR-45065-08	63	110	190	45	65	95	-6	-6	✓	1.34	GI072	C-DW08-2	AT004
L	C4-DWLNL-27050-06	40	60	140	27	50	95	-6	-6	✓	0.43	GI028	C-DW06	–
	C4-DWLNL-27050-08	40	110	140	27	50	95	-6	-6	✓	0.42	GI072	C-DW08-1	AT004
	C5-DWLNL-35060-08	50	110	165	35	60	95	-6	-6	✓	0.76	GI072	C-DW08-2	AT004
	C6-DWLNL-45065-08	63	110	190	45	65	95	-6	-6	✓	1.34	GI072	C-DW08-2	AT004

GI028	WN.. 0604..
GI072	WN.. 0804..

		Nm				
C-DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P	CN 034-01
C-DW08-1	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5	CN 034-01
C-DW08-2	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5	CN 045-01

AT004a	CER WN.N 0804..	DCS 12C4
AT004b	CER WN.A 0804..	DCS 12C2

DWLN(RL) INT

P M K N S H

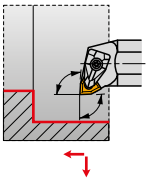
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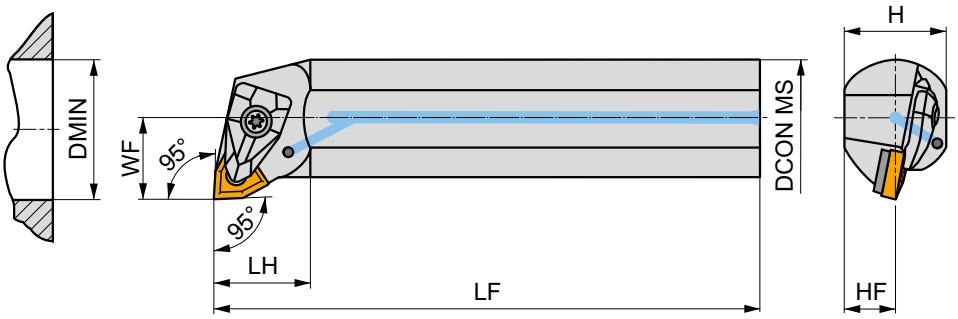
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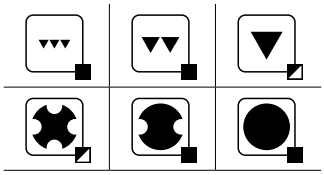


Porta-ferramentas de Interior, Fixação Dupla, Ângulo de 95 °, para Pastilhas WN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação dupla e refrigeração interna, ângulo de corte de 95° para pastilhas negativas WN .. 06 e 08. Diâmetro mínimo de torneamento Ø32 mm. Para torneamento cónico e longitudinal com esquadria, e chanfrar. Disponível com hastes de Ø25 a Ø50 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)	GAMO (°)		kg		
R	A25T-DWLNR 06	25	32	17	23	11.5	300	31	-14	-6	✓	0.97	GI028	DW06
	A25T-DWLNR 08	25	33	17	23	11.5	300	31	-12	-6	✓	0.98	GI072	DWI08
	A32T-DWLNR 08	32	40	22	30	15	300	33	-10	-6	✓	1.71	GI072	DWI08
	A40T-DWLNR 08	40	50	27	37	18.5	300	36	-13	-6	✓	2.59	GI072	DW08
	A50U-DWLNR 08	50	63	35	47	23.5	350	39	-11	-6	✓	5.24	GI072	DW08
L	A25T-DWLNL 06	25	32	17	23	11.5	300	31	-14	-6	✓	0.97	GI028	DW06
	A25T-DWLNL 08	25	33	17	23	11.5	300	31	-12	-6	✓	0.98	GI072	DWI08
	A32T-DWLNL 08	32	40	22	30	15	300	33	-10	-6	✓	1.70	GI072	DWI08
	A40T-DWLNL 08	40	50	27	37	18.5	300	36	-13	-6	✓	2.59	GI072	DW08
	A50U-DWLNL 08	50	63	35	47	23.5	350	39	-11	-6	✓	5.25	GI072	DW08

GI028	WN.. 0604..
GI072	WN.. 0804..

		Nm			
DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P
DW08	DCS 12	3.9	DWS 331-12	US 2002-T15P	FLAG T15P/3,5
DWI08	DCS 12	3.9	DWS 328-02	US 2002-T15P	FLAG T15P/3,5

PWLN(RL) INT

P M K N S H

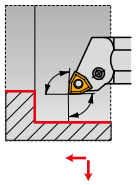
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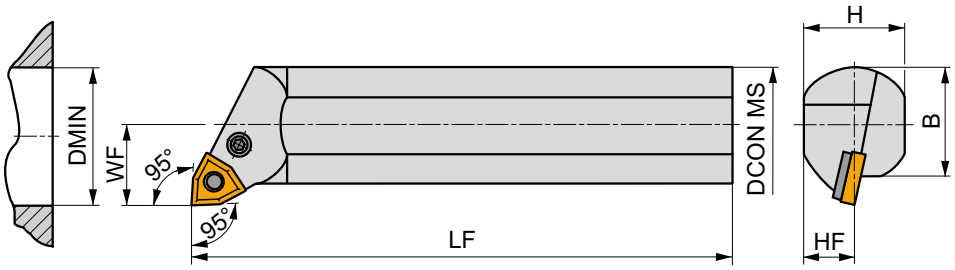
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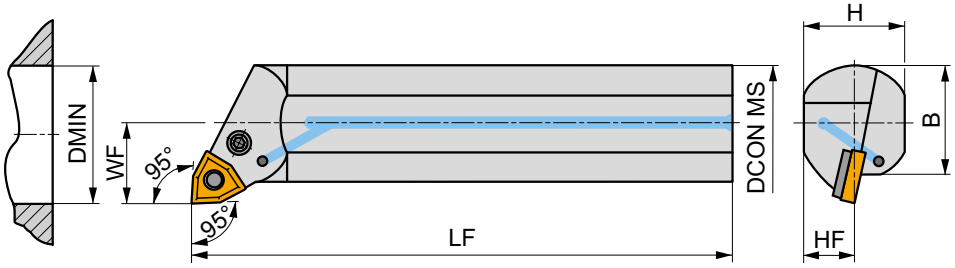


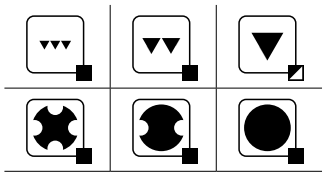
Porta-Ferramentas de Interior, Fixação por Alavanca, Ângulo de 95 °, para Pastilhas WN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação por alavanca e refrigeração interna, e ângulo de corte de 95° para pastilhas WN .. 06 e 08. Diâmetro interno mínimo de torneamento Ø20 mm. Para torneamento cónico interno e longitudinal com esquadria, e chanfrar. Tamanhos de haste de Ø16 a Ø60 mm disponíveis. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	B (mm)	LF (mm)	LAMS (°)	GAMO (°)		kg		
R	A16M-PWLNR 0604	16	20	11	15	15	150	-13.5	-6	✓	0.22	GI028	PW09
	A20Q-PWLNR 0604	20	27	13	18	18	180	-13.5	-6	✓	0.36	GI028	PW09
	S25T-PWLNR 0604	25	32	17	23	23	300	-12	-6	–	1.10	GI028	PW11
	A32S-PWLNR 0604	32	40	22	30	30	250	-12	-6	✓	1.30	GI028	PW11
	A25R-PWLNR 08	25	32	17	23	23	200	-12	-6	✓	0.66	GI072	PW25
	S25T-PWLNR 08	25	32	17	23	23	300	-12	-6	–	1.10	GI072	PW25
	A32S-PWLNR 08	32	40	22	30	30	250	-12	-6	✓	1.46	GI072	PW21
	S32U-PWLNR 08	32	40	22	30	30	350	-12	-6	–	2.09	GI072	PW21
	A40T-PWLNR 08	40	50	27	38	38	300	-12	-6	✓	2.40	GI072	PW20
	A50U-PWLNR 08	50	63	35	47	48.5	350	-12	-6	✓	4.88	GI072	PW20
	A60V-PWLNR 08	60	80	43	57	58.5	400	-12	-6	✓	8.10	GI072	PW20
L	A16M-PWLNL 0604	16	20	11	15	15	150	-13.5	-6	✓	0.22	GI028	PW09
	A20Q-PWLNL 0604	20	27	13	18	18	180	-13.5	-6	✓	0.36	GI028	PW09
	S25T-PWLNL 0604	25	32	17	23	23	300	-12	-6	–	0.98	GI028	PW11
	A32S-PWLNL 0604	32	40	22	30	30	250	-12	-6	✓	1.28	GI028	PW11
	A25R-PWLNL 08	25	32	17	23	23	200	-12	-6	✓	0.75	GI072	PW25
	S25T-PWLNL 08	25	32	17	23	23	300	-12	-6	–	1.01	GI072	PW25
	A32S-PWLNL 08	32	40	22	30	30	250	-12	-6	✓	1.47	GI072	PW21
	S32U-PWLNL 08	32	40	22	30	30	350	-12	-6	–	2.08	GI072	PW21
	A40T-PWLNL 08	40	50	27	38	38	300	-12	-6	✓	2.90	GI072	PW20
	A50U-PWLNL 08	50	63	35	47	48.5	350	-12	-6	✓	4.88	GI072	PW20
	A60V-PWLNL 08	60	80	43	57	58.5	400	-12	-6	✓	8.70	GI072	PW20

GI028	WN.. 0604..
GI072	WN.. 0804..

									
PW09	–	PU 3611-A	PS 0512-A	2.0	M 5	12	–	–	HXK 2
PW11	WNU 060308	PU 01	US 46	5.0	M 6x0.75	13.2	NT 04	MT 04	HXK 3
PW20	WNU 080312	PU 02	US 35	6.0	M 8x1	22.5	NT 05	MT 05	HXK 4
PW21	WNU 080312	PU 02	US 41	6.0	M 8x1	17	NT 05	MT 05	HXK 4
PW25	–	PU 32	US 46	5.0	M 6x0.75	13.2	–	–	HXK 3

NEW

C.-DWLN(RL) INT

P M K N S H

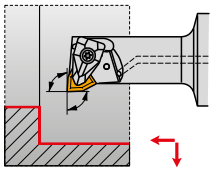
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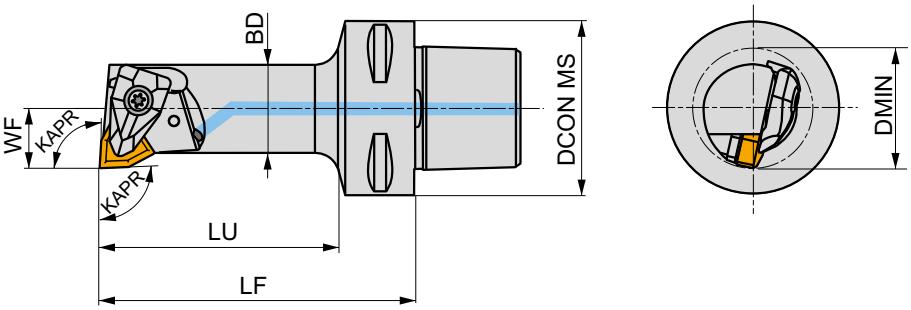
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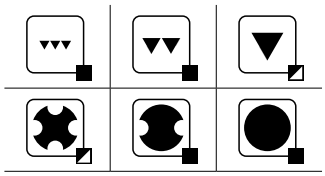


Ferramenta de Interior de Mudança Rápida PSC, Fixação Dupla, Ângulo de 95 °, para Pastilhas WN ..

Porta-ferramentas de interior à direita ou à esquerda, com fixação dupla e refrigeração interna, e ângulo de corte de 95° para torneamento cónico interno e longitudinal com esquadria, e chanfrar com pastilhas WN .. 06 e 08. Diâmetro interno mínimo de Ø27 mm. Disponível com haste poligonal PSC (Polygon Shank Coupling) tamanho C4. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	WF (mm)	LF (mm)	LU (mm)	BD (mm)	KAPR (°)	LAMS (°)	GAMO (°)		kg		
R	C4-DWLNR-13075-06	40	27	13	75	52	20	95	-17	-6	✓	0.42	GI028	DW06
	C4-DWLNR-17090-08	40	33	17	90	68	25	95	-12	-6	✓	0.53	GI072	DWI08
L	C4-DWLNL-13075-06	40	27	13	75	52	20	95	-17	-6	✓	0.42	GI028	DW06
	C4-DWLNL-17090-08	40	33	17	90	68	25	95	-12	-6	✓	0.53	GI072	DWI08

GI028	WN.. 0604..
GI072	WN.. 0804..

		Nm			
DW06	DCS 09	1.7	DWS 328-01	US 2004-T09P	FLAG T09P
DWI08	DCS 12	3.9	DWS 328-02	US 2002-T15P	FLAG T15P/3,5

SANGRAR
E RANHURAR



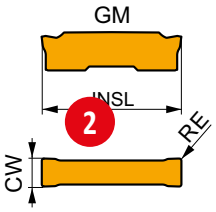
📖 6		WMG E ISO 13399
📖 10	TORNEAMENTO ISO	INSTRUÇÕES
📖 18		NAVEGADORES
📖 57		PASTILHAS POSITIVAS
📖 219		PASTILHAS NEGATIVAS
📖 386		**SANGRAR E RANHURAR**
📖 482		TORNEAMENTO DE ROSCAS
📖 528		ESCATELAR
📖 536		INFORMAÇÃO TÉCNICA GERAL

1 GL. D - GM

PRAMET

	CW [mm]	CWTOLL [mm]	CWTOLU [mm]	INSL [mm]
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0

3



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Product		RE [mm]	P vc [m/min]	P f [mm/rev]	P ap [mm]	M vc [m/min]	M f [mm/rev]	M ap [mm]	K vc [m/min]	K f [mm/rev]	K ap [mm]	N vc [m/min]	N f [mm/rev]	N ap [mm]	S vc [m/min]	S f [mm/rev]	S ap [mm]	H vc [m/min]	H f [mm/rev]	H ap [mm]
4	5		6																	
10 Geometria GM para ranhurar e torneamento longitudinal, e cortes contínuos a interrompidos.																				
GL2-D200M02-GM	G8330	0.2	190	0.10	0.8	110	0.09	0.8	180	0.10	0.8	–	–	–	45	0.08	0.6	–	–	–
7	T7325	9	220	0.10	0.8	170	0.09	0.8	–	–	–	–	–	–	70	0.08	0.6	–	–	–
G 00M02-GM	8330	2	150	0.20	1.0	90	0.18	1.0	140	20	1.0	–	–	–	35	0.14	0.8	–	–	–
	T7325	0.2	175	0.20	1.0	135	0.18	1.0	–	–	–	–	–	–	55	0.14	0.8	–	–	–
GL3-D300M04-GM	G8330	0.4	160	0.20	1.0	95	0.18	1.0	150	0.20	1.0	–	–	–	40	0.14	0.8	–	–	–
	T7325	0.4	185	0.20	1.0	140	0.18	1.0	–	–	–	–	–	–	60	0.14	0.8	–	–	–
GL4-D400M04-GM	G8330	0.4	150	0.25	1.2	90	0.23	1.2	140	0.25	1.2	–	–	–	35	0.18	1.0	–	–	–
	T7325	0.4	170	0.25	1.2	130	0.23	1.2	–	–	–	–	–	–	55	0.18	1.0	–	–	–
GL4-D400M08-GM	G8330	0.8	180	0.25	1.2	105	0.23	1.2	170	0.25	1.2	–	–	–	45	0.18	1.0	–	–	–
	T7325	0.8	200	0.25	1.2	155	0.23	1.2	–	–	–	–	–	–	65	0.18	1.0	–	–	–
GL5-D500M08-GM	G8330	0.8	170	0.30	1.2	100	0.27	1.2	160	0.30	1.2	–	–	–	40	0.21	1.0	–	–	–
	T7325	0.8	190	0.30	1.2	145	0.27	1.2	–	–	–	–	–	–	60	0.21	1.0	–	–	–
GL6-D600M08-GM	G8330	0.8	170	0.30	1.2	100	0.27	1.2	160	0.30	1.2	–	–	–	40	0.21	1.0	–	–	–

11

GL5-D500M08-GM:T7325 Use o código de especificação completo da pastilha ao fazer o pedido!

Qualidade

Incluir dois pontos

Código ISO

PASTILHAS PARA SANGRAR E RANHURAR - VISÃO GERAL

Pos.	Descrição
1	Designação da Pastilha
2	Desenho Esquemático da Pastilha
3	Tabela com tamanhos de pastilhas (mm)
4	Imagem representativa da pastilha
5	Perfil da aresta de corte principal
6	Símbolos - características específicas e tipo da aresta de corte

Pos.	Descrição
7	Código ISO da pastilha
8	Qualidade
9	Raios da Pastilha (mm)
10	Descrição da geometria
11	Área de aplicação da pastilha

1 GG.(RL) INT

P M K N S H 2

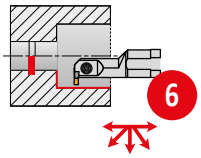
PRAMET 3 G

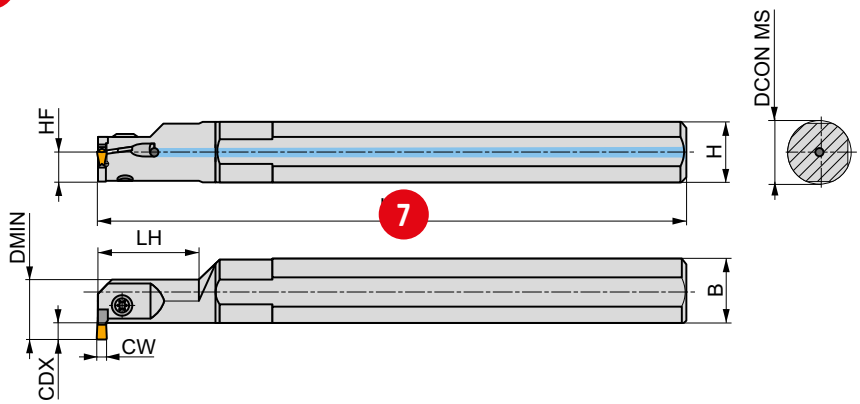

4

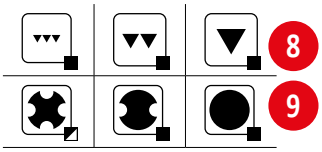
Porta-Ferramentas de Interiorpara Abertura de Ranhuras, para Pastilhas LCM.

Porta-ferramentas de interior à direita ou à esquerda para operações de ranhurar com pastilhas LCM. 0313 e 0413. Diâmetro mínimo da ranhura interna Ø16 mm. Adequado para operações de ranhurar interior e torneamento multidirecional. Disponível com hastes de Ø16 até Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.

5


6




8 9

10

	Product	DCON MS [mm]	HF [mm]	H [mm]	B [mm]	LF [mm]	LH [mm]	CW [mm]	CDX [mm]	DMIN [mm]		kg		
R	A16Q-GGER 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI143	GL06
	A16Q-GGER 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI190	GL06
	A20R-GGFR 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.36	GI143	GL06
	A20R-GGFR 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.39	GI190	GL06
	A25S-GGHR 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.78	GI143	GL06
	A25S-GG[illegible]3	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.78	GI143	GL06
	A32T-GGHR 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06
L	A16Q-GGEL 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.29	GI143	GL06
	A16Q-GGEL 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.28	GI190	GL06
	A20R-GGFL 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI143	GL06
	A20R-GGFL 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI190	GL06
	A25S-GGHL 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.81	GI143	GL06
	A25S-GGFL 0413	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.82	GI170	GL06
	A32T-GGHL 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06

11 12 13 14 15 16 17

	18
GI143	LCM. 0313..
GI170	LCM. 0413..
GI190	LCM. 0313…..-04

		Nm	19		
GL06	SR 85011-T15P	5.0	M 5	9	FLAG T15P

Página modelo exibindo suportes de torneamento - os detalhes da página específica serão diferentes

SUPORTES PARA SANGRAR E RANHURAR - VISÃO GERAL

Pos.	Descrição
1	Designação do suporte para sangrar e ranhurar
2	Recomendações do grupo de material
3	Sistema de fixação da pastilha
4	Foto ilustrativa[1)]
5	Descrição da ferramenta
6	Perfil da peça de trabalho
7	Desenho esquemático da ferramenta
8	Qualidade de superfície alcançável
9	Tipo de corte / condições de trabalho
10	Aplicações do produto

Pos.	Descrição
11	Desenho da ferramenta
12	Código do suporte
13	Dimensões (mm) e ângulos [2)] (°) do suporte
14	Alimentação de refrigerante interno
15	Peso (kg)
16	Grupo de pastilhas compatíveis[3)]
17	Grupo de peças sobressalentes [3), 4)]
18	Pastilhas compatíveis
19	Peças sobressalentes

1) Os porta ferramentas são apresentados em desenho à direita (R)

2) GAMO = ângulo ortogonal (ver secção técnica)
LAMS = ângulo de saída do fio de corte (ver secção técnica)

3) O código do grupo de pastilhas compatíveis, peças sobressalentes e acessórios especiais utiliza-se apenas para uso deste catálogo. Não pode ser utilizado para pedidos.

4) Os ícones das peças sobressalentes e acessórios especiais estão desenhados esquemáticamente para uma melhor compreensão. Não estão incluídos na lista de iconos. Em alguns casos, a informação dos parafusos completa-se com a informação de aperto em Nm, comprimento e tamanho de rosca.

SANGRAR E RANHURAR - VISÃO GERAL DOS SÍMBOLOS

SÍMBOLOS GERAIS

■	Utilização principal
◪	Utilização possível

▼▼▼	Acabamento - qualidade de superfície muito boa
▼▼	Maquinação média - qualidade de superfície boa
▼	Desbaste - rugosidade de superfície ilimitada

●	Adequado para condições de trabalho estáveis
◖	Adequado para condições de trabalho instáveis
✖	Adequado para condições de trabalho muito instáveis

OPERAÇÕES DE TORNEAMENTO

	Torneamento em cópia (maquinação multi direcional)
	Ranhura axial profunda e larga (com expansão posterior)
	Ranhura axial profunda
	Ranhura radial profunda
	Torneamento em cópia frontal

	Ranhura interna
	Ranhura interna (com expansão posterior)
	Sangrar
	Ranhura axial pouco profunda e larga (com expansão posterior)
	Ranhura axial pouco profunda

	Ranhura radial pouco profunda
	Sangrar tubos
	Ranhura radial larga (com expansão posterior)

CARACTERÍSTICAS

	Primeira escolha
	Balanço grande

	Opção de gama ampla universal
	Condições de trabalho pesadas

	Aresta arredondada
	Aresta arredondada com faceta

OUTRO

	Torque de fixação do parafuso (Nm)

	Alimentação de refrigerante interno

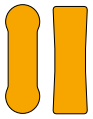
PASTILHAS PARA SANGRAR E RANHURAR - NAVEGADOR

GL. D NEW



406

LCMF 13



418

LCMF 16, LCMF 30



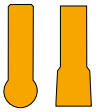
432

LCMF 20



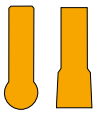
453

LCMR 13



419

LCMR 16, LCMR 30



435

LFMX



456

LFUX



464

TN R EXT



475

TN R INT



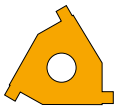
475

TN ZZ EXT



476

TN ZZ INT



477

X 61 NEW



468

X 61 R NEW



469

X 61 R-1 NEW



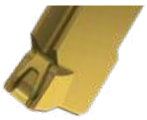
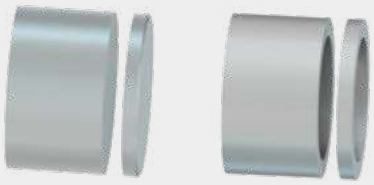
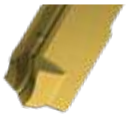
473

X 61-1 NEW



472

GEOMETRIAS DE SANGRAR E RANHURAR - NAVEGADOR

		Tipo de operação	seleção da família de pastilhas	
			Primeira escolha	Escolha opcional
EXTERIOR		Ranhurar	GL. D NEW GM  406	LCMF16, LCMF30 F  432
		Sangrar	GL. D NEW PM  407	LFMX M2  457
		Ranhura frontal	LCMF13 F  418	LCMF16, LCMF30 F  432
		Perfil em cópia	GL. D NEW MM  406	LCMF16, LCMF30 MP  433
		Ranhura de anéis de retenção	X61 NEW  469	TN ZZ EXT  476
INTERIOR		Ranhura	LCMF13 F  418	
		Perfil em cópia	LCMF13 MP  419	
		Ranhura de anéis de retenção	X61 NEW  468	TN ZZ INT  477

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de Corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do Refrigerante	Descrição da Qualidade
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	Do ponto de vista tecnológico, esta é uma qualidade extremamente versátil, com alta resistência a danos mecânicos em condições de corte adversas e mantém excelente resistência ao desgaste. A aplicação correta deste material requer velocidades de corte altas.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Uma das qualidades de torneamento mais universais. Especialmente projetada para a maquinação de aço inoxidável. Equilíbrio ideal entre resistência ao desgaste e confiabilidade de desempenho. Adequada para uma ampla variedade de aplicações em operações de torneamento.
6640	P20 - P40 M20 - M35 K25 - K40	■ ■ ■				MT-CVD		H	+ + +	Um dos materiais de torneamento mais resistentes que pode ser usado especialmente em operações de desbaste, ou onde a confiabilidade operacional sob condições de corte adversas é uma prioridade. Outra escolha ideal para máquinas que trabalham com velocidades de corte baixas a médias e taxas de avanço médias a altas.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Material de corte versátil, é útil para a maquinação de todos os tipos de materiais maquinados e é praticamente aplicável em quase todos os tipos de operações de torneamento. Os seus principais benefícios são sua alta confiabilidade operacional e excelentes propriedades de fricção; portanto, é adequado para aplicações em velocidades de corte médias e baixas.
G8330	P25 - P40 M20 - M35 K20 - K40 S15 - S25	■ ■ ■ ◪				PVD		submicron H	+ + +	Qualidade de corte universal para aplicações de ranhurar e sangrar. Esta qualidade é caracterizada pela sua excecional fiabilidade e versatilidade. Desenvolvida para se adequar às condições de maquinação para a maioria dos materiais da peça.

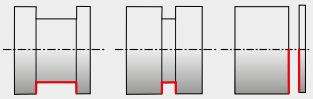
Substrato	
H	Substrato com base WC-Co
submicron H	Substrato com base WC-Co de grão fino (< 1 µm)
FGM	Substrato de grau funcional

Revestimento	
MT-CVD	Método de revestimento químico a temperatura média
PVD	Método de revestimento físico a baixa temperatura

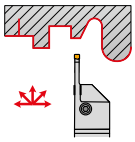
Benefícios do refrigerante	
+ + +	O uso de refrigerante é essencial
+ +	Altamente recomendado

SANGRAR E RANHURAR - EXTERIOR



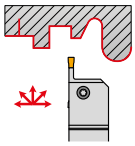


GLSF(RL) EXT NEW



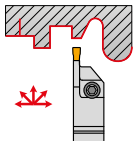
GL.D
GL2 GL3 GL4 GL5 GL6
20×20 25×25
410 / 406 – 408

GLSF(RL) EXT-G NEW



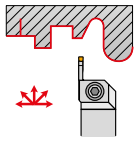
GL.D
GL2 GL3 GL4 GL5 GL6
20×20 25×25
412 / 406 – 408

GLSF(RL) EXT-S NEW



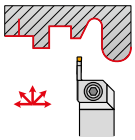
GL.D
GL2 GL3 GL4
12×12 16×16
413 / 406 – 408

GFK(RL) EXT



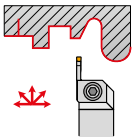
LCMF
0220
16×16 25×25
455 / 418 – 454

GFI(RL) EXT



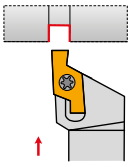
LCMF, LCMR
0316 0416 0516 0616 0830
16×16 32×25
437 / 418 – 454

GFM(RL) EXT



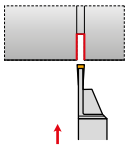
LCMF, LCMR
0316 0416 0516 0616 0830
20×20 32×25
439 / 418 – 454

P61 (RL) EXT NEW



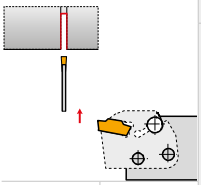
X61
16×16 25×25
470 / 468 – 469

XLCF(RL)



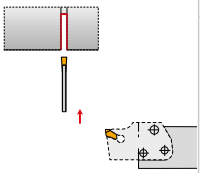
LFUX
03 04 05 06
16×12 32×25
465 / 464

XLCCN 25 BS + MS-EN



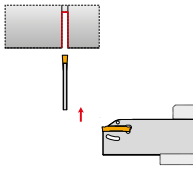
LCMF, LCMR
0316 0416 0516 0616
25×25 32×25
442, 443 / 418 – 454

XLCF(NRL) BS + MS-EN



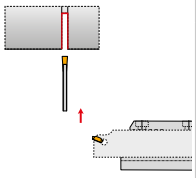
LFMX
1.50 1.60 2.00 2.20 3.10 4.10 5.10 6.35
12×12 32×25
461, 463 / 456 – 458

GLS B + DU, D NEW



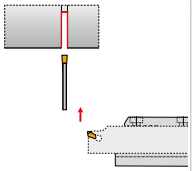
GL.D
GL2 GL3 GL4 GL5 GL6
20×20 32×29
414, 415 / 406 – 409

XLCCN B + DU, D



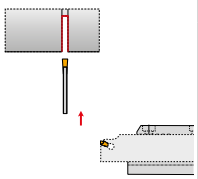
LCMF, LCMR
0316 0416 0516 0616
20×20 32×29
440, 441 / 418 – 454

XLCFN B + DU, D



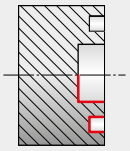
LFMX
1.50 1.60 2.00 2.20 3.10 4.10 5.10 6.35
20×20 40×36
459, 460 / 456 – 458

XLCFN B LFUX + DU, D

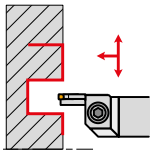


LFUX
03 04 05 06
20×20 40×40
466, 467 / 464

RANHURA FRONTAL



GFIL-L AXIAL

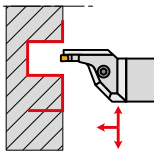


LCMF, LCMR
0313 0316

17-30
140-230

422, 444
418 – 454

GFIL-R AXIAL

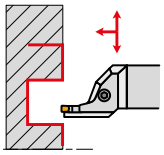


LCMF, LCMR
0313 0316 0413 0416

17-30
140-230

423, 445
418 – 454

GFIR-L AXIAL

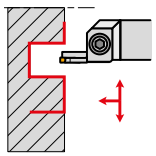


LCMF, LCMR
0313 0316 0413 0416

17-30
140-230

424, 446
418 – 454

GFIR-R AXIAL

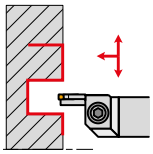


LCMF, LCMR
0313 0316

17-30
140-230

425, 447
418 – 454

GFML-L AXIAL

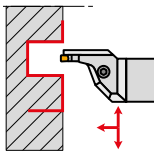


LCMF, LCMR
0413 0416

17-30
140-230

426, 448
418 – 454

GFML-R AXIAL

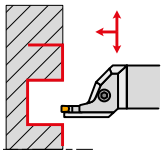


LCMF, LCMR
0413 0416

17-30
140-230

427, 449
418 – 454

GFMR-L AXIAL

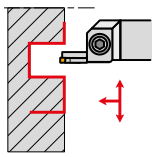


LCMF, LCMR
0413 0416

17-30
140-230

428, 450
418 – 454

GFMR-R AXIAL

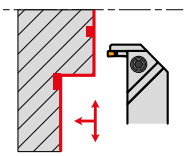


LCMF, LCMR
0413 0416

17-30
140-230

429, 451
418 – 454

GGI(RL)-90 AXIAL

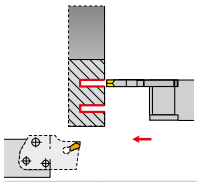


LCMF, LCMR
0313 0316

17-30
110-170

430, 452
418 – 454

XLXFL BS AXIAL + MS-EN

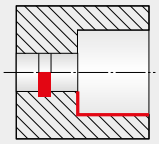


LFMX
3.10

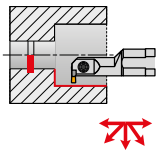
60-85
150-280

462, 463
456 – 458

RANHURA - INTERIOR



GG.(RL) INT



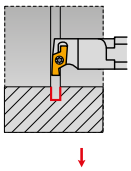
LCMF, LCMR
0313 0413

ØDmin	
16 32	

421

418 – 454

P61 (RL) INT NEW



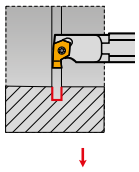
X61

ØDmin	
16 40	

471

468

P61S(RL)-1 INT NEW



X61-1

ØDmin	
12.5	

474

472

PASTILHAS DE SANGRAR E RANHURAR - DESIGNAÇÃO DO CÓDIGO ISO

1	2		3	4	5	6	7		8
GL	3	–	D	300	G	02	L06	–	PM

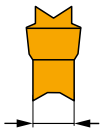


1 Grupo de ferramentas

GL

2 Tamanho de parte frontal das peças

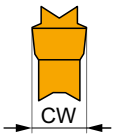
1, 2, 3, 4, 5, 6



3 Número de arestas

S	Uma aresta
D	Duas arestas

4 Largura de corte - CW

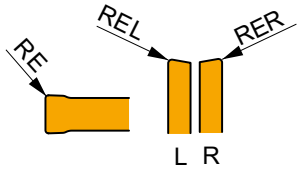


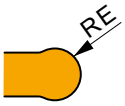
	CW
200	2.00
250	2.50
300	3.00
400	4.00
500	5.00
600	6.00

5 Desenho da aresta

G	Retificado
M	Diretamente prensado

6 Raio da Ponta

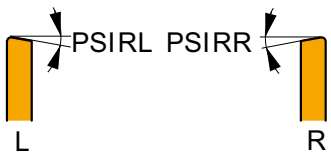




	RE, RER, REL (mm)
02	0.2
03	0.3
04	0.4
08	0.8

	ROUND GEOMETRY
	RE (mm)
M0	RE = CW/2

7 Ângulo de posição



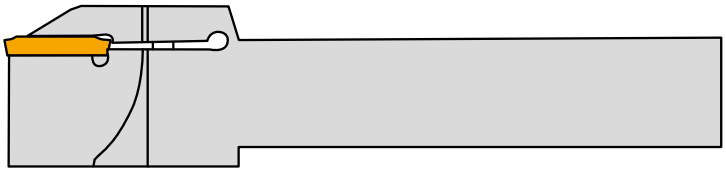
	(°)
06	6
12	12

8 Designação de quebra-aparas

PM
PR
GM
MM

SUPORTES PARA SANGRAR E RANHURAR (TORNEAMENTO EXTERIOR) - GL - DESIGNAÇÃO DO CÓDIGO

1	2		3	4	5	6	7		8		9	10	11
GL	3	–	S	2525	M	F	L	–	20	–	R	120	090

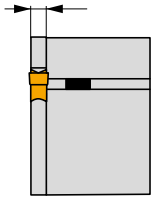


1 Grupo de ferramentas

GL

2 Tamanho de parte frontal das peças

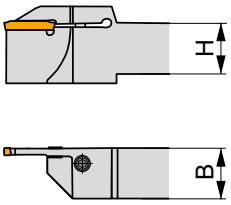
1, 2, 3, 4, 5, 6



3 Tipo de encabadouro

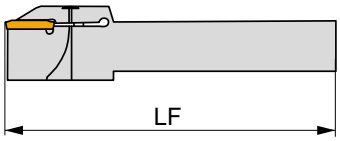
A	Encabadouro em aço com refrigerante interno
S	Encabadouro em aço sem refrigerante interno

4 Dimensões do encabadouro



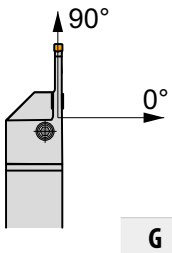
	H/B (mm)/ (mm)
1212	12/12
1616	16/16
2020	20/20
2525	25/25

5 Comprimento total - LF



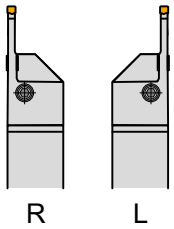
	LF (mm)
H	100
K	125
M	150
P	170

6 Tipo de ferramenta - ângulo de posição

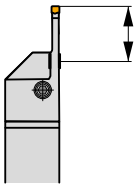


	(°)
G	0
F	90

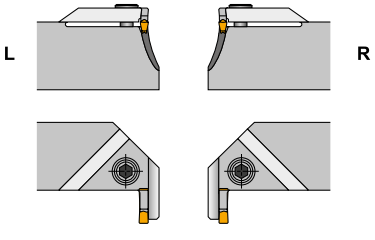
7 Versão (direita / esquerda)



8 Profundidade de corte máxima - CDX

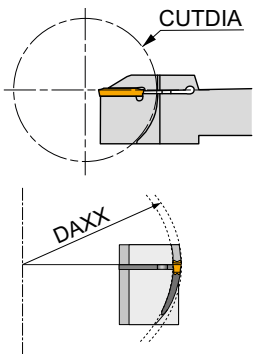


9 Direção da curvatura da lâmina

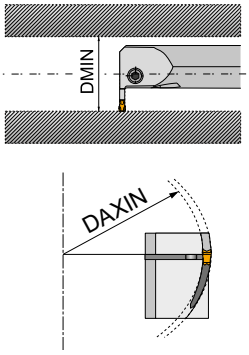


Informação adicional para ranhura axial ou frontal

10 Diâmetro máximol



11 Diâmetro mínimo



LÂMINAS PARA SANGRAR E RANHURAR (TORNEAMENTO EXTERIOR) - GL - DESIGNAÇÃO DO CÓDIGO

1	2		3	4	5	6
GL	3	–	S	32	M	B

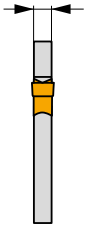


1 Grupo de ferramentas

GL

2 Tamanho de parte frontal das peças

1, 2, 3, 4, 5, 6



3 Tipo de encabadouro

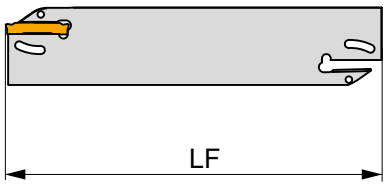
A	Encabadouro em aço com refrigeração interna
S	Encabadouro em aço sem refrigeração interna

4 Dimensões do encabadouro



	H (mm)
26	26
32	32

5 Comprimento total da lâmina - LF

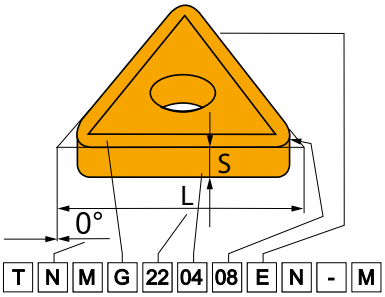


	LF (mm)	LF (")
K	125	5.000"
M	150	6.000"

6 Tipo de ferramenta

B - lâmina

PASTILHAS – DESIGNAÇÃO DE CÓDIGO ISO



	1	2	3	4
ISO	T	N	U	N
	T	N	M	G
ANSI	T	N	U	
	T	N	M	G

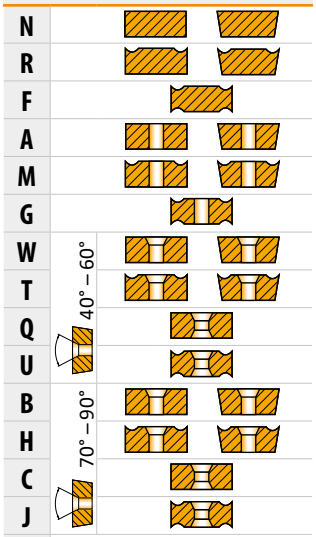
1 Forma de pastilha

H	O	P	R
S	T	C 80°	D 55°
E 75°	M 86°	V 35°	W 80°
L	A 85°	B 82°	K 55°

2 Ângulo de incidência

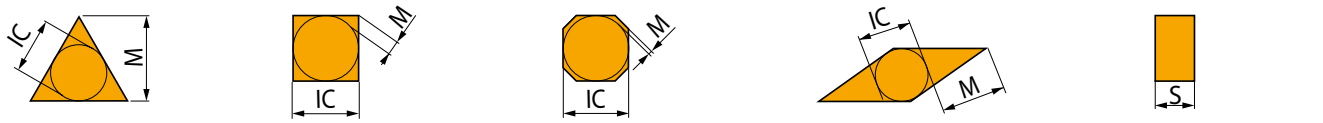
A 3°		B 5°	
C 7°		D 15°	
E 20°		F 25°	
G 30°		N 0°	
P 11°		O	Especial

4 Tipo de pastilha



3 Tolerâncias

	(mm)			(")		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002"	.001"	.0010"
F	0.005	0.025	0.013	.0002"	.001"	.0005"
C	0.013	0.025	0.025	.0005"	.001"	.0010"
H	0.013	0.025	0.013	.0005"	.001"	.0005"
E	0.025	0.025	0.025	.0010"	.001"	.0010"
G	0.025	0.130	0.025	.0010"	.005"	.0010"
J	0.005	0.025	0.05 – 0.13	.0002"	.001"	.002 – 0.005"
K	0.013	0.025	0.05 – 0.13	.0005"	.001"	.002 – 0.005"
L	0.025	0.025	0.05 – 0.13	.0010"	.001"	.002 – 0.005"
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007"	.005"	.002 – 0.005"
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007"	.001"	.002 – 0.005"
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015"	.005"	.003 – 0.010"



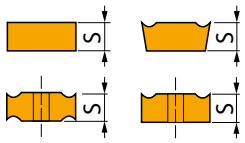
PASTILHAS – DESIGNAÇÃO DE CÓDIGO ISO

5	6	7	8	9		10
22	04	08			-	
22	04	08	E	N		M
5	6	7	8	9		10
4	3	2			-	
4	3	2	E	N		M

5 – Comprimento do fio de corte (tamanho da pastilha)

d=IC (mm)	(in)	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"	1.2												
4.76					04	08	04	05	04	04	08	L3		
	3/16"	1.5												
5.56					05	09	05	06	05	05	09	03		
	7/32"	1.8												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"	2												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"	2.5												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"	3												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"	4												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"	5												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"	6												
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"	8												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"	10												

6 – Espessura



	S (mm)	S (")
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7 – Raio de ponta

	RE (mm)	RE (")
00	0	0"
02	0.2	1/128"
04	0.4	1/64"
08	0.8	1/32"
12	1.2	3/64"
16	1.6	1/16"
24	2.4	3/32"
32	3.2	1/8"



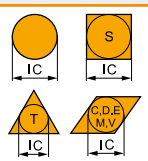
Pastilhas redondas

d = I.C.	
(")	00
(mm)	M0



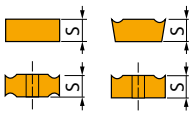
ANSI

5 – Circulo inscrito



Symbol	d = I.C. (mm)	d = I.C. (")
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6 – Espessura



Symbol	S (mm)	S (")
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7 – Raio de ponta



Symbol	RE (mm)	RE (")
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

8 – Designação do fio de corte da pastilha

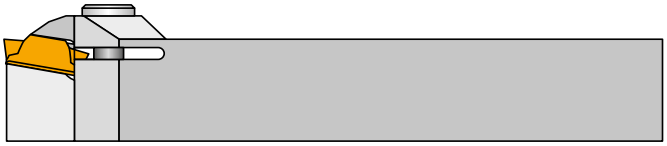
F – Fios vivos	E – Fios arredondados
T – Fios com faceta	S – Fios arredondados com faceta
K – Fios com faceta dupla	P – Fios arredondados com faceta dupla

9 – Direção de avanço



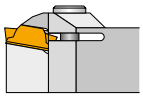
10 – Designação do quebra aparas

	1	2	3	4	5	6	7	8	9	10	11
ISO	G	F	I	L	25	25	M	0316	R	030	017
ANSI	1	2	3	4	5 & 6		7	8	9	10	11
	G	F	I	L	16		D	0316	R	1.18	.670

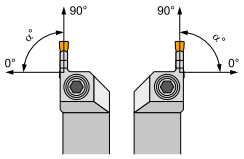


1 Sistema de fixação

G



2 Tipo de ferramenta - ângulo de posição



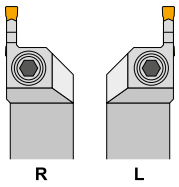
α°	
G = 0°	K = 75°
R = 15°	F = 90°
T = 30°	B = 105°
S = 45°	E = 120°
W = 60°	D = 135°

3 Profundidade de corte máxima – CDX

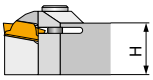


G = 2.0 × CW	N = 5.5 × CW
H = 2.5 × CW	O = 6.0 × CW
I = 3.0 × CW	P = 6.5 × CW
J = 3.5 × CW	Q = 7.0 × CW
K = 4.0 × CW	R = 7.5 × CW
L = 4.5 × CW	S = 8.0 × CW
M = 5.0 × CW	T = 8.5 × CW

4 Versão (direita / esquerda) R/L

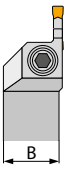


5 Altura do encabadouro(mm)



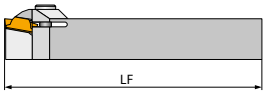
12 = 12 mm
16 = 16 mm
20 = 20 mm
etc.

6 Largura do encabadouro (mm)



12 = 12 mm
16 = 16 mm
20 = 20 mm
etc.

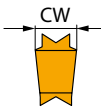
7 Comprimento total



	LF (mm)
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200

	LF (")
A	4.000"
B	4.500"
C	5.000"
D	6.000"
E	7.000"
F	8.000"

8 Largura de pastilha



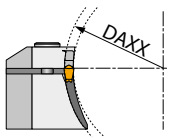
	CW (mm)	CW (")
02	2.0	.079"
03, 0313, 0316	3.0	.118"
04, 0413, 0416	4.0	.157"
05, 0516	5.0	.197"
06, 0616	6.0	.236"
08, 0830	8.0	.315"

5 & 6

	B (")	H (")
05	5/16"	5/16"
06	3/8"	3/8"
08	1/2"	1/2"
10	5/8"	5/8"
12	3/4"	3/4"
16	1"	1"
85	1"	1 1/4"
86	1"	1 1/2"
20	1 1/4"	1 1/4"
24	1 1/2"	1 1/2"
32	2"	2"

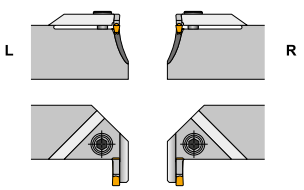
Para encabadouros quadrados, este é o número de 1/16 da polegada de largura e altura. Para encabadouros retangulares, o primeiro digito é o numero de 1/8 da polegada de largura, e o segundo digito é o numero de 1/4 da polegada de altura

10 Diâmetro máximo - ranhura frontal



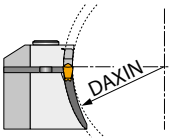
Informação adicional para ranhura axial ou frontal

9 Direção da curvatura da lâmina



Informação adicional para ranhura axial ou frontal

11 Diâmetro mínimo - ranhura frontal



Informação adicional para ranhura axial ou frontal

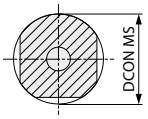
	1	2	3		4	5	6	7	8
ISO	A	25	S	–	G	G	H	L	0313
ANSI	A	16	S	–	G	G	H	L	0313



1 Encabadouro

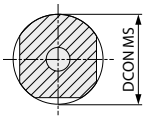
S	Encabadouro de aço
A	Encabadouro de aço com refrigeração interna

2 Diâmetro do encabadouro



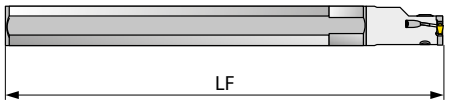
	DCON MS (mm)
12	12
16	16
20	20
25	25
32	32
40	40

2 Diâmetro do encabadouro



	DCON MS (")
08	.500"
10	.625"
12	.750"
16	1.000"
20	1.250"
24	1.500"

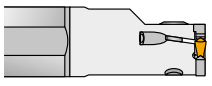
3 Comprimento total do suporte



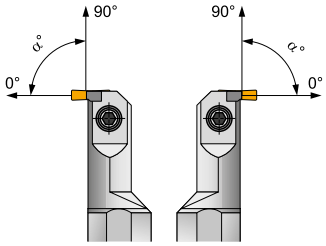
	LF (mm)	LF (")		LF (mm)	LF (")
M	150	6.000"	S	250	10.000"
P	170	6.250"	T	300	12.000"
Q	180	7.250"	U	350	14.000"
R	200	8.000"	V	400	15.750"

4 Sistema de fixação

G

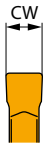


5 Tipo de ferramenta - ângulo de posição



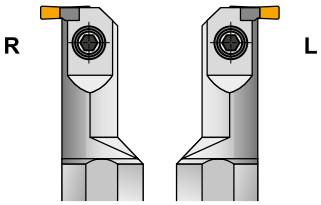
α°	
G = 0°	K = 75°
R = 15°	F = 90°
T = 30°	B = 105°
S = 45°	E = 120°
W = 60°	D = 135°

6 Profundidade de corte máxima– CDX

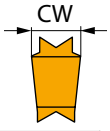


E = 1.0 × CW	J = 3.5 × CW
F = 1.5 × CW	K = 4.0 × CW
G = 2.0 × CW	L = 4.5 × CW
H = 2.5 × CW	M = 5.0 × CW
I = 3.0 × CW	N = 5.5 × CW
X = Especial	

7 Versão (direita / esquerda) R/L



8 Largura de pastilha



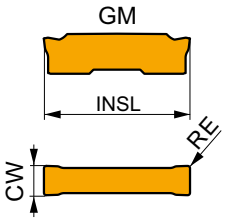
0313	3.0
0413	4.0

NEW

GL. D - GM

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

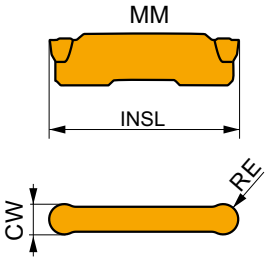
Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			U E																	
			Geometria GM para ranhurar e torneamento longitudinal, e cortes contínuos a interrompidos.																	
GL2-D200M02-GM	**G8330**	0.2	■ 190	0.10	0.8	■ 110	0.09	0.8	■ 180	0.10	0.8	–	–	–	◪ 45	0.08	0.6	–	–	–
	T7325	0.2	◪ 220	0.10	0.8	■ 170	0.09	0.8	–	–	–	–	–	–	◪ 70	0.08	0.6	–	–	–
GL3-D300M02-GM	**G8330**	0.2	■ 150	0.20	1.0	■ 90	0.18	1.0	■ 140	0.20	1.0	–	–	–	◪ 35	0.14	0.8	–	–	–
	T7325	0.2	◪ 175	0.20	1.0	■ 135	0.18	1.0	–	–	–	–	–	–	◪ 55	0.14	0.8	–	–	–
GL3-D300M04-GM	**G8330**	0.4	■ 160	0.20	1.0	■ 95	0.18	1.0	■ 150	0.20	1.0	–	–	–	◪ 40	0.14	0.8	–	–	–
	T7325	0.4	◪ 185	0.20	1.0	■ 140	0.18	1.0	–	–	–	–	–	–	◪ 60	0.14	0.8	–	–	–
GL4-D400M04-GM	**G8330**	0.4	■ 150	0.25	1.2	■ 90	0.23	1.2	■ 140	0.25	1.2	–	–	–	◪ 35	0.18	1.0	–	–	–
	T7325	0.4	◪ 170	0.25	1.2	■ 130	0.23	1.2	–	–	–	–	–	–	◪ 55	0.18	1.0	–	–	–
GL4-D400M08-GM	**G8330**	0.8	■ 180	0.25	1.2	■ 105	0.23	1.2	■ 170	0.25	1.2	–	–	–	◪ 45	0.18	1.0	–	–	–
	T7325	0.8	◪ 200	0.25	1.2	■ 155	0.23	1.2	–	–	–	–	–	–	◪ 65	0.18	1.0	–	–	–
GL5-D500M08-GM	**G8330**	0.8	■ 170	0.30	1.2	■ 100	0.27	1.2	■ 160	0.30	1.2	–	–	–	◪ 40	0.21	1.0	–	–	–
	T7325	0.8	◪ 190	0.30	1.2	■ 145	0.27	1.2	–	–	–	–	–	–	◪ 60	0.21	1.0	–	–	–
GL6-D600M08-GM	**G8330**	0.8	■ 170	0.30	1.2	■ 100	0.27	1.2	■ 160	0.30	1.2	–	–	–	◪ 40	0.21	1.0	–	–	–
	T7325	0.8	◪ 190	0.30	1.2	■ 145	0.27	1.2	–	–	–	–	–	–	◪ 60	0.21	1.0	–	–	–

NEW

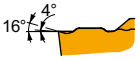
GL. D - MM

PRAMET

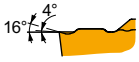
	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	26.0
600	6.00	-0.05	0.05	26.0



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			U S																	
			Geometria MM, com formato de raio completo para perfil em cópia e torneamento longitudinal, e cortes contínuos a interrompidos.																	
GL2-D200MM0-MM	**G8330**	1.0	■ 250	0.10	1.0	■ 150	0.09	1.0	■ 235	0.10	1.0	–	–	–	◪ 60	0.08	0.8	–	–	–
	T7325	1.0	◪ 285	0.10	1.0	■ 220	0.09	1.0	–	–	–	–	–	–	◪ 90	0.08	0.8	–	–	–

Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

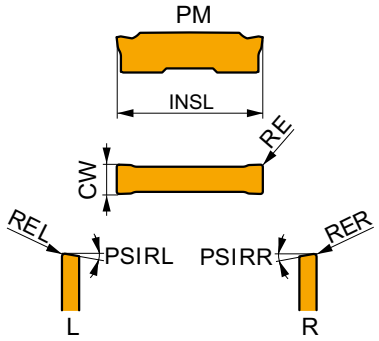
Produto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
		(mm)																		
																				
GL3-D300MM0-MM	G8330	1.5	■ 210	0.20	1.2	■ 125	0.18	1.2	■ 195	0.20	1.2	–	–	–	◪ 50	0.14	1.0	–	–	–
	T7325	1.5	◪ 240	0.20	1.2	■ 185	0.18	1.2	–	–	–	–	–	–	◪ 75	0.14	1.0	–	–	–
GL4-D400MM0-MM	G8330	2.0	■ 220	0.20	1.2	■ 130	0.18	1.2	■ 205	0.20	1.2	–	–	–	◪ 55	0.14	1.0	–	–	–
	T7325	2.0	◪ 250	0.20	1.2	■ 195	0.18	1.2	–	–	–	–	–	–	◪ 80	0.14	1.0	–	–	–
GL5-D500MM0-MM	G8330	2.5	■ 205	0.25	1.2	■ 120	0.23	1.2	■ 190	0.25	1.2	–	–	–	◪ 50	0.18	1.0	–	–	–
	T7325	2.5	◪ 235	0.25	1.2	■ 180	0.23	1.2	–	–	–	–	–	–	◪ 75	0.18	1.0	–	–	–
GL6-D600MM0-MM	G8330	3.0	■ 195	0.30	1.2	■ 115	0.27	1.2	■ 185	0.30	1.2	–	–	–	◪ 45	0.21	1.0	–	–	–
	T7325	3.0	◪ 220	0.30	1.2	■ 170	0.27	1.2	–	–	–	–	–	–	◪ 70	0.21	1.0	–	–	–

NEW

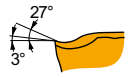
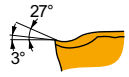
GL. D - PM

PRAMET

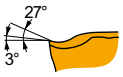
	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
200	2.00	-0.05	0.05	25.0
250	2.55	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
		(mm)														
																
GL2-D200M02-PM	G8330	0.2	■ 130	0.08	■ 75	0.07	◪ 120	0.08	–	–	◪ 30	0.06	–	–	–	–
	T7325	0.2	◪ 150	0.08	■ 115	0.07	–	–	–	–	◪ 45	0.06	–	–	–	–
GL3-D250G02-PM	G8330	0.2	■ 130	0.10	■ 75	0.09	◪ 120	0.10	–	–	◪ 30	0.07	–	–	–	–
GL3-D300M02-PM	G8330	0.2	■ 130	0.10	■ 75	0.09	◪ 120	0.10	–	–	◪ 30	0.07	–	–	–	–
	T7325	0.2	◪ 150	0.10	■ 115	0.09	–	–	–	–	◪ 45	0.07	–	–	–	–
GL4-D400M02-PM	G8330	0.2	■ 130	0.12	■ 75	0.11	◪ 120	0.12	–	–	◪ 30	0.10	–	–	–	–
	T7325	0.2	◪ 150	0.12	■ 115	0.11	–	–	–	–	◪ 45	0.10	–	–	–	–
GL5-D500M03-PM	G8330	0.3	■ 130	0.15	■ 75	0.14	◪ 120	0.15	–	–	◪ 30	0.12	–	–	–	–
GL6-D600M03-PM	G8330	0.3	■ 130	0.15	■ 75	0.14	◪ 120	0.15	–	–	◪ 30	0.12	–	–	–	–
																
																
GL2-D200G02R06-PM	G8330	0.2	■ 130	0.08	■ 75	0.07	◪ 120	0.08	–	–	◪ 30	0.06	–	–	6	–
	T7325	0.2	◪ 150	0.08	■ 115	0.07	–	–	–	–	◪ 45	0.06	–	–	6	–
GL2-D200G02R12-PM	G8330	0.2	■ 130	0.08	■ 75	0.07	◪ 120	0.08	–	–	◪ 30	0.06	–	–	12	–
GL3-D300G02R06-PM	G8330	0.2	■ 130	0.10	■ 75	0.09	◪ 120	0.10	–	–	◪ 30	0.07	–	–	6	–
	T7325	0.2	◪ 150	0.10	■ 115	0.09	–	–	–	–	◪ 45	0.07	–	–	6	–
GL3-D300G02R12-PM	G8330	0.2	■ 130	0.10	■ 75	0.09	◪ 120	0.10	–	–	◪ 30	0.07	–	–	12	–
GL4-D400G02R06-PM	G8330	0.2	■ 130	0.12	■ 75	0.11	◪ 120	0.12	–	–	◪ 30	0.10	–	–	6	–
	T7325	0.2	◪ 150	0.12	■ 115	0.11	–	–	–	–	◪ 45	0.10	–	–	6	–
GL4-D400G02R12-PM	G8330	0.2	■ 130	0.12	■ 75	0.11	◪ 120	0.12	–	–	◪ 30	0.10	–	–	12	–

Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
																
GL2-D200G02L06-PM	G8330	0.2	130	0.08	75	0.07	120	0.08	–	–	30	0.06	–	–	–	6
	T7325	0.2	150	0.08	115	0.07	–	–	–	–	45	0.06	–	–	–	6
GL2-D200G02L12-PM	G8330	0.2	130	0.08	75	0.07	120	0.08	–	–	30	0.06	–	–	–	12
GL3-D300G02L06-PM	G8330	0.2	130	0.10	75	0.09	120	0.10	–	–	30	0.07	–	–	–	6
	T7325	0.2	150	0.10	115	0.09	–	–	–	–	45	0.07	–	–	–	6
GL3-D300G02L12-PM	G8330	0.2	130	0.10	75	0.09	120	0.10	–	–	30	0.07	–	–	–	12
GL4-D400G02L06-PM	G8330	0.2	130	0.12	75	0.11	120	0.12	–	–	30	0.10	–	–	–	6
	T7325	0.2	150	0.12	115	0.11	–	–	–	–	45	0.10	–	–	–	6
GL4-D400G02L12-PM	G8330	0.2	130	0.12	75	0.11	120	0.12	–	–	30	0.10	–	–	–	12

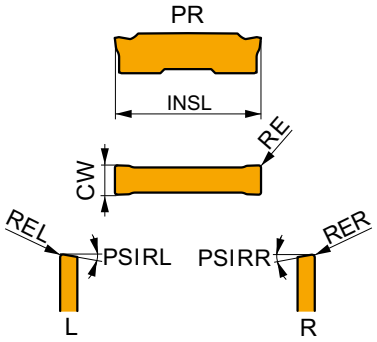
Geometria à esquerda L-PM, primeira escolha para sangrar, e cortes contínuos a ligeiramente interrompidos.

NEW

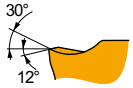
GL. D - PR

PRAMET

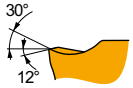
	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
200	2.00	-0.05	0.05	25.0
300	3.00	-0.05	0.05	25.0
400	4.00	-0.05	0.05	25.0
500	5.00	-0.05	0.05	25.0
600	6.00	-0.05	0.05	25.0



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
																
GL2-D200M02-PR	G8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
	T7325	0.2	150	0.10	115	0.09	–	–	–	–	–	–	–	–	–	–
GL3-D300M02-PR	G8330	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–
	T7325	0.2	150	0.12	115	0.11	–	–	–	–	–	–	–	–	–	–
GL4-D400M02-PR	G8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–
	T7325	0.2	150	0.15	115	0.14	–	–	–	–	–	–	–	–	–	–
GL5-D500M04-PR	G8330	0.4	130	0.18	75	0.16	120	0.18	–	–	–	–	–	–	–	–
GL6-D600M04-PR	G8330	0.4	130	0.18	75	0.16	120	0.18	–	–	–	–	–	–	–	–

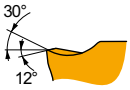
Geometria PR, primeira escolha para sangrar e ranhurar, e cortes contínuos a interrompidos.

R-PR geometria à direita, primeira escolha para sangrar, e cortes contínuos a interrompidos.

GL2-D200G02R06-PR	G8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	6	–
GL2-D200G02R12-PR	G8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	12	–
GL3-D300G02R06-PR	G8330	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	6	–
GL3-D300G02R12-PR	G8330	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	12	–
GL4-D400G02R06-PR	G8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	6	–
GL4-D400G02R12-PR	G8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	12	–

Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
		(mm)														
			S													
			Geometria à esquerda L-PR, primeira escolha para sangrar, e cortes contínuos a interrompidos.													
GL2-D200G02L06-PR	**G8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	6
GL2-D200G02L12-PR	**G8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	12
GL3-D300G02L06-PR	**G8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	6
GL3-D300G02L12-PR	**G8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	12
GL4-D400G02L06-PR	**G8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	6
GL4-D400G02L12-PR	**G8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	12

NEW

GLSF(RL) EXT

P M K N S H

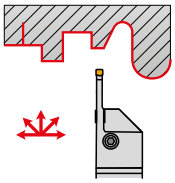
PRAMET

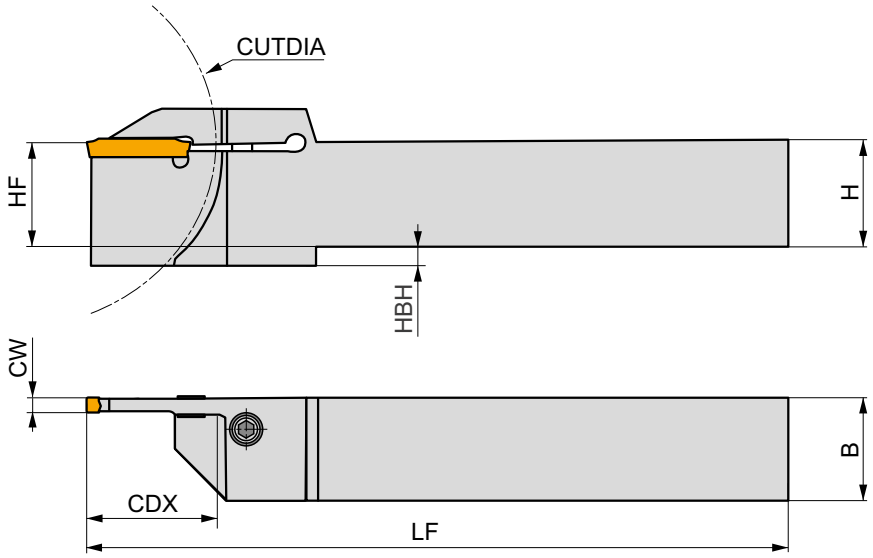
G

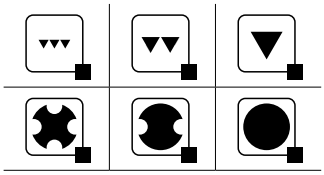


Ferramenta Exterior para Sangrar e Ranhurar, Fixação Superior e Ranhura em 'V', para Pastilhas GL

Porta-ferramentas de exterior à direita ou à esquerda para abertura radial de ranhuras com pastilhas GL 2, 3, 4, 5 ou 6 de dupla face. Adequado para aplicações de sangrar e ranhurar radiais, até 32 mm de profundidade máxima de corte. Disponível com haste de 20x20 ou 25x25 mm. Corpo reforçado para maior tempo de vida útil da ferramenta e baixas vibrações.









	Produto	HF (mm)	HBH (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	CUTDIA (mm)	kg		
R	GL2-S2020KFR-20-80	20	–	20	20	125	2.00	20	80	0.38	GI334	GL11
	GL2-S2020KFR-24-80	20	5	20	20	125	2.00	24	80	0.36	GI334	GL11
	GL2-S2525MFR-20-80	25	–	25	25	150	2.00	20	80	0.68	GI334	GL11
	GL2-S2525MFR-24-80	25	–	25	25	150	2.00	24	80	0.64	GI334	GL11
	GL3-S2020KFR-20-80	20	–	20	20	125	3.00	20	80	0.38	GI335	GL11
	GL3-S2020KFR-24-80	20	5	20	20	125	3.00	24	80	0.36	GI335	GL11
	GL3-S2525MFR-20-80	25	–	25	25	150	3.00	20	80	0.68	GI335	GL11
	GL3-S2525MFR-24-80	25	–	25	25	150	3.00	24	80	0.65	GI335	GL11
	GL3-S2525PFR-32-80	25	5	25	25	170	3.00	32	80	0.72	GI335	GL11
	GL4-S2020KFR-20-80	20	–	20	20	125	4.00	20	80	0.38	GI336	GL11
	GL4-S2020KFR-24-80	20	5	20	20	125	4.00	24	80	0.37	GI336	GL11
	GL4-S2525MFR-20-80	25	–	25	25	150	4.00	20	80	0.68	GI336	GL11
	GL4-S2525MFR-24-80	25	–	25	25	150	4.00	24	80	0.65	GI336	GL11
	GL4-S2525PFR-32-80	25	5	25	25	170	4.00	32	80	0.78	GI336	GL11
	GL5-S2020KFR-20-80	20	–	20	20	125	5.00	20	80	0.38	GI337	GL11
	GL5-S2525MFR-20-80	25	–	25	25	150	5.00	20	80	0.68	GI337	GL11
	GL5-S2525PFR-32-100	25	5	25	25	170	5.00	32	100	0.75	GI337	GL11
	GL6-S2020KFR-20-80	20	–	20	20	125	6.00	20	80	0.39	GI338	GL11
	GL6-S2525MFR-20-80	25	–	25	25	150	6.00	20	80	0.68	GI338	GL11
	GL6-S2525PFR-32-100	25	5	25	25	170	6.00	32	100	0.75	GI338	GL11
L	GL2-S2020KFL-20-80	20	–	20	20	125	2.00	20	80	0.38	GI334	GL11
	GL2-S2020KFL-24-80	20	5	20	20	125	2.00	24	80	0.36	GI334	GL11
	GL2-S2525MFL-20-80	25	–	25	25	150	2.00	20	80	0.70	GI334	GL11
	GL2-S2525MFL-24-80	25	–	25	25	150	2.00	24	80	0.64	GI334	GL11
	GL3-S2020KFL-20-80	20	–	20	20	125	3.00	20	80	0.38	GI335	GL11
	GL3-S2020KFL-24-80	20	5	20	20	125	3.00	24	80	0.36	GI335	GL11
	GL3-S2525MFL-20-80	25	–	25	25	150	3.00	20	80	0.68	GI335	GL11

	Produto	HF (mm)	HBH (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	CUTDIA (mm)	kg		
L	**GL3-S2525MFL-24-80**	25	–	25	25	150	3.00	24	80	0.65	GI335	GL11
	GL3-S2525PFL-32-80	25	5	25	25	170	3.00	32	80	0.78	GI335	GL11
	GL4-S2020KFL-20-80	20	–	20	20	125	4.00	20	80	0.38	GI336	GL11
	GL4-S2020KFL-24-80	20	5	20	20	125	4.00	24	80	0.37	GI336	GL11
	GL4-S2525MFL-20-80	25	–	25	25	150	4.00	20	80	0.68	GI336	GL11
	GL4-S2525MFL-24-80	25	–	25	25	150	4.00	24	80	0.65	GI336	GL11
	GL4-S2525PFL-32-80	25	5	25	25	170	4.00	32	80	0.72	GI336	GL11
	GL5-S2020KFL-20-80	20	–	20	20	125	5.00	20	80	0.38	GI337	GL11
	GL5-S2525MFL-20-80	25	–	25	25	150	5.00	20	80	0.71	GI337	GL11
	GL5-S2525PFL-32-100	25	5	25	25	170	5.00	32	100	0.75	GI337	GL11
	GL6-S2020KFL-20-80	20	–	20	20	125	6.00	20	80	0.39	GI338	GL11
	GL6-S2525MFL-20-80	25	–	25	25	150	6.00	20	80	0.71	GI338	GL11
	GL6-S2525PFL-32-100	25	5	25	25	170	6.00	32	100	0.75	GI338	GL11

GI334	GL2..
GI335	GL3..
GI336	GL4..
GI337	GL5..
GI338	GL6..

		Nm			
GL11	US 5018-T20P	5.0	M 5	18.2	LK T20P

Profundidades de corte no diâmetro maquinado na página 416.

NEW

GLSF(RL) EXT-G

P M K N S H

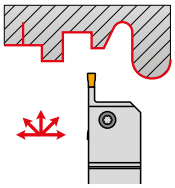
PRAMET

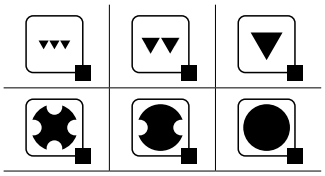
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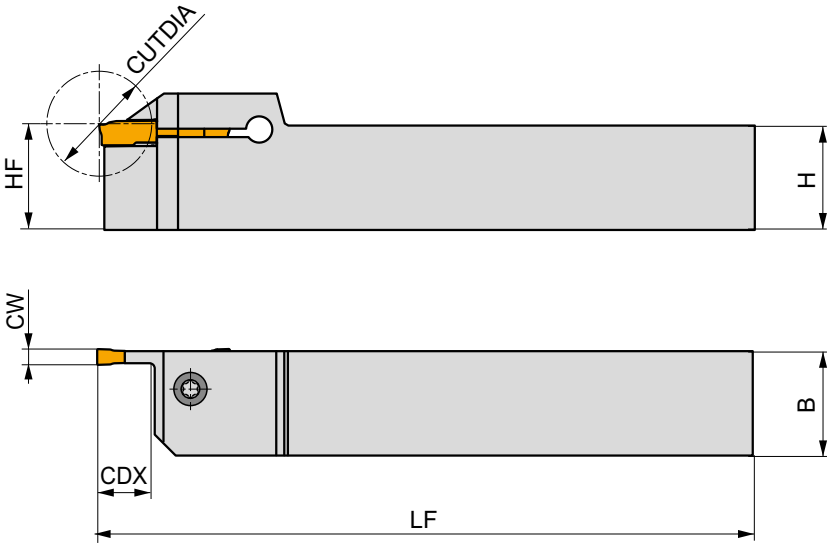


Ferramenta Exterior para Ranhurar e Torneamento, Fixação Superior e Ranhura em 'V', para Pastilhas GL

Porta-ferramentas de exterior à direita ou à esquerda para abertura radial de ranhuras com pastilhas de duas faces GL 2, 3, 4, 5 ou 6. Adequado para aplicações de ranhurar radial, torneamento longitudinal e perfilamento, até 12 mm de profundidade máxima de corte. Disponível com haste de 20x20 ou 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	CUTDIA (mm)	kg		
R	GL2-S2020KFR-10	20	20	20	125	2.00	10	20	0.38	GI334	GL11
	GL2-S2525MFR-10	25	25	25	150	2.00	10	20	0.69	GI334	GL11
	GL3-S2020KFR-10	20	20	20	125	3.00	10	20	0.36	GI335	GL11
	GL3-S2525MFR-10	25	25	25	150	3.00	10	20	0.69	GI335	GL11
	GL4-S2020KFR-12	20	20	20	125	4.00	12	24	0.37	GI336	GL11
	GL4-S2525MFR-12	25	25	25	150	4.00	12	24	0.69	GI336	GL11
	GL5-S2020KFR-12	20	20	20	125	5.00	12	24	0.36	GI337	GL11
	GL5-S2525MFR-12	25	25	25	150	5.00	12	24	0.70	GI337	GL11
	GL6-S2020KFR-12	20	20	20	125	6.00	12	24	0.36	GI338	GL11
	GL6-S2525MFR-12	25	25	25	150	6.00	12	24	0.68	GI338	GL11
L	GL2-S2020KFL-10	20	20	20	125	2.00	10	20	0.37	GI334	GL11
	GL2-S2525MFL-10	25	25	25	150	2.00	10	20	0.70	GI334	GL11
	GL3-S2020KFL-10	20	20	20	125	3.00	10	20	0.36	GI335	GL11
	GL3-S2525MFL-10	25	25	25	150	3.00	10	20	0.70	GI335	GL11
	GL4-S2020KFL-12	20	20	20	125	4.00	12	24	0.37	GI336	GL11
	GL4-S2525MFL-12	25	25	25	150	4.00	12	24	0.69	GI336	GL11
	GL5-S2020KFL-12	20	20	20	125	5.00	12	24	0.36	GI337	GL11
	GL5-S2525MFL-12	25	25	25	150	5.00	12	24	0.69	GI337	GL11
	GL6-S2020KFL-12	20	20	20	125	6.00	12	24	0.36	GI338	GL11
	GL6-S2525MFL-12	25	25	25	150	6.00	12	24	0.68	GI338	GL11

GI334	GL2..
GI335	GL3..
GI336	GL4..
GI337	GL5..
GI338	GL6..

		Nm			
GL11	US 5018-T20P	5.0	M 5	18.2	LKT20P

NEW

GLSF(RL) EXT-S

P M K N S H

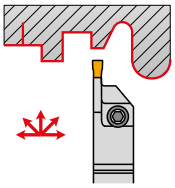
PRAMET

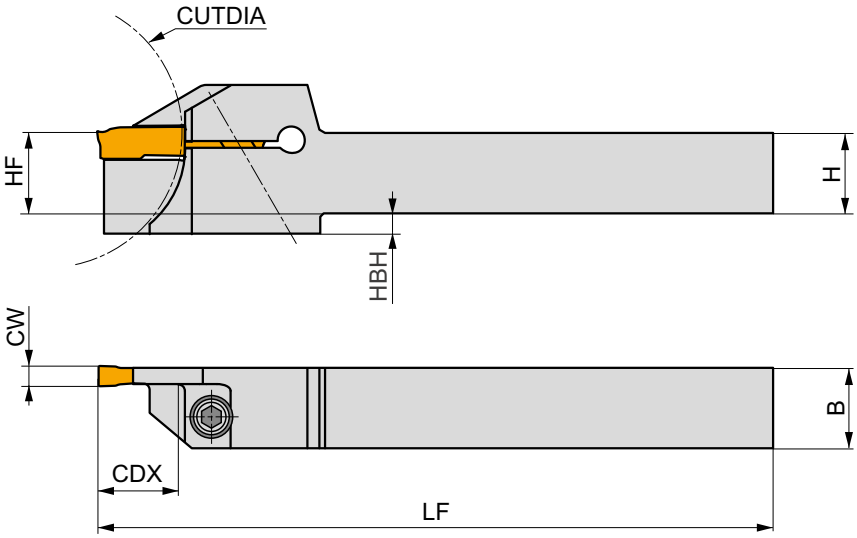
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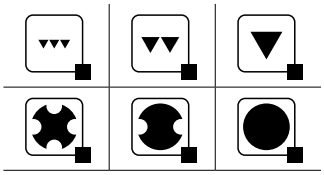


Ferramenta de Exterior para Sangrar e Ranhurar, para Pastilhas GL para Máquinas com Cabeçote Móvel

Porta-ferramentas de exterior à direita ou à esquerda para ranhurar em máquinas com cabeçote móvel com larguras GL 2, 3, 4. Para aplicações radiais de ranhurar, perfilamento e sangrar até 16 mm de profundidade máxima de corte. Disponível com haste de 12x12 ou 16x16 mm. Corpo reforçado para maior tempo de vida útil da ferramenta e baixas vibrações, fixação de fácil acesso.









	Produto	HF (mm)	HBH (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	CUTDIA (mm)	kg		
R	**GL2-S1212HFR-12-40**	12	3	12	12	100	2.00	12	40	0.11	GI334	GL13
	GL2-S1616KFR-16-45	16	3	16	16	125	2.00	16	45	0.23	GI334	GL12
	GL3-S1212HFR-12-40	12	3	12	12	100	3.00	12	40	0.11	GI335	GL13
	GL3-S1616KFR-16-45	16	3	16	16	125	3.00	16	45	0.23	GI335	GL12
	GL4-S1616KFR-16-45	16	4	16	16	125	4.00	16	45	0.26	GI336	GL12
L	**GL2-S1212HFL-12-40**	12	3	12	12	100	2.00	12	40	0.11	GI334	GL13
	GL2-S1616KFL-16-45	16	3	16	16	125	2.00	16	45	0.23	GI334	GL12
	GL3-S1212HFL-12-40	12	3	12	12	100	3.00	12	40	0.11	GI335	GL13
	GL3-S1616KFL-16-45	16	3	16	16	125	3.00	16	45	0.23	GI335	GL12
	GL4-S1616KFL-16-45	16	4	16	16	125	4.00	16	45	0.24	GI336	GL12

GI334	GL2..
GI335	GL3..
GI336	GL4..

		Nm			
GL12	HS 0516	5.0	M 5	16	HXK 4
GL13	HS 0412	5.0	M 4	12	HXK 3

Profundidades de corte no diâmetro maquinado na página 416.

NEW

GLS B

P M K N S H

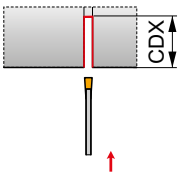
PRAMET

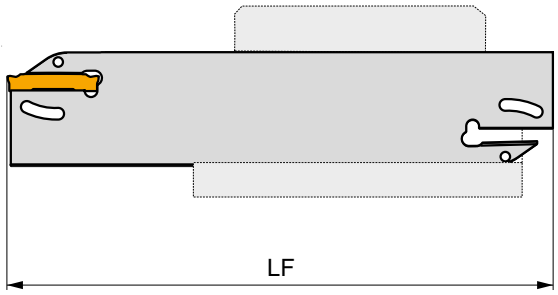
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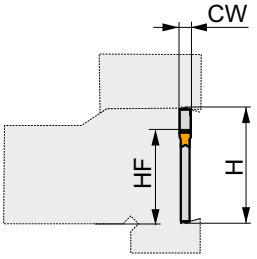


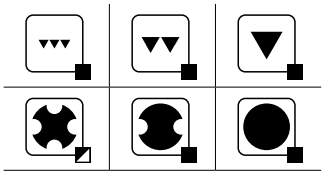
Lâmina de Sangrar de Ponta Dupla para Pastilhas GL

Lâmina para aplicações de sangrar até 60 mm de profundidade máxima ou barra de Ø120 mm. Adequado para pastilhas de duas faces da família GL. Disponível nas alturas de 26 e 32 mm. Pode ser montada nos suportes básicos DU da Pramet. Lâmina tratada para maior tempo de vida útil da ferramenta.











Produto	HF (mm)	H (mm)	LF (mm)	CW (mm)	CDX (mm)	kg		
GL2-S26KB	21.4	26	125	2.00	35	0.13	GI334	KV2
GL2-S32MB	25	32	150	2.00	50	0.15	GI334	KV2
GL3-S26KB	21.4	26	125	3.00	35	0.15	GI335	KV2
GL3-S32MB	25	32	150	3.00	50	0.16	GI335	KV2
GL4-S32MB	25	32	150	4.00	50	0.16	GI336	KV2
GL5-S32MB	25	32	150	5.00	60	0.16	GI337	KV2
GL6-S32MB	25	32	150	6.00	60	0.16	GI338	KV2

GI334	GL2..
GI335	GL3..
GI336	GL4..
GI337	GL5..
GI338	GL6..

KV2	KV 15x150

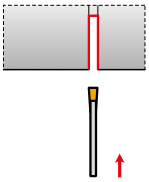
DU, D

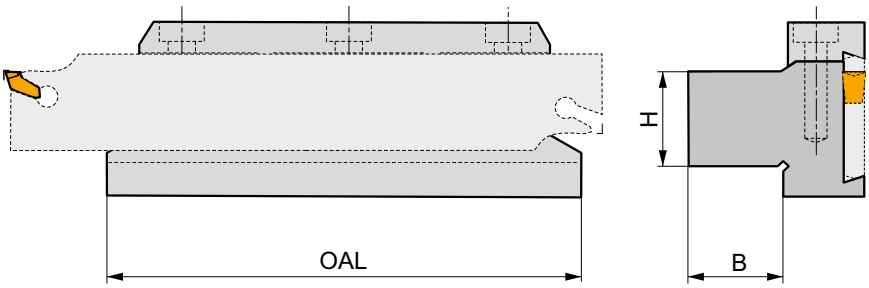
PRAMET

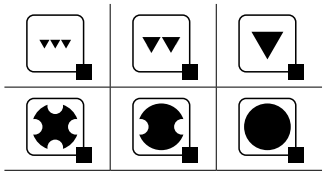


Bloco Porta Lâminas para Lâminas de Sangrar

Porta-ferramentas adequado para lâminas de sangrar GL ou XLC. Disponível com hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







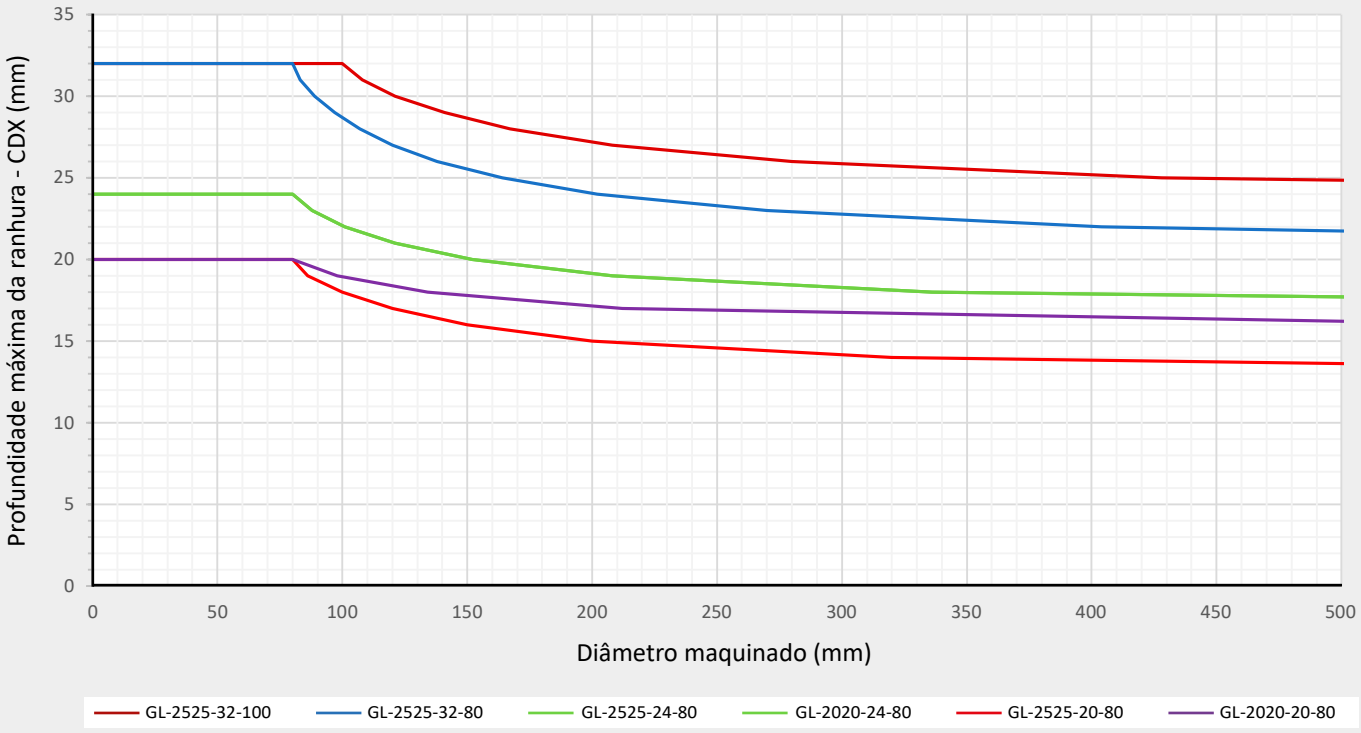
Produto	H (mm)	B (mm)	OAL (mm)	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

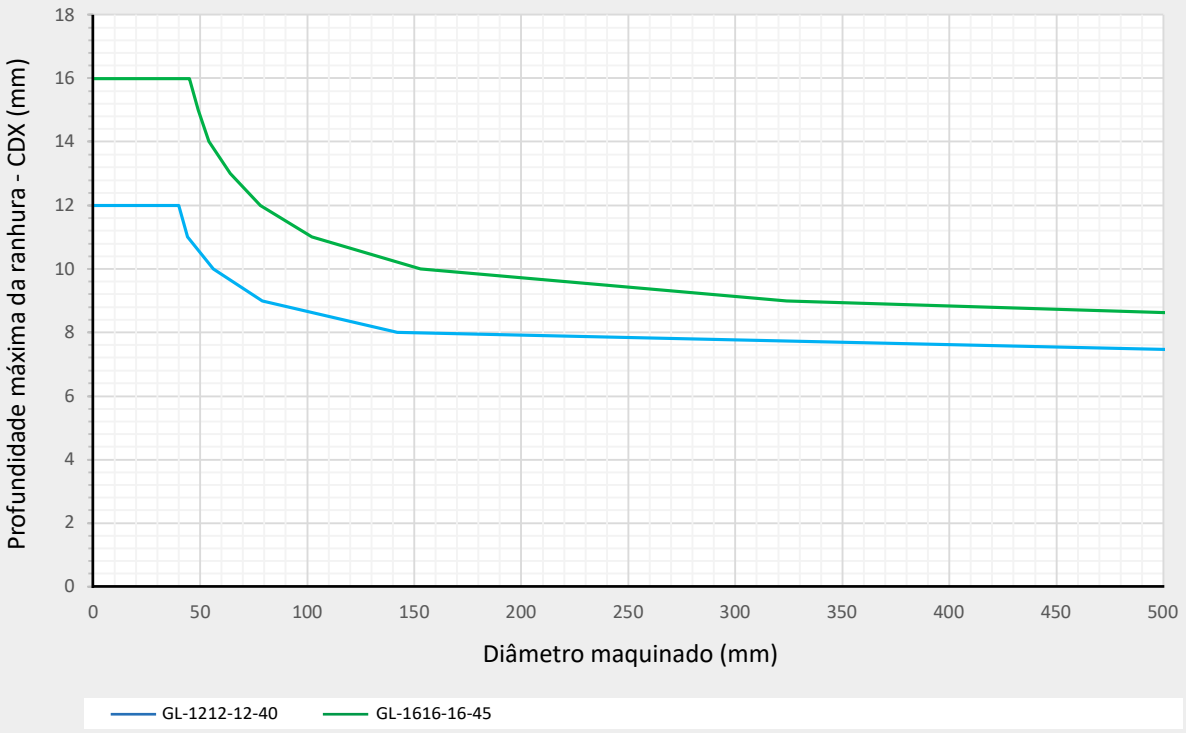
		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

PROFUNDIDADES DE CORTE CONSOANTE O DIÂMETRO MAQUINADO

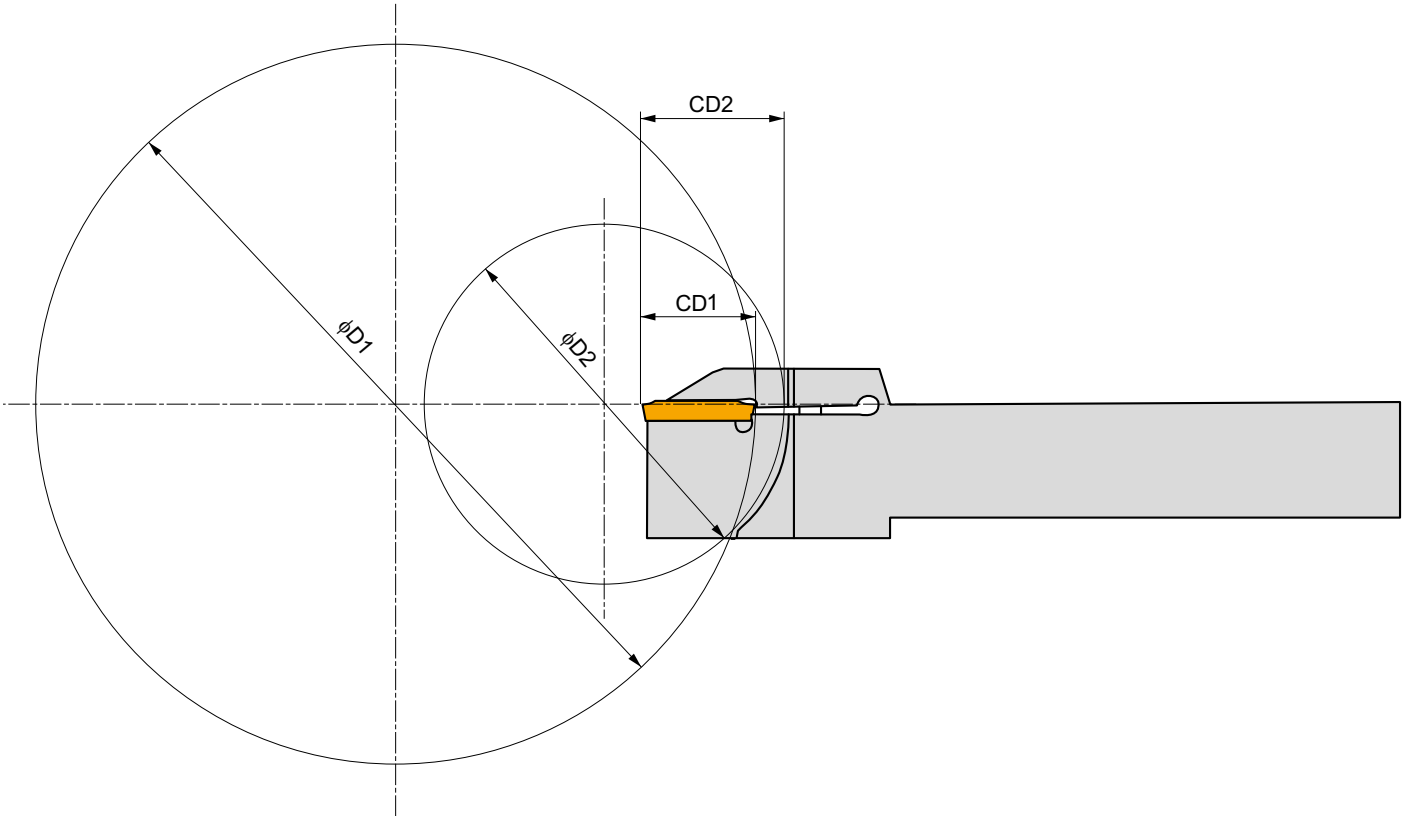
GLSF (RL) EXT



GLSF (RL) EXT-S



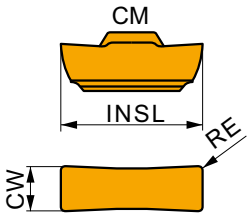
PROFUNDIDADES DE CORTE CONSOANTE O DIÂMETRO MAQUINADO



LCMF 13 - CM

PRAMET

	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

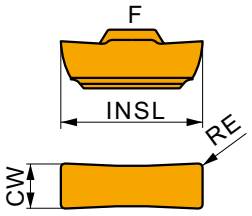
Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	M vc (m/min)	M f (mm/rev)	K vc (m/min)	K f (mm/rev)	N vc (m/min)	N f (mm/rev)	S vc (m/min)	S f (mm/rev)	H vc (m/min)	H f (mm/rev)	PSIRR (°)	PSIRL (°)
			E													
			Geometria CM e primeira escolha para ranhurar.													
LCMF 031304-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 031304-CM-04	**T8330**[1)]	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 041304-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–

[1)] Pastilha para suporte interior A16Q-GGERIL0313-04, A20R-GGFRIL0313-04.

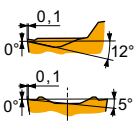
LCMF 13 - F

PRAMET

	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



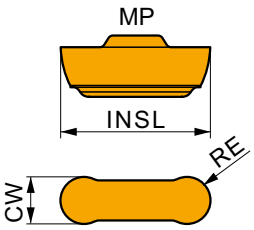
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
			U			S														
			Geometria F e primeira escolha para torneamento.																	
LCMF 031302-F	**T8330**	0.2	195	0.10	0.3	115	0.09	0.3	185	0.10	0.3	–	–	–	–	–	–	–	–	–
LCMF 031302-F-04	**T8330**[1)]	0.2	195	0.10	0.3	115	0.09	0.3	185	0.10	0.3	–	–	–	–	–	–	–	–	–
LCMF 031304-F	**T8330**	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMF 031304-F-04	**T8330**[1)]	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMF 041304-F	**T8330**	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	275	0.13	0.5	165	0.12	0.5	260	0.13	0.5	–	–	–	–	–	–	–	–	–

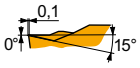
[1)] Pastilha para suporte interior A16Q-GGERIL0313-04, A20R-GGFRIL0313-04.

LCMF 13 - MP

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



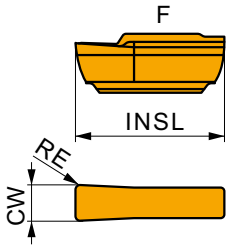
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
			Geometria MP para torneamento longitudinal e perfis em cópia, operações de maquinação de acabamento a acabamento fino, e cortes contínuos a interrompidos.																	
LCMF 0313MO-MP	**T8330**	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMF 0313MO-MP-04	**T8330**[1)]	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMF 0413MO-MP	**T8330**	2.0	■ 175	0.40	1.0	◪ 105	0.36	1.0	■ 165	0.40	1.0	–	–	–	–	–	–	–	–	–

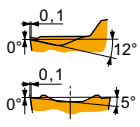
[1)] Pastilha para suporte interior A16Q-GGERIL0313-04, A20R-GGFRIL0313-04.

LCMR 13 - F

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



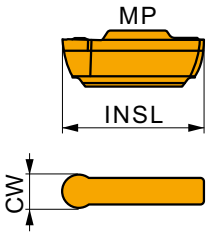
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
			Geometria F para ranhurar e tornear, operações de maquinação de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
LCMR 031304-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMR 041304-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–

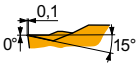
LCMR 13 - MP

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0313	3.00	-0.05	0.05	12.6
0413	4.00	-0.05	0.05	12.6



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
LCMR 0313M0-MP	**T8330**	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMR 0413M0-MP	**T8330**	2.0	■ 175	0.40	1.0	◪ 105	0.36	1.0	■ 165	0.40	1.0	–	–	–	–	–	–	–	–	–

Geometria MP para torneamento longitudinal e perfis em cópia, e cortes contínuos a interrompidos.

GG.(RL) INT

P M K N S H

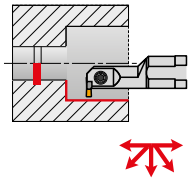
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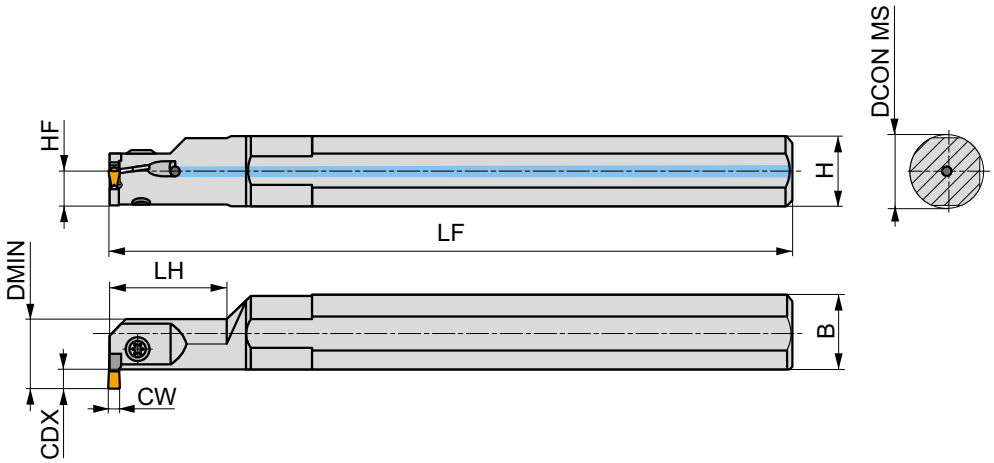
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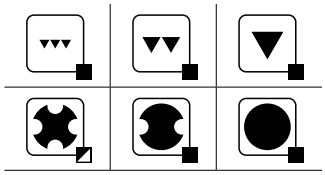


Porta-ferramentas Interior para Abertura de Ranhuras, para Pastilhas LCM.

Porta-ferramentas de interior à direita ou à esquerda para operações de ranhurar com pastilhas LCM. 0313 e 0413. Diâmetro mínimo da ranhura interna Ø16 mm. Adequado para operações de ranhurar interior e torneamento multidirecional. Disponível com hastes de Ø16 até Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	HF (mm)	H (mm)	B (mm)	LF (mm)	LH (mm)	CW (mm)	CDX (mm)	DMIN (mm)		kg		
R	A16Q-GGER 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI143	GL06
	A16Q-GGER 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.26	GI190	GL06
	A20R-GGFR 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.36	GI143	GL06
	A20R-GGFR 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.39	GI190	GL06
	A25S-GGHR 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.78	GI143	GL06
	A25S-GGFR 0413	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.73	GI170	GL06
	A32T-GGHR 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06
L	A16Q-GGEL 0313	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.29	GI143	GL06
	A16Q-GGEL 0313-04	16	7.5	15	15.5	180	25	3.00	3	16	✓	0.28	GI190	GL06
	A20R-GGFL 0313	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI143	GL06
	A20R-GGFL 0313-04	20	9	18	19	200	30	3.00	4.5	20	✓	0.38	GI190	GL06
	A25S-GGHL 0313	25	11.5	23	24	250	40	3.00	6.5	25	✓	0.81	GI143	GL06
	A25S-GGFL 0413	25	11.5	23	24	250	40	4.00	6.5	25	✓	0.82	GI170	GL06
	A32T-GGHL 0413	32	15	30	31	300	50	4.00	9.5	32	✓	1.59	GI170	GL06

GI143	LCM. 0313..
GI170	LCM. 0413..
GI190	LCM. 0313.....-04

		Nm			
GL06	SR 85011-T15P	5.0	M 5	9	FLAG T15P

GFIL-L AXIAL

P M K N S H

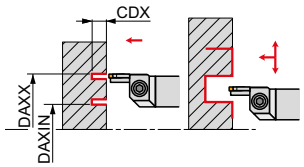
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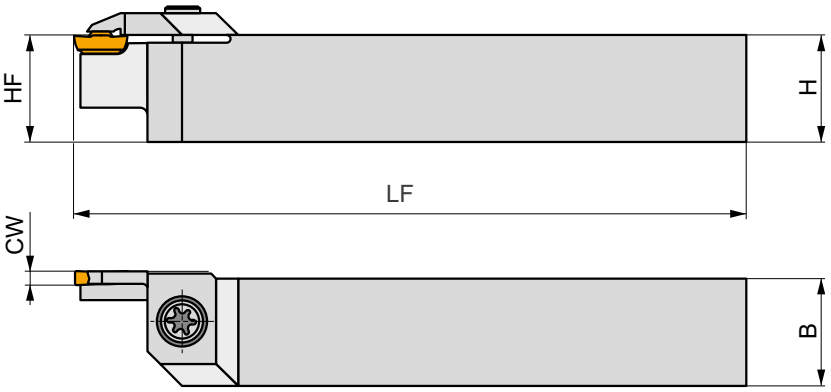
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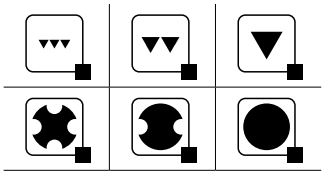


Ferramenta Exterior de Ranhurar Axial, com Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 03

Porta-Ferramentas de exterior esquerdo para abertura de ranhuras com pastilhas LCM 0313 ou 0316 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø170 mm, com profundidade de corte máxima de 9 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	**GFIL 2525 M 0313L 030017**	25	25	25	150	3.00	9	17	30	0.64	GI143	GL02
	GFIL 2525 M 0313L 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIL 2525 M 0313L 050033	25	25	25	150	3.00	9	33	50	0.67	GI143	GL07
	GFIL 2525 M 0313L 060043	25	25	25	150	3.00	9	43	60	0.67	GI143	GL07
	GFIL 2525 M 0313L 076053	25	25	25	150	3.00	9	53	76	0.67	GI143	GL07
	GFIL 2525 M 0316L 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIL 2525 M 0316L 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIL 2525 M 0316L 170110	25	25	25	150	3.00	9	110	170	0.71	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFIL-R AXIAL

P M K N S H

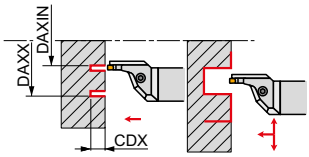
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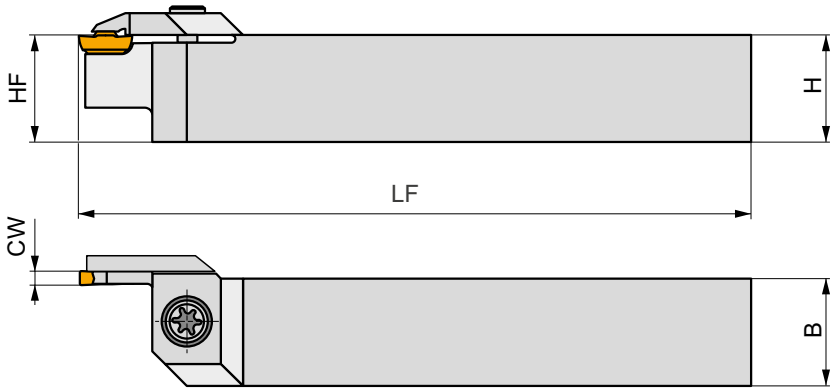
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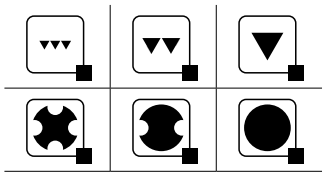


Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 03 ou 04

Porta-Ferramentas de exterior esquerdo para abertura axial de ranhuras com pastilhas LCM 0313, 0316, 0413 ou 0416 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade de corte máxima de 12 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	GFIL 2525 M 03R 030017-A	25	25	25	150	3.00	9	17	30	0.69	GI143	GL07
	GFIL 2525 M 03R 039024-A	25	25	25	150	3.00	9	24	39	0.69	GI143	GL07
	GFIL 2525 M 03R 050033-A	25	25	25	150	3.00	9	33	50	0.72	GI143	GL07
	GFIL 2525 M 03R 060043-A	25	25	25	150	3.00	9	43	60	0.69	GI143	GL07
	GFIL 2525 M 03R 076053-A	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIL 2525 M 03R 100070-A	25	25	25	150	3.00	9	70	100	0.79	GI136	GL08
	GFIL 2525 M 03R 130090-A	25	25	25	150	3.00	9	90	130	0.73	GI136	GL08
	GFIL 2525 M 03R 170110-A	25	25	25	150	3.00	9	110	170	0.76	GI136	GL08
	GFIL 2525 M 04R 030017-A	25	25	25	150	3.00	9	17	30	0.71	GI170	GL07
	GFIL 2525 M 04R 034021-A	25	25	25	150	4.00	9	21	34	0.69	GI170	GL07
	GFIL 2525 M 04R 040026-A	25	25	25	150	4.00	11	26	40	0.00	GI170	GL07
	GFIL 2525 M 04R 050032-A	25	25	25	150	4.00	11	32	50	0.68	GI170	GL07
	GFIL 2525 M 04R 060042-A	25	25	25	150	4.00	11	42	60	0.66	GI170	GL07
	GFIL 2525 M 04R 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIL 2525 M 04R 100070-A	25	25	25	150	4.00	12	70	100	0.75	GI137	GL08
	GFIL 2525 M 04R 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
	GFIL 2525 M 04R 170110-A	25	25	25	150	4.00	12	110	170	0.75	GI137	GL08
	GFIL 2525 M 04R 230140-A	25	25	25	150	4.00	12	140	230	0.78	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-L AXIAL

P M K N S H

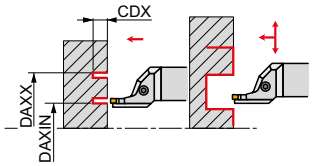
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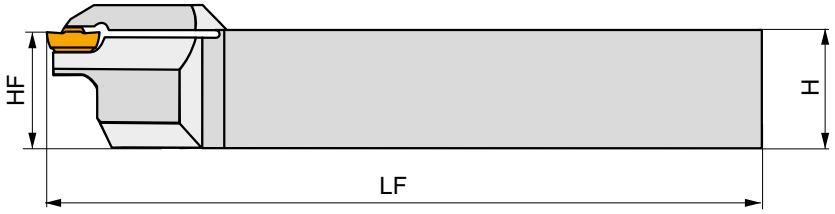
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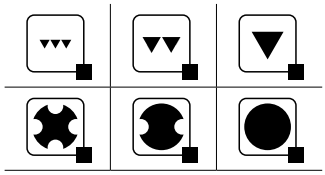
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 03 ou 04

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM . 313, 0316, 0413 ou 0416 de uma ou duas faces. Adequado para operações de ranhurar axial, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade máxima de corte de 12 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GFIR 2525 M 03L 030017-A	25	25	25	150	3.00	9	17	30	0.65	GI143	GL07
	GFIR 2525 M 03L 039024-A	25	25	25	150	3.00	9	24	39	0.68	GI143	GL07
	GFIR 2525 M 03L 050033-A	25	25	25	150	3.00	9	33	50	0.65	GI143	GL07
	GFIR 2525 M 03L 060043-A	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 03L 076053-A	25	25	25	150	3.00	9	53	76	0.69	GI143	GL07
	GFIR 2525 M 03L 100070-A	25	25	25	150	3.00	9	70	100	0.75	GI136	GL08
	GFIR 2525 M 03L 130090-A	25	25	25	150	3.00	9	90	130	0.76	GI136	GL08
	GFIR 2525 M 03L 170110-A	25	25	25	150	3.00	9	110	170	0.68	GI136	GL08
	GFIR 2525 M 04L 030017-A	25	25	25	150	3.00	9	17	30	0.68	GI170	GL07
	GFIR 2525 M 04L 034021-A	25	25	25	150	4.00	9	21	34	0.68	GI170	GL07
	GFIR 2525 M 04L 040026-A	25	25	25	150	4.00	11	26	40	0.68	GI170	GL07
	GFIR 2525 M 04L 050032-A	25	25	25	150	4.00	11	32	50	0.66	GI170	GL07
	GFIR 2525 M 04L 060042-A	25	25	25	150	4.00	11	42	60	0.69	GI170	GL07
	GFIR 2525 M 04L 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIR 2525 M 04L 100070-A	25	25	25	150	4.00	12	70	100	0.72	GI137	GL08
	GFIR 2525 M 04L 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
	GFIR 2525 M 04L 170110-A	25	25	25	150	4.00	12	110	170	0.72	GI137	GL08
	GFIR 2525 M 04L 230140-A	25	25	25	150	4.00	12	140	230	0.79	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-R AXIAL

P M K N S H

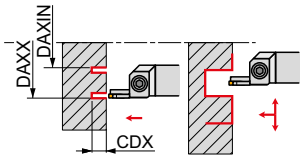
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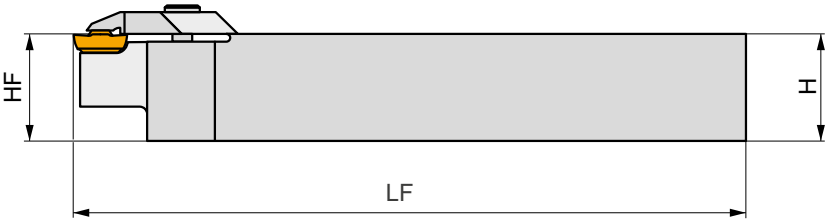
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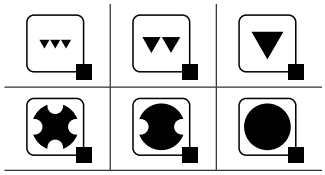
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 03

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM. 0313 ou 0316 de uma ou duas faces. Adequado para aplicações de ranhurar axial, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø170 mm, com profundidade máxima de corte de 9 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	**GFIR 2525 M 0313R 030017**	25	25	25	150	3.00	9	17	30	0.65	GI143	GL02
	GFIR 2525 M 0313R 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIR 2525 M 0313R 050033	25	25	25	150	3.00	9	33	50	0.68	GI143	GL07
	GFIR 2525 M 0313R 060043	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 0313R 076053	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIR 2525 M 0316R 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIR 2525 M 0316R 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIR 2525 M 0316R 170110	25	25	25	150	3.00	9	110	170	0.70	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-L AXIAL

P M K N S H

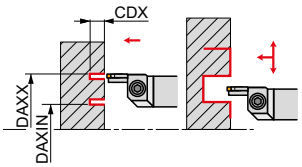
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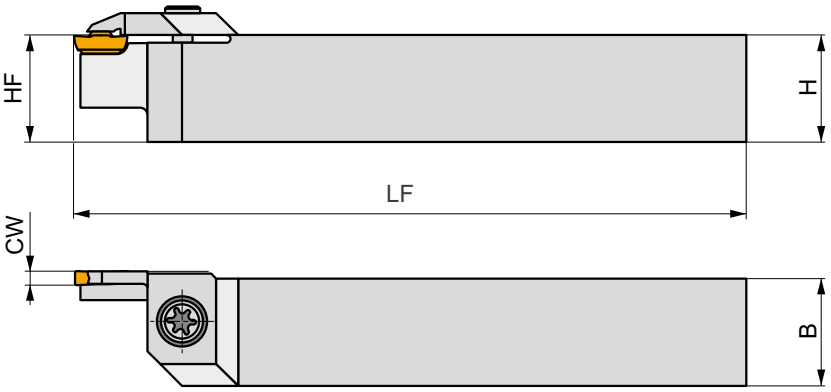
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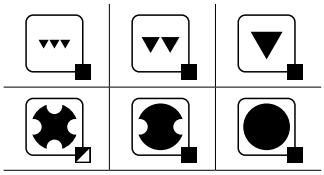


Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 04

Porta-Ferramentas de exterior esquerdo para abertura axial de ranhuras com pastilhas LCM 0413 ou 0416 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade de corte máxima de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	**GFML 2525 M 0413L 030017**	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFML 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFML 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.65	GI170	GL07
	GFML 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.64	GI170	GL07
	GFML 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.65	GI170	GL07
	GFML 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.66	GI170	GL07
	GFML 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.66	GI137	GL07
	GFML 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.67	GI137	GL07
	GFML 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFML 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.67	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-R AXIAL

P M K N S H

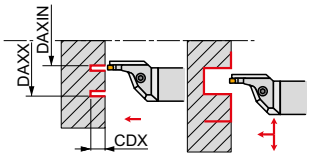
PRAMET

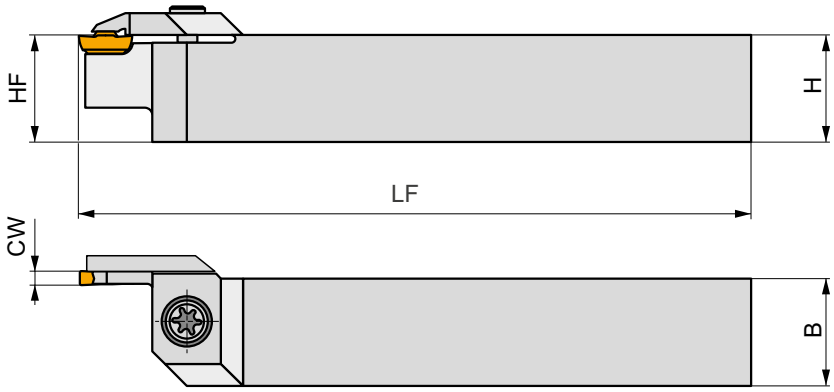
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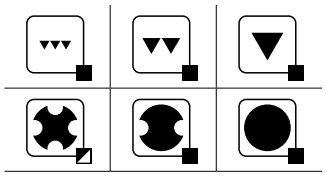


Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 04

Porta-Ferramentas de exterior esquerdo para abertura axial de ranhuras com pastilhas LCM 0413 ou 0416 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras , perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade de corte máxima de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	**GFML 2525 M 0413R 030017**	25	25	25	150	4.00	20	17	30	0.68	GI170	GL07
	GFML 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.69	GI170	GL07
	GFML 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.69	GI170	GL07
	GFML 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFML 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.69	GI170	GL07
	GFML 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFML 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.80	GI137	GL08
	GFML 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFML 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.78	GI137	GL08
	GFML 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFMR-L AXIAL

P M K N S H

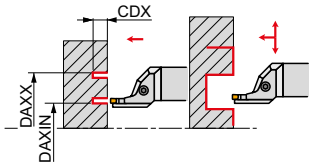
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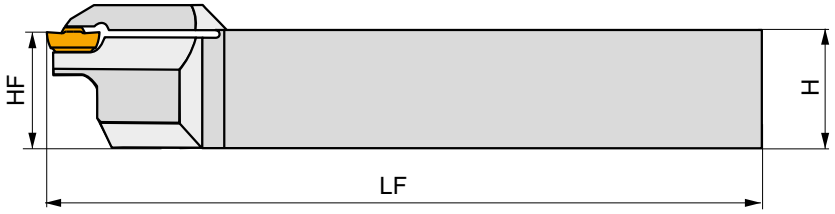
G



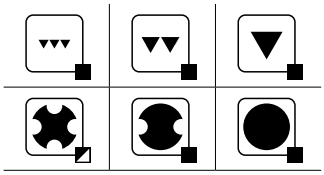
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 04

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM. 0413 ou 0416 de uma ou duas faces. Adequado para abertura axial de ranhuras profundas, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade máxima de corte de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GFMR 2525 M 0413L 030017	25	25	25	150	4.00	20	17	30	0.70	GI170	GL07
	GFMR 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.66	GI170	GL07
	GFMR 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.66	GI170	GL07
	GFMR 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFMR 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.66	GI170	GL07
	GFMR 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFMR 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.88	GI137	GL08
	GFMR 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFMR 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.81	GI137	GL08
	GFMR 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFMR-R AXIAL

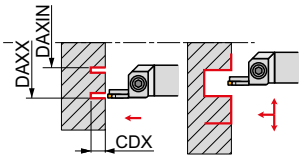
P M K N S H

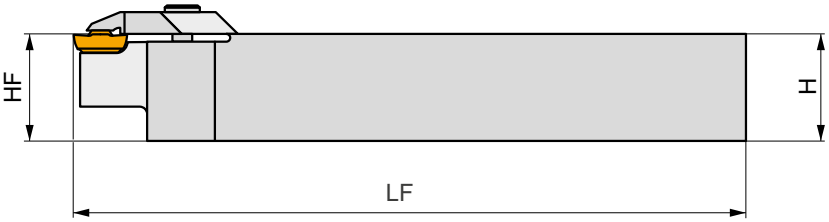
PRAMET G



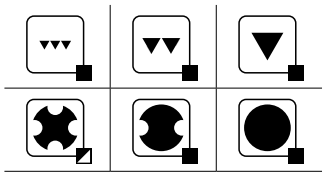
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 04

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM. 0413 ou 0416 de uma ou duas faces. Adequado para abertura axial de ranhuras profundas, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade máxima de corte de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GFMR 2525 M 0413R 030017	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFMR 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFMR 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.64	GI170	GL07
	GFMR 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.63	GI170	GL07
	GFMR 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.64	GI170	GL07
	GFMR 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.67	GI170	GL07
	GFMR 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.67	GI137	GL07
	GFMR 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.66	GI137	GL07
	GFMR 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFMR 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.68	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GGI(RL)-90 AXIAL

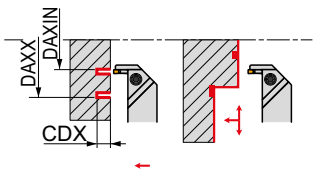
P M K N S H

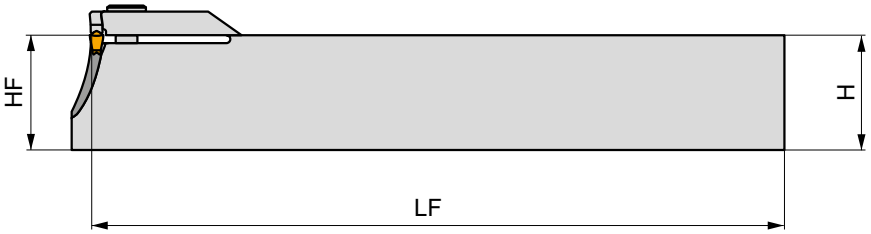
PRAMET G

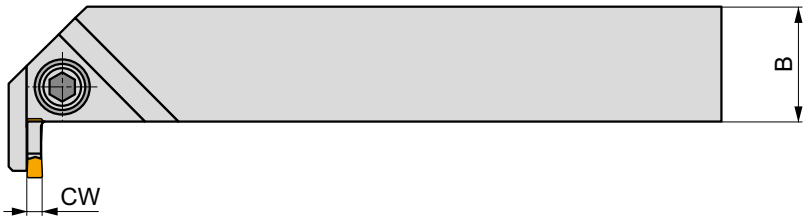


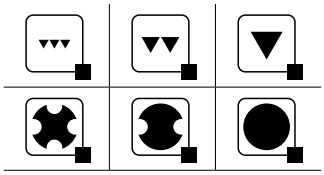
Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V' de 90 °, p/ Pastilhas LCM. 03

Porta-ferramentas de exterior a 90° à direita ou à esquerda para abertura frontal de ranhuras com pastilhas LCM 0313 ou 0316 de uma ou duas faces. Adequado para aplicações de ranhurar axial, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø170 mm, com profundidade máxima de corte de 11 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











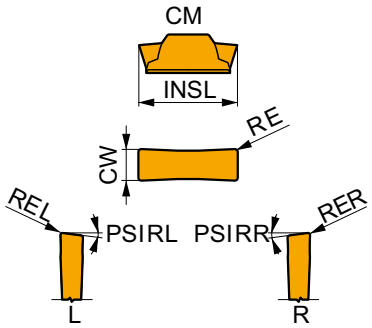
	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GGIR 2525 M 03R 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIR 2525 M 03R 039024	25	25	25	150	3.00	9.5	24	39	0.78	GI143	GL01
	GGIR 2525 M 03R 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIR 2525 M 03R 060043	25	25	25	150	3.00	11	43	60	0.78	GI143	GL01
	GGIR 2525 M 03R 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIR 2525 M 03R 100070	25	25	25	150	3.00	9	70	100	0.78	GI136	GL04
	GGIR 2525 M 03R 130090	25	25	25	150	3.00	9	90	130	0.73	GI136	GL04
	GGIR 2525 M 03R 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04
L	GGIL 2525 M 03L 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIL 2525 M 03L 039024	25	25	25	150	3.00	9.5	24	39	0.25	GI143	GL01
	GGIL 2525 M 03L 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIL 2525 M 03L 060043	25	25	25	150	3.00	11	43	60	0.75	GI143	GL01
	GGIL 2525 M 03L 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIL 2525 M 03L 100070	25	25	25	150	3.00	9	70	100	0.77	GI136	GL04
	GGIL 2525 M 03L 130090	25	25	25	150	3.00	9	90	130	0.77	GI136	GL04
	GGIL 2525 M 03L 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04

GI136	LCM. 0316..
GI143	LCM. 0313..

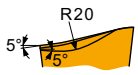
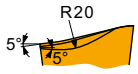
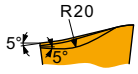
		Nm			
GL01	HS 0520C	5.0	M 5	20	HXK 4
GL04	HS 0620C	6.0	M 6	20	HXK 5

LCMF 16 - CM

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

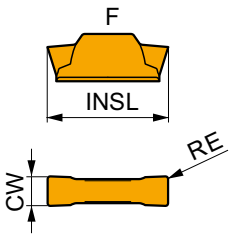
Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		(mm)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(°)	(°)
																
Geometria CM, primeira escolha para sangrar e ranhurar, e cortes contínuos a ligeiramente interrompidos.																
LCMF 031602-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 031604-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 041602-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 041604-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMF 051604-CM	**T8330**	0.4	130	0.11	75	0.11	120	0.11	–	–	–	–	–	–	–	–
LCMF 061604-CM	**T8330**	0.4	130	0.11	75	0.11	120	0.11	–	–	–	–	–	–	–	–
																
Geometria R-CM, desenho à direita, primeira escolha para sangrar, e cortes contínuos a ligeiramente interrompidos.																
LCMF 031602R15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	15	–
LCMF 031602R6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	6	–
LCMF 041602R15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	15	–
LCMF 041602R6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	6	–
																
Geometria L-CM, desenho à esquerda, primeira escolha para sangrar, e cortes contínuos a ligeiramente interrompidos.																
LCMF 031602L15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	15
LCMF 031602L6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	6
LCMF 041602L15-CM	**T8330**[1)]	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	15
LCMF 041602L6-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	6

[1)] Os porta-ferramentas devem ser modificados.

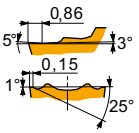
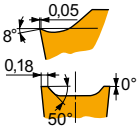
LCMF 16, LCMF 30 - F

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4
0830	8.00	-0.05	0.05	30.0



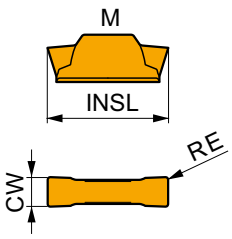
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
			  																	
			Geometria F para sangrar, ranhurar e torneamento axial, para operações de maquinação de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
LCMF 031602-F	**T8330**	0.2	■ 195	0.10	0.3	◪ 115	0.09	0.3	◪ 185	0.10	0.3	–	–	–	–	–	–	–	–	–
LCMF 031604-F	**T8330**	0.4	■ 200	0.10	0.5	◪ 120	0.09	0.5	◪ 190	0.10	0.5	–	–	–	–	–	–	–	–	–
LCMF 041604-F	**T8330**	0.4	■ 185	0.13	0.5	◪ 110	0.12	0.5	◪ 175	0.13	0.5	–	–	–	–	–	–	–	–	–
	T9325	0.4	■ 275	0.13	0.5	◪ 165	0.12	0.5	◪ 260	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMF 041608-F	**T8330**	0.8	■ 205	0.13	1.0	◪ 120	0.12	1.0	◪ 190	0.13	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 305	0.13	1.0	◪ 180	0.12	1.0	◪ 285	0.13	1.0	–	–	–	–	–	–	–	–	–
LCMF 051608-F	**T8330**	0.8	■ 195	0.15	1.0	◪ 115	0.14	1.0	◪ 185	0.15	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 285	0.15	1.0	◪ 170	0.14	1.0	◪ 270	0.15	1.0	–	–	–	–	–	–	–	–	–
LCMF 061608-F	**T8330**	0.8	■ 190	0.17	1.0	◪ 110	0.15	1.0	◪ 180	0.17	1.0	–	–	–	–	–	–	–	–	–
	T9325	0.8	■ 270	0.17	1.0	◪ 160	0.15	1.0	◪ 255	0.17	1.0	–	–	–	–	–	–	–	–	–
			 																	
			Geometria F para sangrar, ranhurar e torneamento axial, para operações de maquinação de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
LCMF 083008-F	**T8330**	0.8	■ 175	0.25	1.0	◪ 105	0.23	1.0	◪ 165	0.25	1.0	–	–	–	–	–	–	–	–	–
LCMF 083012-F	**T8330**	1.2	■ 170	0.25	1.5	◪ 100	0.23	1.5	◪ 160	0.25	1.5	–	–	–	–	–	–	–	–	–

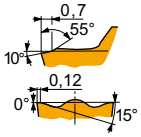
LCMF 16 - M

PRAMET

	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4



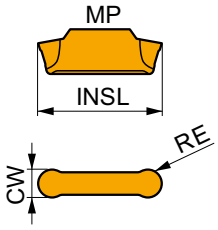
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria M para ranhurar e torneamento longitudinal, e cortes contínuos a interrompidos.																	
LCMF 031602-M	**T8330**	0.2	■ 160	0.13	1.0	◪ 95	0.12	1.0	■ 150	0.13	1.0	–	–	–	–	–	–	◪ 30	0.15	1.0
LCMF 031604-M	**T8330**	0.4	■ 170	0.13	1.0	◪ 100	0.12	1.0	■ 160	0.13	1.0	–	–	–	–	–	–	◪ 30	0.15	1.0
LCMF 041604-M	**T8330**	0.4	■ 155	0.18	1.0	◪ 90	0.16	1.0	■ 145	0.18	1.0	–	–	–	–	–	–	◪ 30	0.15	1.0
	T9325	0.4	■ 225	0.18	1.0	◪ 135	0.16	1.0	◪ 210	0.18	1.0	–	–	–	–	–	–	–	–	–
LCMF 041608-M	**T8330**	0.8	■ 185	0.18	1.0	◪ 110	0.16	1.0	■ 175	0.18	1.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 265	0.18	1.0	◪ 155	0.16	1.0	◪ 250	0.18	1.0	–	–	–	–	–	–	–	–	–
LCMF 051608-M	**T8330**	0.8	■ 180	0.20	1.0	◪ 105	0.18	1.0	■ 170	0.20	1.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 255	0.20	1.0	◪ 150	0.18	1.0	◪ 240	0.20	1.0	–	–	–	–	–	–	–	–	–
LCMF 061608-M	**T8330**	0.8	■ 175	0.25	1.0	◪ 105	0.23	1.0	■ 165	0.25	1.0	–	–	–	–	–	–	◪ 35	0.15	1.0
	T9325	0.8	■ 230	0.25	1.0	◪ 135	0.23	1.0	◪ 215	0.25	1.0	–	–	–	–	–	–	–	–	–

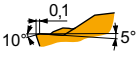
LCMF 16, LCMF 30 - MP

PRAMET

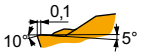
	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
0316	3.00	-0.05	0.05	17.5
0416	4.00	-0.05	0.05	17.6
0516	5.00	-0.05	0.05	18.3
0616	6.00	-0.05	0.05	18.5
0830	8.00	-0.05	0.05	30.9



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria MP para torneamento longitudinal e perfis em cópia, e cortes contínuos a interrompidos.																	
LCMF 0316MO-MP	**T8330**	1.5	■ 190	0.30	0.8	◪ 110	0.27	0.8	■ 180	0.30	0.8	–	–	–	–	–	–	–	–	–
LCMF 0416MO-MP	**T8330**	2.0	■ 175	0.40	1.0	◪ 105	0.36	1.0	■ 165	0.40	1.0	–	–	–	–	–	–	–	–	–
	T9325	2.0	■ 220	0.40	1.0	◪ 130	0.36	1.0	◪ 205	0.40	1.0	–	–	–	–	–	–	–	–	–
LCMF 0516MO-MP	**T8330**	2.5	■ 170	0.45	1.0	◪ 100	0.41	1.0	■ 160	0.45	1.0	–	–	–	–	–	–	–	–	–
	T9325	2.5	■ 205	0.45	1.0	◪ 120	0.41	1.0	◪ 190	0.45	1.0	–	–	–	–	–	–	–	–	–

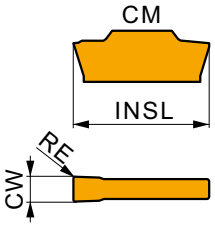
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
Geometria MP para torneamento longitudinal e perfis em cópia, e cortes contínuos a interrompidos.																				
LCMF 0616MO-MP	**T8330**	3.0	165	0.50	1.0	95	0.45	1.0	155	0.50	1.0	–	–	–	–	–	–	–	–	–
	T9325	3.0	200	0.50	1.0	120	0.45	1.0	190	0.50	1.0	–	–	–	–	–	–	–	–	–
LCMF 0830MO-MP	**T8330**	4.0	150	0.60	1.2	90	0.54	1.2	140	0.60	1.2	–	–	–	–	–	–	–	–	–

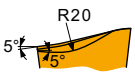
LCMR 16 - CM

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4



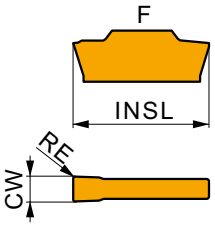
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		(mm)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(°)	(°)
																
Geometria CM, primeira escolha para sangrar e ranhurar, e cortes contínuos a ligeiramente interrompidos.																
LCMR 031602-CM	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LCMR 041604-CM	**T8330**	0.4	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–

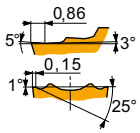
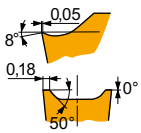
LCMR 16, LCMR 30 - F

PRAMET

	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4
0830	8.00	-0.05	0.05	30.0



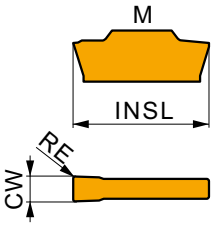
Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria F para sangrar, ranhurar e torneamento longitudinal, operações de maquinação de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
LCMR 031604-F	**T8330**	0.4	200	0.10	0.5	120	0.09	0.5	190	0.10	0.5	–	–	–	–	–	–	–	–	–
LCMR 041604-F	**T8330**	0.4	185	0.13	0.5	110	0.12	0.5	175	0.13	0.5	–	–	–	–	–	–	–	–	–
LCMR 051604-F	**T8330**	0.4	180	0.15	0.5	105	0.14	0.5	170	0.15	0.5	–	–	–	–	–	–	–	–	–
LCMR 061608-F	**T8330**	0.8	190	0.17	1.0	110	0.15	1.0	180	0.17	1.0	–	–	–	–	–	–	–	–	–
																				
			Geometria F para sangrar, ranhurar e torneamento longitudinal, operações de maquinação de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.																	
LCMR 083008-F	**T8330**	0.8	175	0.25	1.0	105	0.23	1.0	165	0.25	1.0	–	–	–	–	–	–	–	–	–

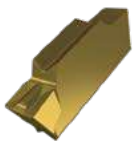
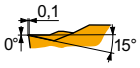
LCMR 16 - M

PRAMET

	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	INSL (mm)
0316	3.00	-0.05	0.05	16.4
0416	4.00	-0.05	0.05	16.4
0516	5.00	-0.05	0.05	16.4
0616	6.00	-0.05	0.05	16.4

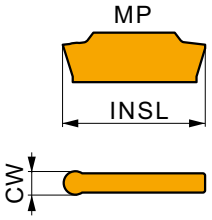


Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

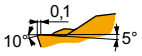
Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	P ap (mm)	M vc (m/min)	M f (mm/rev)	M ap (mm)	K vc (m/min)	K f (mm/rev)	K ap (mm)	N vc (m/min)	N f (mm/rev)	N ap (mm)	S vc (m/min)	S f (mm/rev)	S ap (mm)	H vc (m/min)	H f (mm/rev)	H ap (mm)
																				
			Geometria M para ranhurar e torneamento longitudinal, e cortes contínuos a interrompidos.																	
LCMR 031604-M	**T8330**	0.4	170	0.13	1.0	100	0.12	1.0	160	0.13	1.0	–	–	–	–	–	–	30	0.15	1.0
LCMR 041604-M	**T8330**	0.4	155	0.18	1.0	90	0.16	1.0	145	0.18	1.0	–	–	–	–	–	–	30	0.15	1.0
LCMR 051604-M	**T8330**	0.4	150	0.20	1.0	90	0.18	1.0	140	0.20	1.0	–	–	–	–	–	–	30	0.15	1.0
LCMR 061608-M	**T8330**	0.8	175	0.25	1.0	105	0.23	1.0	165	0.25	1.0	–	–	–	–	–	–	35	0.15	1.0

LCMR 16 - MP

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0316	3.00	-0.05	0.05	17.4
0416	4.00	-0.05	0.05	17.5
0516	5.00	-0.05	0.05	18.1
0616	6.00	-0.05	0.05	18.3



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
LCMR 0316M0-MP	**T8330**	1.5	■	190	0.30	0.8	◪	110	0.27	0.8	■	180	0.30	0.8	–	–	–	–	–	–	–	–	–	–
LCMR 0416M0-MP	**T8330**	2.0	■	175	0.40	1.0	◪	105	0.36	1.0	■	165	0.40	1.0	–	–	–	–	–	–	–	–	–	–
LCMR 0516M0-MP	**T8330**	2.5	■	170	0.45	1.0	◪	100	0.41	1.0	■	160	0.45	1.0	–	–	–	–	–	–	–	–	–	–
LCMR 0616M0-MP	**T8330**	3.0	■	165	0.50	1.0	◪	95	0.45	1.0	■	155	0.50	1.0	–	–	–	–	–	–	–	–	–	–

Geometria MP para torneamento longitudinal e perfis em cópia, e cortes contínuos a interrompidos.

GFI(RL) EXT

P M K N S H

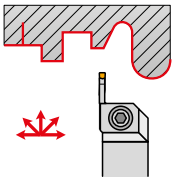
PRAMET

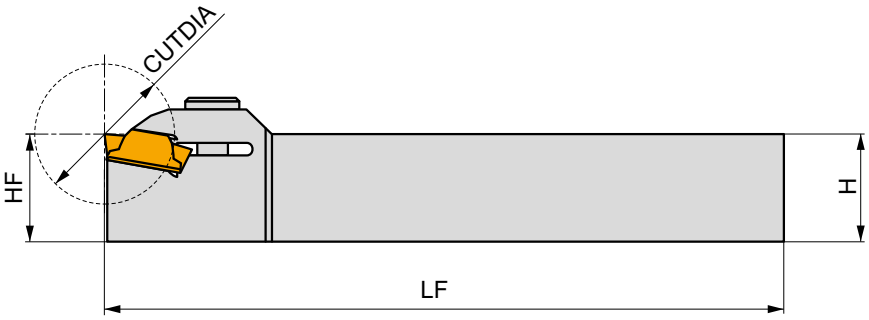
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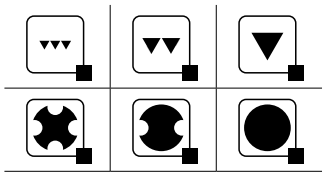


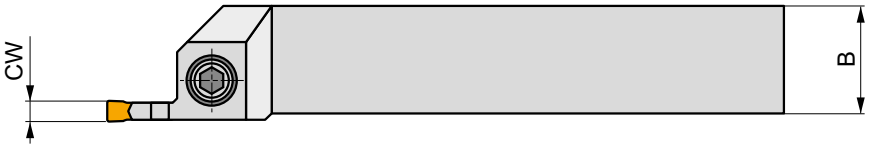
Ferramenta Exterior para Torneamento e Ranhurar, Fixação Superior e Ranhura em 'V', p/ Pastilhas LCM.

Porta-ferramentas de exterior à direita ou à esquerda para ranhurar com pastilhas LCM. 0316, 0416, 0516, 0616 e 0830. Adequado para aplicações de sangrar até ao máximo de Ø48 mm, perfilar e torneamento longitudinal. Disponível com hastes de tamanho 16x16 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CUTDIA (mm)	kg		
R	**GFIR 1616 H 03**	16	16	16	100	3.00	18	0.22	GI136	GL03
	GFIR 2020 K 03	20	20	20	125	3.00	18	0.40	GI136	GL04
	GFIR 2525 M 03	25	25	25	150	3.00	18	0.73	GI136	GL05
	GFIR 1616 H 04	16	16	16	100	4.00	24	0.22	GI137	GL03
	GFIR 2020 K 04	20	20	20	125	4.00	24	0.38	GI137	GL04
	GFIR 2525 M 04	25	25	25	150	4.00	24	0.67	GI137	GL05
	GFIR 2020 K 05	20	20	20	125	5.00	28	0.38	GI138	GL04
	GFIR 2525 M 05	25	25	25	150	5.00	28	0.70	GI138	GL05
	GFIR 2020 K 06	20	20	20	125	6.00	28	0.38	GI139	GL04
	GFIR 2525 M 06	25	25	25	150	6.00	28	0.70	GI139	GL05
	GFIR 2525 M 08	25	25	25	150	8.00	48	0.74	GI193	GL09
	GFIR 3225 P 08	32	32	25	170	8.00	48	1.03	GI193	GL09
L	**GFIL 1616 H 03**	16	16	16	100	3.00	18	0.22	GI136	GL03
	GFIL 2020 K 03	20	20	20	125	3.00	18	0.39	GI136	GL04
	GFIL 2525 M 03	25	25	25	150	3.00	18	0.73	GI136	GL05
	GFIL 1616 H 04	16	16	16	100	4.00	24	0.20	GI137	GL03
	GFIL 2020 K 04	20	20	20	125	4.00	24	0.38	GI137	GL04
	GFIL 2525 M 04	25	25	25	150	4.00	24	0.69	GI137	GL05
	GFIL 2020 K 05	20	20	20	125	5.00	28	0.38	GI138	GL04
	GFIL 2525 M 05	25	25	25	150	5.00	28	0.71	GI138	GL05
	GFIL 2020 K 06	20	20	20	125	6.00	28	0.40	GI139	GL04
	GFIL 2525 M 06	25	25	25	150	6.00	28	0.70	GI139	GL05
	GFIL 2525 M 08	25	25	25	150	8.00	48	0.75	GI193	GL09
	GFIL 3225 P 08	32	32	25	170	8.00	48	1.03	GI193	GL09

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..
GI193	LCM. 0830..

GL03	HS 0616C	6.0	M 6	16	HXK 5
GL04	HS 0620C	6.0	M 6	20	HXK 5
GL05	HS 0625C	6.0	M 6	25	HXK 5
GL09	HSI 1020	8.0	M 10	20	HXK 8

GFM(RL) EXT

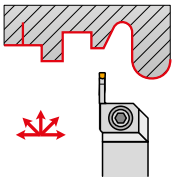
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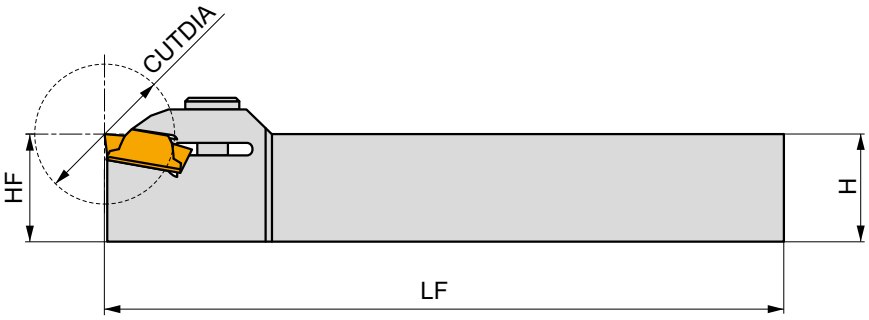
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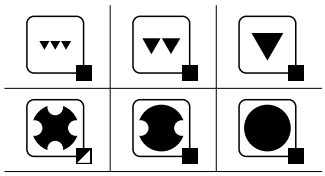


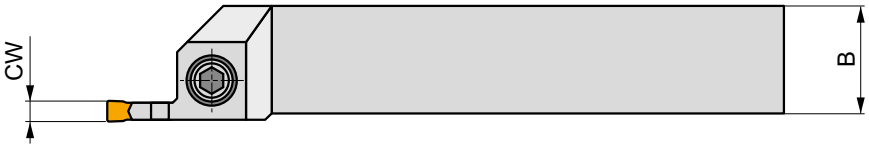
Ferramenta Exterior para Torneamento e Ranhurar, Fixação Superior e Ranhura em 'V', Pastilhas LCM.

Porta-ferramentas de exterior à direita ou à esquerda para ranhurar com pastilhas LCM. 0316, 0416, 0516, 0616 e 0830. Adequado para sangrar no máximo Ø30 a Ø80 mm, perfilamento e torneamento longitudinal. Disponível com hastes de 20x20 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CUTDIA (mm)	kg		
R	**GFMR 2020 K 0316**	20	20	20	125	3.00	30	0.37	GI136	GL04
	GFMR 2525 M 0316	25	25	25	150	3.00	30	0.68	GI136	GL04
	GFMR 2020 K 0416	20	20	20	125	4.00	40	0.38	GI137	GL04
	GFMR 2525 M 0416	25	25	25	150	4.00	40	0.68	GI137	GL04
	GFMR 2525 M 0516	25	25	25	150	5.00	50	0.67	GI138	GL04
	GFMR 3225 P 0516	32	32	25	170	5.00	50	0.97	GI138	GL04
	GFMR 2525 M 0616	25	25	25	150	6.00	60	0.66	GI139	GL04
	GFMR 3225 P 0616	32	32	25	170	6.00	60	0.97	GI139	GL04
	GFMR 3225 P 0830	32	32	25	170	8.00	80	0.97	GI193	GL10
L	**GFML 2020 K 0316**	20	20	20	125	3.00	30	0.24	GI136	GL04
	GFML 2525 M 0316	25	25	25	150	3.00	30	0.70	GI136	GL04
	GFML 2020 K 0416	20	20	20	125	4.00	40	0.37	GI137	GL04
	GFML 2525 M 0416	25	25	25	150	4.00	40	0.69	GI137	GL04
	GFML 2525 M 0516	25	25	25	150	5.00	50	0.64	GI138	GL04
	GFML 3225 P 0516	32	32	25	170	5.00	50	0.97	GI138	GL04
	GFML 2525 M 0616	25	25	25	150	6.00	60	0.64	GI139	GL04
	GFML 3225 P 0616	32	32	25	170	6.00	60	0.95	GI139	GL04
	GFML 3225 P 0830	32	32	25	170	8.00	80	0.99	GI193	GL10

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..
GI193	LCM. 0830..

		Nm			
GL04	HS 0620C	6.0	M 6	20	HXK 5
GL10	HSI 1020	8.0	M 10	20	HXK 8

XLCCN B

P M K N S H

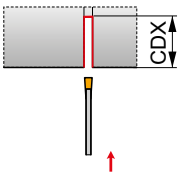
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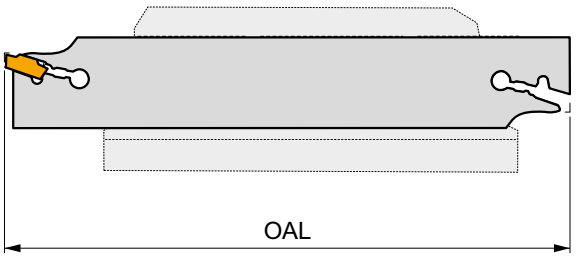
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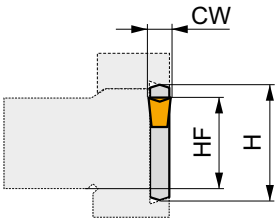


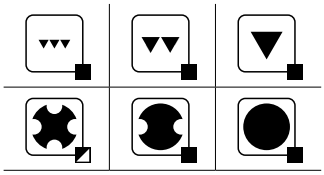
Lâmina de Sangrar de Ponta Dupla para Pastilhas LCM

Lâmina para aplicações de corte até 60 mm de profundidade máxima ou barra de Ø120 mm. Adequado para pastilhas LCM de face simples ou dupla face. Disponível nas alturas de 26 ou 32 mm. Pode ser montada nos suportes básicos DU da Pramet. Lâmina tratada para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	LF (mm)	CW (mm)	CDX (mm)	kg		
N	**XLCCN 2602 J 0316**	21.4	26	110	3.00	35	0.09	GI136	KV1
	XLCCN 3202 M 0316	25	32	150	3.00	50	0.13	GI136	KV1
	XLCCN 3203 M 0416	25	32	150	4.00	50	0.15	GI137	KV1
	XLCCN 3204 M 0516	25	32	150	5.00	60	0.18	GI138	KV1
	XLCCN 3205 M 0616	25	32	150	6.00	60	0.17	GI139	KV1

GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..

KV1	KV 5x100

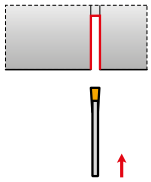
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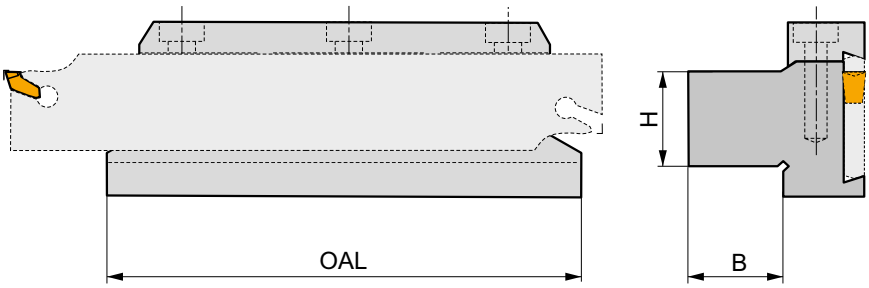
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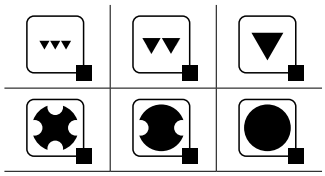


Bloco Porta Lâminas para Lâminas de Sangrar

Porta-ferramentas adequado para lâminas de sangrar GL ou XLC. Disponível com hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







Produto	H (mm)	B (mm)	OAL (mm)	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

XLCCN 25 BS

P M K N S H

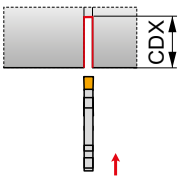
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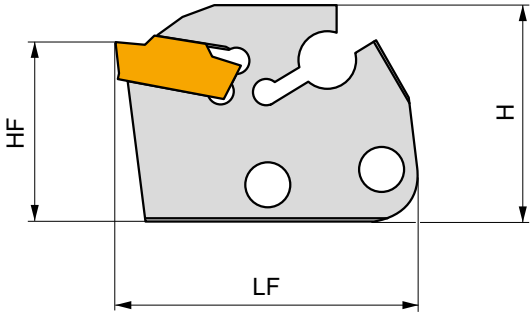
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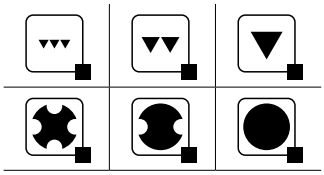


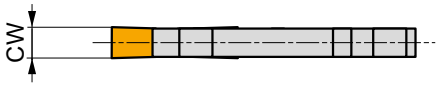
Lâmina de Ranhurar Radial para Porta-Ferramentas Modular MS-EN, para Pastilhas LCM.

Lâmina modular para ranhurar com pastilhas LCM 0316, 0416, 0516 ou 0616 de uma ou duas faces. Adequado para aplicações de ranhurar ou sangrar até um máximo de 25 mm de profundidade de corte. Pode ser montada em porta-ferramentas MS-EN. Lâminas tratadas para maior tempo de vida útil da ferramenta.











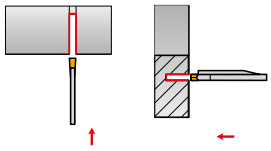
	Produto	HF (mm)	H (mm)	LF (mm)	CW (mm)	CDX (mm)	kg		
N	**XLCCN 250215-0316**	24	29	40	3.00	15	0.01	GI136	–
	XLCCN 250225-0316	24	29	50	3.00	25	0.02	GI136	–
	XLCCN 250315-0416	24	29	40	4.00	15	0.04	GI137	–
	XLCCN 250325-0416	24	29	50	4.00	25	0.04	GI137	–
	XLCCN 250425-0516	24	29	50	5.00	25	0.03	GI138	–
	XLCCN 250525-0616	24	29	50	6.00	25	0.04	GI139	–

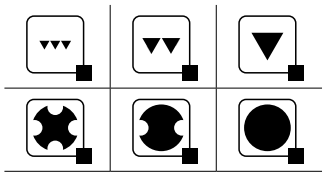
GI136	LCM. 0316..
GI137	LCM. 0416..
GI138	LCM. 0516..
GI139	LCM. 0616..

MS-EN

PRAMET

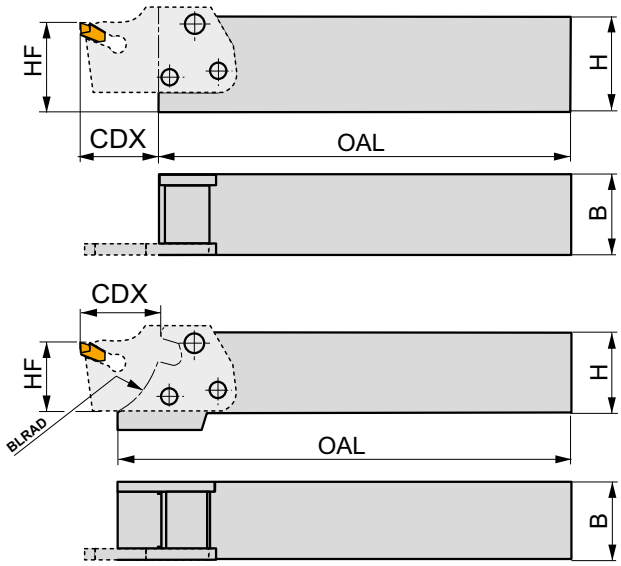






Porta-Ferramentas Modular para Lâminas de Ranhurar XLCCN, XLCF(NRL) ou XLXFL

Porta-ferramentas modular para lâminas de ranhurar XLC 25 BS, XLCF (NRL) BS, ou lâmina de ranhurar frontal XLXFL BS. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.



	Produto	HF (mm)	H (mm)	B (mm)	OAL (mm)	CDX (mm)	BLRAD (mm)	kg		
	MS-EN-1212 F	12	12	12	75	15	–	0.13	GI006	ND4
	MS-EN-1616 H	16	16	16	90	15	–	0.21	GI006	ND4
	MS-EN-2020 K	20	20	20	115	15	–	0.23	GI003	ND5
	MS-EN-2020 KS	20	20	20	129	15	25	0.42	GI060	ND5
	MS-EN-2525 M	25	25	25	140	15	–	0.65	GI003	ND5
	MS-EN-2525 MS	25	25	25	153	15	25	0.74	GI060	ND5
	MS-EN-3225 P	32	32	25	160	15	–	0.95	GI003	ND5
	MS-EN-3225 PS	32	32	25	174	15	25	1.00	GI060	ND5

GI003	XLC.. 25..15...	XLXFL 25…	XLC.. 25..25…
GI006	XLCF. 16..15…	XLCF. 16..20…	–
GI060	XLC.. 25..15…	XLC.. 25..25…	–

		Nm				Nm			
ND4	US 4011-T15P	3.5	M 4	10.6	–	–	–	–	FLAG T15P
ND5	US 45013-T20P	5.0	M 5	13	US 46017-T20P	5.0	M6	17	FLAG T15P

ND4 =3 x US 4011-T15P; ND5=2 x US 45013-T20P

GFIL-L AXIAL

P M K N S H

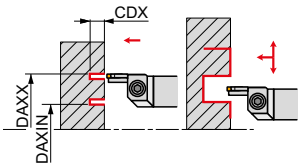
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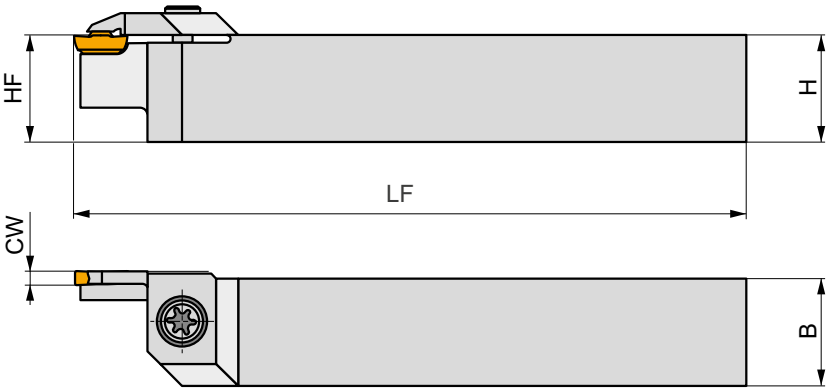
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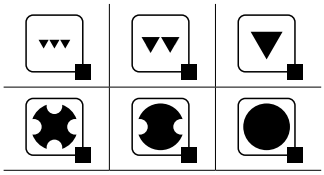


Ferramenta Exterior de Ranhurar Axial, com Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 03

Porta-Ferramentas de exterior esquerdo para abertura de ranhuras com pastilhas LCM 0313 ou 0316 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø170 mm, com profundidade de corte máxima de 9 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN	DAXX (mm)	kg		
L	**GFIL 2525 M 0313L 030017**	25	25	25	150	3.00	9	17	30	0.64	GI143	GL02
	GFIL 2525 M 0313L 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIL 2525 M 0313L 050033	25	25	25	150	3.00	9	33	50	0.67	GI143	GL07
	GFIL 2525 M 0313L 060043	25	25	25	150	3.00	9	43	60	0.67	GI143	GL07
	GFIL 2525 M 0313L 076053	25	25	25	150	3.00	9	53	76	0.67	GI143	GL07
	GFIL 2525 M 0316L 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIL 2525 M 0316L 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIL 2525 M 0316L 170110	25	25	25	150	3.00	9	110	170	0.71	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFIL-R AXIAL

P M K N S H

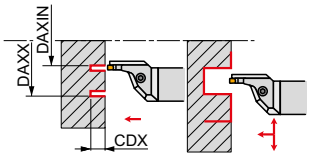
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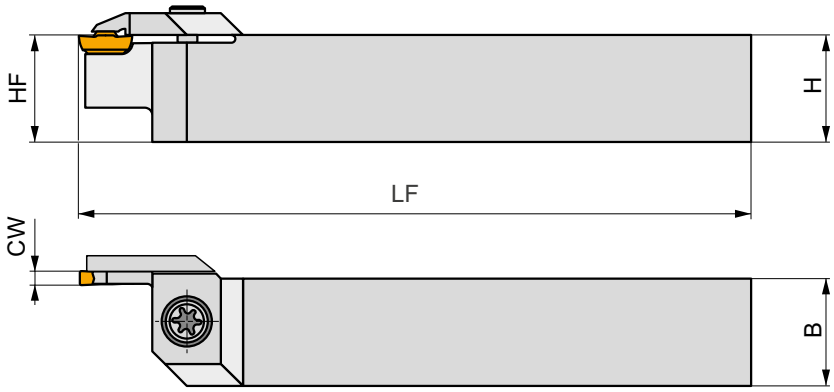
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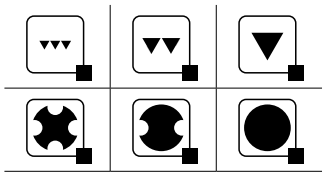


Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 03 ou 04

Porta-Ferramentas de exterior esquerdo para abertura axial de ranhuras com pastilhas LCM 0313, 0316, 0413 ou 0416 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade de corte máxima de 12 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN	DAXX (mm)	kg		
L	GFIL 2525 M 03R 030017-A	25	25	25	150	3.00	9	17	30	0.69	GI143	GL07
	GFIL 2525 M 03R 039024-A	25	25	25	150	3.00	9	24	39	0.69	GI143	GL07
	GFIL 2525 M 03R 050033-A	25	25	25	150	3.00	9	33	50	0.72	GI143	GL07
	GFIL 2525 M 03R 060043-A	25	25	25	150	3.00	9	43	60	0.69	GI143	GL07
	GFIL 2525 M 03R 076053-A	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIL 2525 M 03R 100070-A	25	25	25	150	3.00	9	70	100	0.79	GI136	GL08
	GFIL 2525 M 03R 130090-A	25	25	25	150	3.00	9	90	130	0.73	GI136	GL08
	GFIL 2525 M 03R 170110-A	25	25	25	150	3.00	9	110	170	0.76	GI136	GL08
	GFIL 2525 M 04R 030017-A	25	25	25	150	3.00	9	17	30	0.71	GI170	GL07
	GFIL 2525 M 04R 034021-A	25	25	25	150	4.00	9	21	34	0.69	GI170	GL07
	GFIL 2525 M 04R 040026-A	25	25	25	150	4.00	11	26	40	0.00	GI170	GL07
	GFIL 2525 M 04R 050032-A	25	25	25	150	4.00	11	32	50	0.68	GI170	GL07
	GFIL 2525 M 04R 060042-A	25	25	25	150	4.00	11	42	60	0.66	GI170	GL07
	GFIL 2525 M 04R 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIL 2525 M 04R 100070-A	25	25	25	150	4.00	12	70	100	0.75	GI137	GL08
	GFIL 2525 M 04R 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
	GFIL 2525 M 04R 170110-A	25	25	25	150	4.00	12	110	170	0.75	GI137	GL08
	GFIL 2525 M 04R 230140-A	25	25	25	150	4.00	12	140	230	0.78	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-L AXIAL

P M K N S H

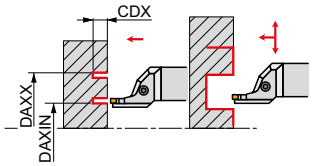
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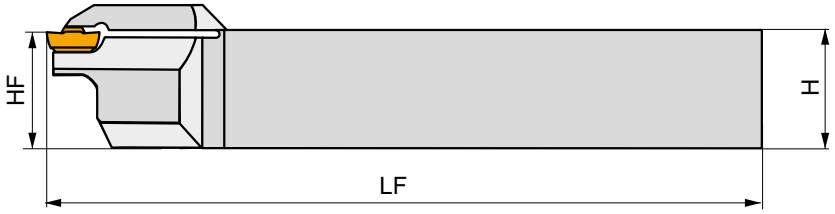
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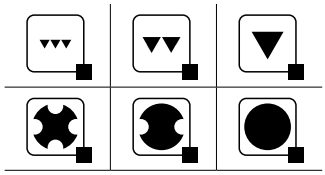
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 03 ou 04

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM . 313, 0316, 0413 ou 0416 de uma ou duas faces. Adequado para operações de ranhurar axial, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade máxima de corte de 12 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GFIR 2525 M 03L 030017-A	25	25	25	150	3.00	9	17	30	0.65	GI143	GL07
	GFIR 2525 M 03L 039024-A	25	25	25	150	3.00	9	24	39	0.68	GI143	GL07
	GFIR 2525 M 03L 050033-A	25	25	25	150	3.00	9	33	50	0.65	GI143	GL07
	GFIR 2525 M 03L 060043-A	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 03L 076053-A	25	25	25	150	3.00	9	53	76	0.69	GI143	GL07
	GFIR 2525 M 03L 100070-A	25	25	25	150	3.00	9	70	100	0.75	GI136	GL08
	GFIR 2525 M 03L 130090-A	25	25	25	150	3.00	9	90	130	0.76	GI136	GL08
	GFIR 2525 M 03L 170110-A	25	25	25	150	3.00	9	110	170	0.68	GI136	GL08
	GFIR 2525 M 04L 030017-A	25	25	25	150	3.00	9	17	30	0.68	GI170	GL07
	GFIR 2525 M 04L 034021-A	25	25	25	150	4.00	9	21	34	0.68	GI170	GL07
	GFIR 2525 M 04L 040026-A	25	25	25	150	4.00	11	26	40	0.68	GI170	GL07
	GFIR 2525 M 04L 050032-A	25	25	25	150	4.00	11	32	50	0.66	GI170	GL07
	GFIR 2525 M 04L 060042-A	25	25	25	150	4.00	11	42	60	0.69	GI170	GL07
	GFIR 2525 M 04L 075052-A	25	25	25	150	4.00	11	52	75	0.67	GI170	GL07
	GFIR 2525 M 04L 100070-A	25	25	25	150	4.00	12	70	100	0.72	GI137	GL08
	GFIR 2525 M 04L 130090-A	25	25	25	150	4.00	12	90	130	0.75	GI137	GL08
	GFIR 2525 M 04L 170110-A	25	25	25	150	4.00	12	110	170	0.72	GI137	GL08
	GFIR 2525 M 04L 230140-A	25	25	25	150	4.00	12	140	230	0.79	GI137	GL08

GI136	LCM. 0316..
GI137	LCM. 0416..
GI143	LCM. 0313..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFIR-R AXIAL

P M K N S H

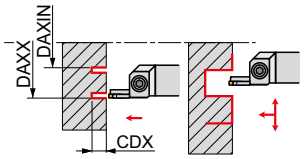
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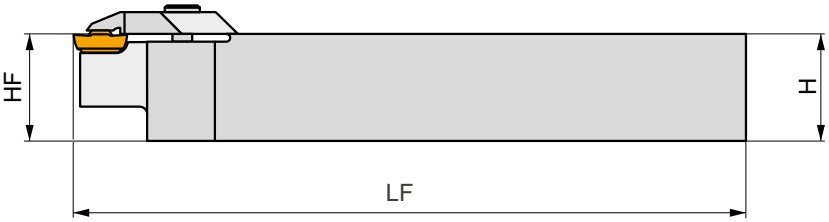
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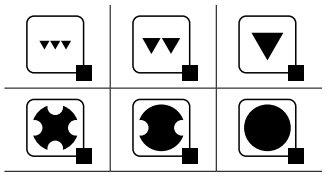
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 03

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM. 0313 ou 0316 de uma ou duas faces. Adequado para aplicações de ranhurar axial, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø170 mm, com profundidade máxima de corte de 9 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	**GFIR 2525 M 0313R 030017**	25	25	25	150	3.00	9	17	30	0.65	GI143	GL02
	GFIR 2525 M 0313R 039024	25	25	25	150	3.00	9	24	39	0.66	GI143	GL07
	GFIR 2525 M 0313R 050033	25	25	25	150	3.00	9	33	50	0.68	GI143	GL07
	GFIR 2525 M 0313R 060043	25	25	25	150	3.00	9	43	60	0.68	GI143	GL07
	GFIR 2525 M 0313R 076053	25	25	25	150	3.00	9	53	76	0.68	GI143	GL07
	GFIR 2525 M 0316R 100070	25	25	25	150	3.00	9	70	100	0.69	GI136	GL07
	GFIR 2525 M 0316R 130090	25	25	25	150	3.00	9	90	130	0.70	GI136	GL07
	GFIR 2525 M 0316R 170110	25	25	25	150	3.00	9	110	170	0.70	GI136	GL07

GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-L AXIAL

P M K N S H

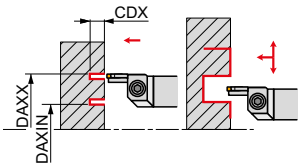
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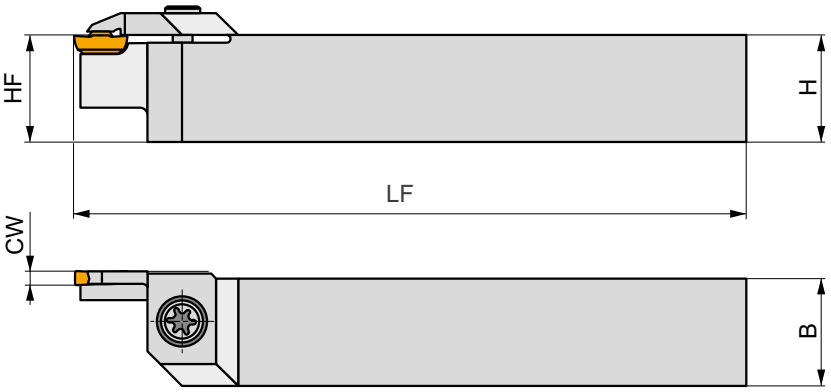
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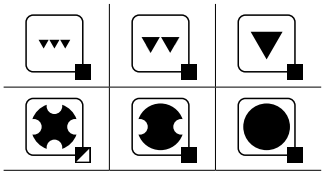


Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 04

Porta-Ferramentas de exterior esquerdo para abertura axial de ranhuras com pastilhas LCM 0413 ou 0416 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade de corte máxima de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	**GFML 2525 M 0413L 030017**	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFML 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFML 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.65	GI170	GL07
	GFML 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.64	GI170	GL07
	GFML 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.65	GI170	GL07
	GFML 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.66	GI170	GL07
	GFML 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.66	GI137	GL07
	GFML 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.67	GI137	GL07
	GFML 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFML 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.67	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GFML-R AXIAL

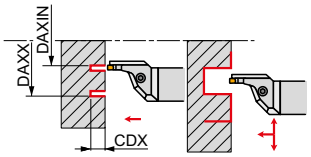
P M K N S H

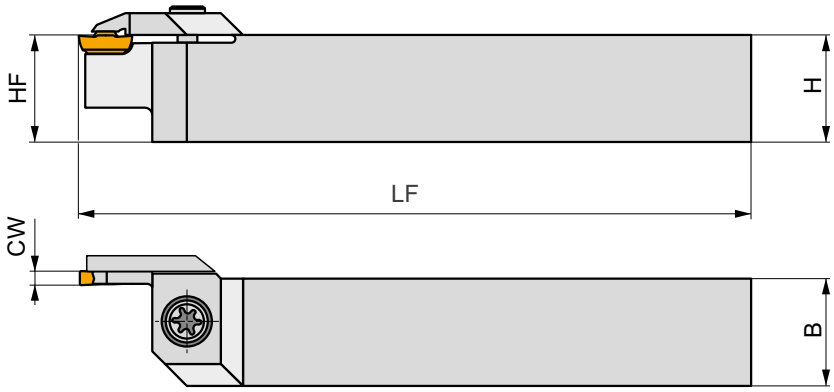
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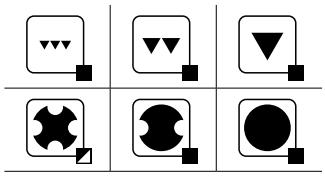


Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V', para Pastilhas LCM. 04

Porta-Ferramentas de exterior esquerdo para abertura axial de ranhuras com pastilhas LCM 0413 ou 0416 de uma ou duas faces. Adequado para aplicações de abertura axial de ranhuras , perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade de corte máxima de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	GFML 2525 M 0413R 030017	25	25	25	150	4.00	20	17	30	0.68	GI170	GL07
	GFML 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.69	GI170	GL07
	GFML 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.69	GI170	GL07
	GFML 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFML 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.69	GI170	GL07
	GFML 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFML 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.80	GI137	GL08
	GFML 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFML 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.78	GI137	GL08
	GFML 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFMR-L AXIAL

P M K N S H

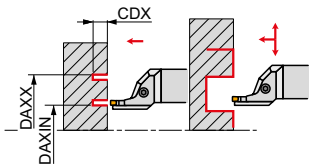
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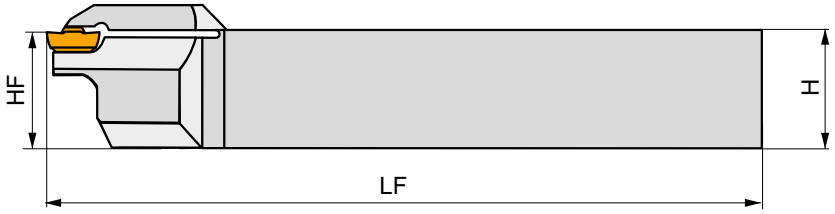
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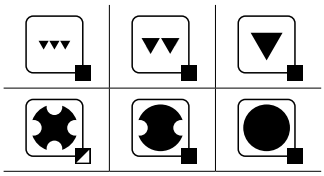
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 04

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM. 0413 ou 0416 de uma ou duas faces. Adequado para abertura axial de ranhuras profundas, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade máxima de corte de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	**GFMR 2525 M 0413L 030017**	25	25	25	150	4.00	20	17	30	0.70	GI170	GL07
	GFMR 2525 M 0413L 034021	25	25	25	150	4.00	20	21	34	0.66	GI170	GL07
	GFMR 2525 M 0413L 040026	25	25	25	150	4.00	20	26	40	0.66	GI170	GL07
	GFMR 2525 M 0413L 050032	25	25	25	150	4.00	20	32	50	0.68	GI170	GL07
	GFMR 2525 M 0413L 060042	25	25	25	150	4.00	20	42	60	0.66	GI170	GL07
	GFMR 2525 M 0413L 075052	25	25	25	150	4.00	20	52	75	0.69	GI170	GL07
	GFMR 2525 M 0416L 100070	25	25	25	150	4.00	20	70	100	0.88	GI137	GL08
	GFMR 2525 M 0416L 130090	25	25	25	150	4.00	20	90	130	0.78	GI137	GL08
	GFMR 2525 M 0416L 170110	25	25	25	150	4.00	20	110	170	0.81	GI137	GL08
	GFMR 2525 M 0416L 230140	25	25	25	150	4.00	20	140	230	0.78	GI137	GL08

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm				
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P	–
GL08	US 6020-T25P	6.0	M 6	20.2	–	SDR T25P

GFMR-R AXIAL

P M K N S H

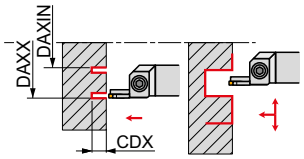
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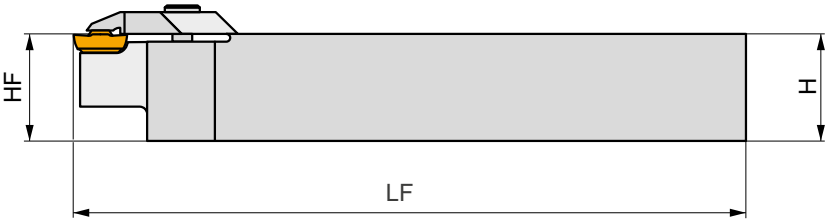
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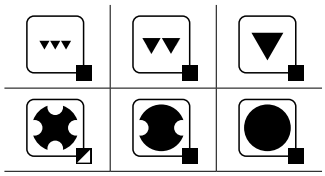
Ferramenta Exterior para Ranhurar, Fixação Superior e Ranhura em 'V' para Pastilhas LCM. 04

Porta-ferramentas de exterior direito para abertura frontal de ranhuras com pastilhas LCM. 0413 ou 0416 de uma ou duas faces. Adequado para abertura axial de ranhuras profundas, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø230 mm, com profundidade máxima de corte de 20 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GFMR 2525 M 0413R 030017	25	25	25	150	4.00	20	17	30	0.62	GI170	GL02
	GFMR 2525 M 0413R 034021	25	25	25	150	4.00	20	21	34	0.63	GI170	GL07
	GFMR 2525 M 0413R 040026	25	25	25	150	4.00	20	26	40	0.64	GI170	GL07
	GFMR 2525 M 0413R 050032	25	25	25	150	4.00	20	32	50	0.63	GI170	GL07
	GFMR 2525 M 0413R 060042	25	25	25	150	4.00	20	42	60	0.64	GI170	GL07
	GFMR 2525 M 0413R 075052	25	25	25	150	4.00	20	52	75	0.67	GI170	GL07
	GFMR 2525 M 0416R 100070	25	25	25	150	4.00	20	70	100	0.67	GI137	GL07
	GFMR 2525 M 0416R 130090	25	25	25	150	4.00	20	90	130	0.66	GI137	GL07
	GFMR 2525 M 0416R 170110	25	25	25	150	4.00	20	110	170	0.67	GI137	GL07
	GFMR 2525 M 0416R 230140	25	25	25	150	4.00	20	140	230	0.68	GI137	GL07

GI137	LCM. 0416..
GI170	LCM. 0413..

		Nm			
GL02	US 5015-T20P	5.0	M 5	15	FLAG T20P
GL07	US 5018-T20P	5.0	M 5	18.2	FLAG T20P

GGI(RL)-90 AXIAL

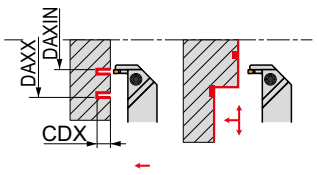
P M K N S H

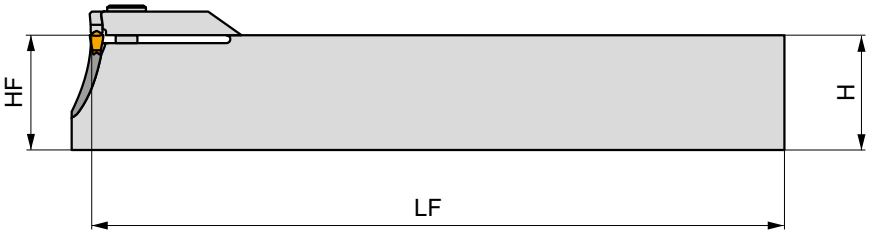
PRAMET G

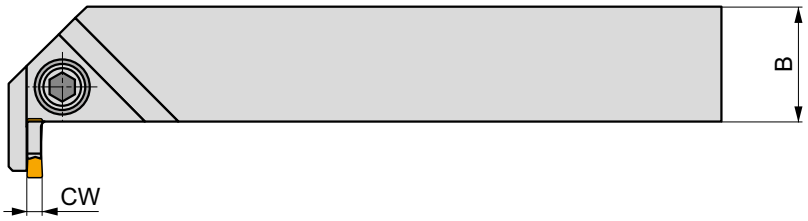


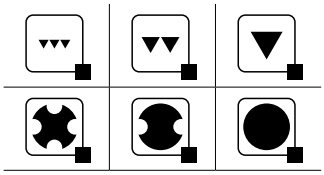
Ferramenta Exterior de Ranhurar Axial, Fixação Superior e Ranhura em 'V' de 90 °, p/ Pastilhas LCM. 03

Porta-ferramentas de exterior a 90° à direita ou à esquerda para abertura frontal de ranhuras com pastilhas LCM 0313 ou 0316 de uma ou duas faces. Adequado para aplicações de ranhurar axial, perfilamento axial ou alargamento de ranhuras de Ø17 até Ø170 mm, com profundidade máxima de corte de 11 mm. Disponível com haste de 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
R	GGIR 2525 M 03R 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIR 2525 M 03R 039024	25	25	25	150	3.00	9.5	24	39	0.78	GI143	GL01
	GGIR 2525 M 03R 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIR 2525 M 03R 060043	25	25	25	150	3.00	11	43	60	0.78	GI143	GL01
	GGIR 2525 M 03R 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIR 2525 M 03R 100070	25	25	25	150	3.00	9	70	100	0.78	GI136	GL04
	GGIR 2525 M 03R 130090	25	25	25	150	3.00	9	90	130	0.73	GI136	GL04
	GGIR 2525 M 03R 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04
L	GGIL 2525 M 03L 030017	25	25	25	150	3.00	9.5	17	30	0.75	GI143	GL01
	GGIL 2525 M 03L 039024	25	25	25	150	3.00	9.5	24	39	0.25	GI143	GL01
	GGIL 2525 M 03L 050033	25	25	25	150	3.00	11	33	50	0.75	GI143	GL01
	GGIL 2525 M 03L 060043	25	25	25	150	3.00	11	43	60	0.75	GI143	GL01
	GGIL 2525 M 03L 076053	25	25	25	150	3.00	11	53	76	0.75	GI143	GL01
	GGIL 2525 M 03L 100070	25	25	25	150	3.00	9	70	100	0.77	GI136	GL04
	GGIL 2525 M 03L 130090	25	25	25	150	3.00	9	90	130	0.77	GI136	GL04
	GGIL 2525 M 03L 170110	25	25	25	150	3.00	9	110	170	0.76	GI136	GL04

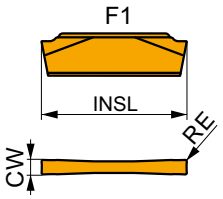
GI136	LCM. 0316..
GI143	LCM. 0313..

		Nm			
GL01	HS 0520C	5.0	M 5	20	HXK 4
GL04	HS 0620C	6.0	M 6	20	HXK 5

LCMF 20 - F1

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0220	2.00	-0.03	0.03	19.5



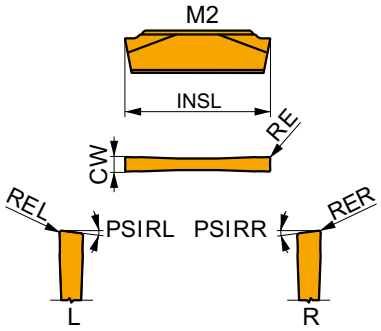
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		(mm)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(°)	(°)
	0,1 0° 12° 0,1 0° 5°															
			Geometria F1 para sangrar e ranhurar, operações de maquinação de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.													
LCMF 022002-F1	**T8330**	0.2	205	0.09	120	0.08	190	0.09	–	–	–	–	–	–	–	–

LCMF 20 - M2

PRAMET

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0220	2.00	-0.03	0.03	19.5

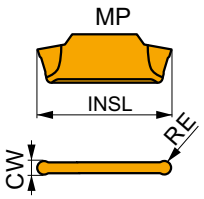


Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

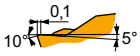
Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		(mm)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(°)	(°)
	0,05 8° 0,18 50° 0°															
			Geometria M2 para sangrar e ranhurar, operações de acabamento e acabamento fino, e cortes contínuos a ligeiramente interrompidos.													
LCMF 022002-M2	**T8330**	0.2	180	0.12	105	0.11	170	0.12	–	–	–	–	–	–	–	–
	0,05 8° 0,18 50° 0°															
			Geometria R-M2, com desenho à direita, para sangrar e cortes contínuos a ligeiramente interrompidos.													
LCMF 022002R6-M2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	6	–
	0,05 8° 0,18 50° 0°															
			Geometria L-M2, com desenho à esquerda, para sangrar e cortes contínuos a ligeiramente interrompidos.													
LCMF 022002L6-M2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	6

LCMF 20 - MP

	CW	CWTOLL	CWTOLU	INSL
	(mm)	(mm)	(mm)	(mm)
0220	2.00	-0.03	0.03	19.5



Recomendação e valores iniciais para velocidade de corte (vc), avanço (f) e profundidade de corte (ap). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
																				
			Geometria MP para torneamento longitudinal e perfis em cópia, operações de maquinação de acabamento e acabamento fino, e cortes contínuos a interrompidos.																	
LCMF 0220MO-MP	**T8330**	1.0	■ 200	0.30	0.5	◪ 120	0.27	0.5	■ 190	0.30	0.5	–	–	–	–	–	–	–	–	–

GFK(RL) EXT

P M K N S H

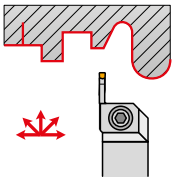
PRAMET

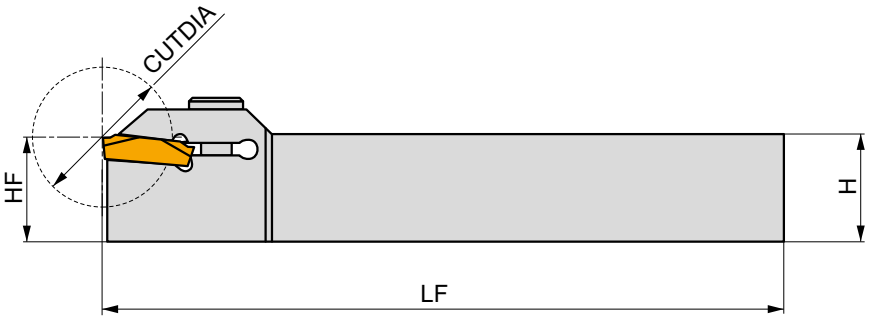
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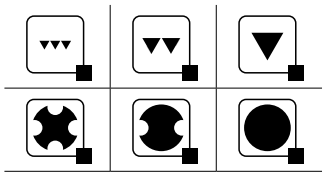


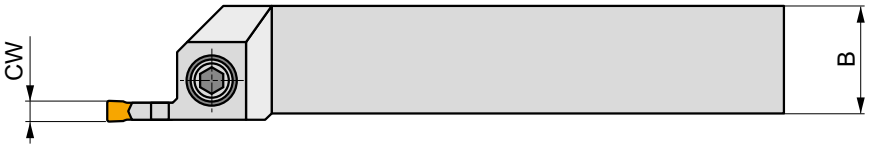
Ferramenta Exterior para Sangrar e Ranhurar, Fixação Superior e Ranhura em 'V', p/ Pastilhas LCMF 0220

Porta-ferramentas de exterior à direita ou à esquerda para ranhurar com pastilhas LCMF 0220. Adequado para aplicações de sangrar, ranhurar e perfilar até 16 mm de profundidade de corte máxima. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CUTDIA (mm)	kg		
R	**GFKR 1616 H 02**	16	16	16	100	2.00	32	0.20	GI168	GL03
	GFKR 2020 K 02	20	20	20	125	2.00	32	0.38	GI168	GL04
	GFKR 2525 M 02	25	25	25	150	2.00	32	0.68	GI168	GL05
L	**GFKL 1616 H 02**	16	16	16	100	2.00	32	0.20	GI168	GL03
	GFKL 2020 K 02	20	20	20	125	2.00	32	0.38	GI168	GL04
	GFKL 2525 M 02	25	25	25	150	2.00	32	0.68	GI168	GL05

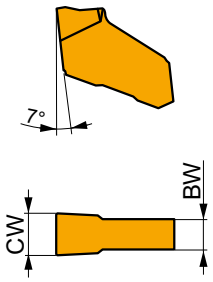
GI168	LCMF 0220..

		Nm			
GL03	HS 0616C	6.0	M 6	16	HXK 5
GL04	HS 0620C	6.0	M 6	20	HXK 5
GL05	HS 0625C	6.0	M 6	25	HXK 5

LFMX - F1

PRAMET

	CW	CWTOLL	CWTOLU	BW
	(mm)	(mm)	(mm)	(mm)
1.5	1.50	-0.03	0.03	1.30
1.6	1.60	-0.03	0.03	1.30
2.0	2.00	-0.03	0.03	1.60
3.1	3.10	-0.04	0.04	2.60
4.1	4.10	-0.04	0.04	3.60



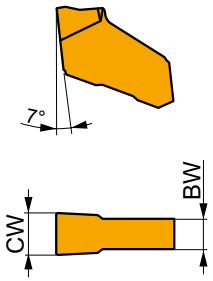
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		(mm)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(°)	(°)
			E													
			Geometria EN-F1 para sangrar e ranhurar, e cortes contínuos.													
LFMX 1.5-.16ENF1	**T8330**	0.2	130	0.08	75	0.07	120	0.08	–	–	–	–	–	–	–	–
LFMX 1.6-.16ENF1	**T8330**	0.2	130	0.08	75	0.07	120	0.08	–	–	–	–	–	–	–	–
LFMX 2.0-.16ENF1	**T8330**	0.2	130	0.08	75	0.07	120	0.08	–	–	–	–	–	–	–	–
LFMX 3.1-.20ENF1	**T8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 4.1-.20ENF1	**T8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–

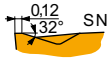
LFMX - F2

PRAMET

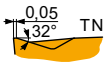
	CW	CWTOLL	CWTOLU	BW
	(mm)	(mm)	(mm)	(mm)
1.6	1.60	-0.03	0.03	1.30
2.0	2.00	-0.03	0.03	1.60
3.1	3.10	-0.04	0.04	2.60
4.1	4.10	-0.04	0.04	3.60
5.1	5.10	-0.04	0.04	4.60
6.35	6.35	-0.04	0.04	5.80



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc	f	vc	f	vc	f	vc	f	vc	f	vc	f		
		(mm)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(m/min)	(mm/rev)	(°)	(°)
			U	S												
			Geometria SN-F2 para sangrar e ranhurar, e cortes contínuos.													
LFMX 1.6-.16SNF2	**T8330**	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 2.0-.16SNF2	**6640**	0.2	150	0.10	90	0.09	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 3.1-.20SNF2	**6640**	0.2	150	0.10	90	0.09	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 4.1-.20SNF2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–
LFMX 5.1-.20SNF2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–
LFMX 6.35-.20SNF2	**T8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–

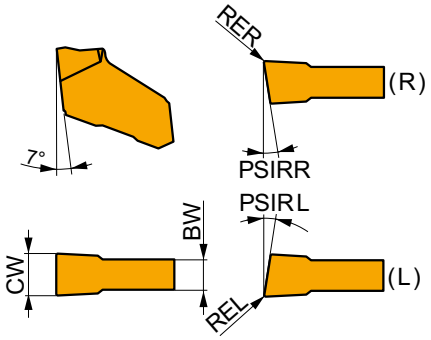
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
		(mm)														
			Geometria TN-F2 para sangrar e ranhurar, e cortes contínuos.													
LFMX 3.1-.20TNF2	**6640**	0.2	150	0.10	90	0.09	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	75	0.09	120	0.10	–	–	–	–	–	–	–	–
LFMX 4.1-.20TNF2	**T8330**	0.2	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	–	–

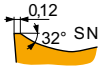
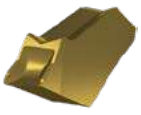
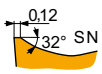
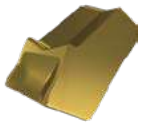
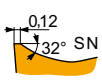
LFMX - M2

PRAMET

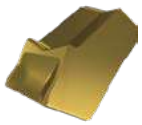
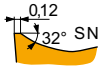
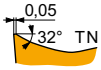
	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	BW (mm)
2.0	2.00	-0.03	0.03	1.60
2.2	2.20	-0.03	0.03	1.60
3.1	3.10	-0.04	0.04	2.60
4.1	4.10	-0.04	0.04	3.60
5.1	5.10	-0.04	0.04	4.60
6.35	6.35	-0.04	0.04	5.80



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
		(mm)														
			Geometria SN-M2 para sangrar ranhurar, e cortes contínuos a ligeiramente interrompidos.													
LFMX 2.0-.16SNM2	**6640**	0.2	150	0.11	90	0.10	140	0.11	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LFMX 2.2-.16SNM2	**6640**	0.2	150	0.11	90	0.10	140	0.11	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	–
LFMX 3.1-.20SNM2	**6640**	0.2	150	0.15	90	0.14	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–
LFMX 4.1-.20SNM2	**6640**	0.2	150	0.15	90	0.14	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–
LFMX 5.1-.20SNM2	**6640**	0.2	150	0.20	90	0.18	140	0.20	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.20	75	0.18	120	0.20	–	–	–	–	–	–	–	–
LFMX 6.35-.20SNM2	**6640**	0.2	150	0.20	90	0.18	140	0.20	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.20	75	0.18	120	0.20	–	–	–	–	–	–	–	–
																
			Geometria SR-M2, com desenho à direita, para sangrar, e cortes contínuos a ligeiramente interrompidos.													
LFMX 2.0-.16SR12M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	12	–
LFMX 2.0-.16SR6M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	6	–
LFMX 3.1-.20SR8M2	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	8	–
LFMX 4.1-.20SR8M2	**T8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	8	–
																
			Geometria SL-M2, com desenho à esquerda, para sangrar, e cortes contínuos a ligeiramente interrompidos.													
LFMX 2.0-.16SL12M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	–	12
LFMX 2.0-.16SL6M2	**T8330**	0.2	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	–	6

Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		PSIRR	PSIRL
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(°)	(°)
																
Geometria SL-M2, com desenho à esquerda, para sangrar, e cortes contínuos a ligeiramente interrompidos.																
LFMX 3.1-.20SL8M2	**T8330**	0.2	130	0.11	75	0.10	120	0.11	–	–	–	–	–	–	–	8
LFMX 4.1-.20SL8M2	**T8330**	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	8
																
Geometria TN-M2 para sangrar e ranhurar, e cortes contínuos a ligeiramente interrompidos.																
LFMX 3.1-.20TNM2	**6640**	0.2	150	0.15	90	0.14	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–
LFMX 4.1-.20TNM2	**6640**	0.2	150	0.15	90	0.14	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	75	0.14	120	0.15	–	–	–	–	–	–	–	–

XLCFN B

P M K N S H

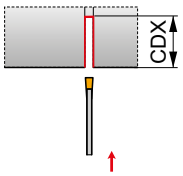
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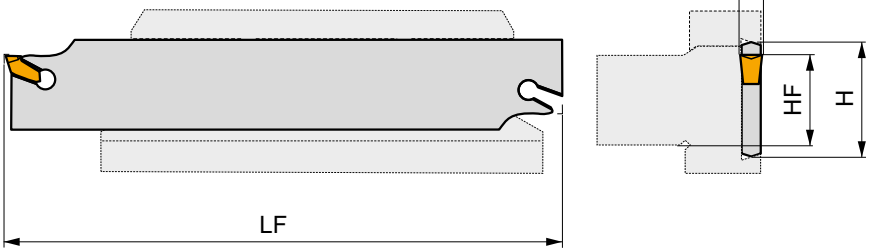
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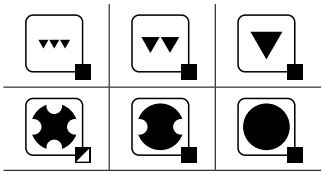


Lâmina de Sangrar de Ponta Dupla para Pastilhas LFMX

Lâmina para aplicações de corte até 80 mm de profundidade máxima ou barra de Ø160 mm. Adequado para pastilhas LFMX de uma face. Disponível nas alturas de 26, 32 ou 45 mm. Pode ser montada nos suportes básicos DU da Pramet. Lâmina tratada para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	LF (mm)	CW (mm)	CDX (mm)	kg		
N	**XLCFN 2601 J 1.60**	21.4	26	110	1.50	15	0.03	GI132	KV
	XLCFN 2601 J 2.00	21.4	26	110	2.00	25	0.04	GI061	KV
	XLCFN 2602 J 3.00	21.4	26	110	3.10	37.5	0.05	GI001	KV
	XLCFN 2603 J 4.00	21.4	26	110	4.10	40	0.06	GI002	KV
	XLCFN 3201 M 1.60	25	32	150	1.50	15	0.06	GI132	KV
	XLCFN 3201 M 2.00	25	32	150	2.00	25	0.11	GI061	KV
	XLCFN 3202 M 3.00	25	32	150	3.10	50	0.08	GI001	KV
	XLCFN 3203 M 4.00	25	32	150	4.10	50	0.11	GI002	KV
	XLCFN 3204 M 5.00	25	32	150	5.10	60	0.14	GI004	KV
	XLCFN 3205 M 6.35	25	32	150	6.35	60	0.17	GI005	KV
	XLCFN 4502 S 3.00	32	45	250	3.10	80	0.12	GI001	KV
	XLCFN 4503 S 4.00	32	45	250	4.10	80	0.19	GI002	KV
	XLCFN 4504 S 5.00	32	45	250	5.10	80	0.28	GI004	KV
	XLCFN 4505 S 6.35	32	45	250	6.35	80	0.40	GI005	KV

GI001	LFMX 3.1-.	–
GI002	LFMX 4.1-.	–
GI004	LFMX 5.1-.	–
GI005	LFMX 6.35-.	–
GI061	LFMX 2.0-.	LFMX 2.2-.
GI132	LFMX 1.5-.	LFMX 1.6-.

KV	KV 5x70

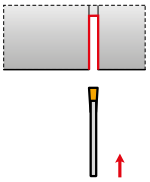
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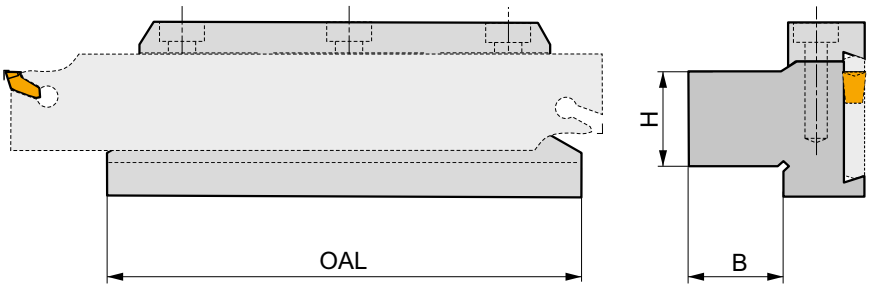
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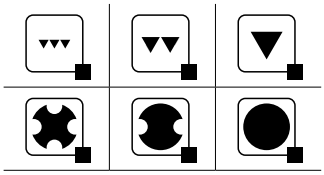


Bloco Porta Lâminas para Lâminas de Sangrar

Porta-ferramentas adequado para lâminas de sangrar GL ou XLC. Disponível com hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







Produto	H (mm)	B (mm)	OAL (mm)	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

XLCF(NRL) BS

P M K N S H

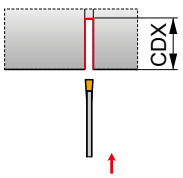
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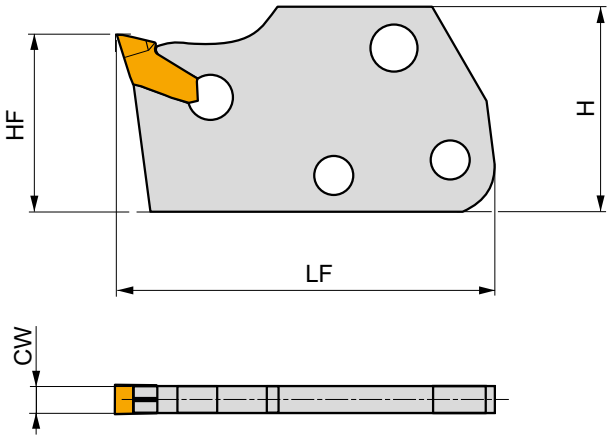
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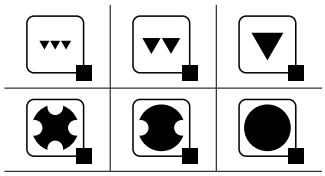


Lâmina de Ranhurar Radial para Porta-Ferramentas Modular MS-EN, para Pastilhas LFMX

Lâmina modular para ranhurar com pastilhas LFMX de uma face. Adequado para operações de ranhurar ou sangrar (profundidade de corte máx. 25 mm). Lâminas tratadas para maior tempo de vida útil da ferramenta.









	Produto	HF (mm)	H (mm)	LF (mm)	CW (mm)	CDX (mm)	kg		
R	XLCFR 160115-1.60	12	25	35	1.50	15	0.01	GI132	KV
	XLCFR 160115-2.00	12	25	35	2.00	15	0.01	GI061	KV
	XLCFR 250115-1.60	24	29	40	1.50	15	0.01	GI132	KV
	XLCFR 250115-2.00	24	29	40	2.00	15	0.05	GI061	KV
L	XLCFL 160115-1.60	12	25	35	1.50	15	0.01	GI132	KV
	XLCFL 160115-2.00	12	25	35	2.00	15	0.04	GI061	KV
	XLCFL 250115-1.60	24	29	40	1.50	15	0.01	GI132	KV
	XLCFL 250115-2.00	24	29	40	2.00	15	0.05	GI061	KV
N	XLCFN 160215-3.00	12	25	35	3.10	15	0.01	GI001	KV
	XLCFN 160220-3.00	12	25	40	3.10	20	0.02	GI001	KV
	XLCFN 250215-3.00	24	29	40	3.10	15	0.02	GI001	KV
	XLCFN 250225-3.00	24	29	50	3.10	25	0.02	GI001	KV
	XLCFN 250315-4.00	24	29	40	4.10	15	0.02	GI002	KV
	XLCFN 250325-4.00	24	29	50	4.10	25	0.03	GI002	KV
	XLCFN 250425-5.00	24	29	50	5.10	25	0.04	GI004	KV
	XLCFN 250525-6.35	24	29	50	6.35	25	0.04	GI005	KV

GI001	LFMX 3.1-.	–
GI002	LFMX 4.1-.	–
GI004	LFMX 5.1-.	–
GI005	LFMX 6.35-.	–
GI061	LFMX 2.0-.	LFMX 2.2-.
GI132	LFMX 1.5-.	LFMX 1.6-.

KV	KV 5x70

XLXFL BS AXIAL

P M K N S H

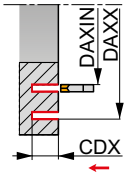
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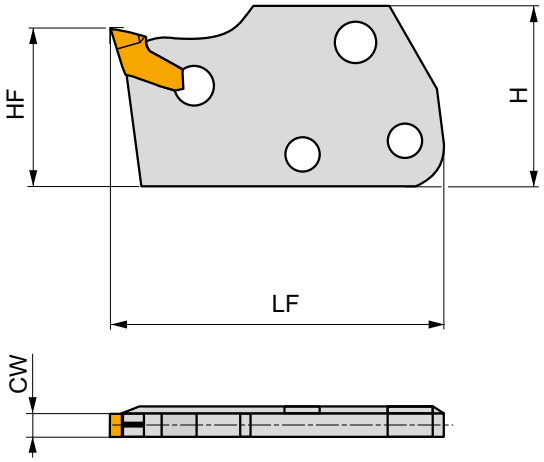
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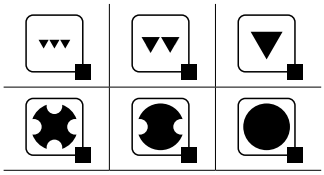


Lâmina de Ranhurar Axial para Porta-Ferramentas Modular MS-EN, para Pastilhas LFMX

Lâmina modular para ranhurar com pastilhas LFMX 3.1 de uma face. Adequado para operações de ranhurar frontal (profundidade de corte máx. 20 mm). Pode ser montada em porta-ferramentas MS-EN. Lâminas tratadas para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	HF (mm)	LF (mm)	CW (mm)	CDX (mm)	DAXIN (mm)	DAXX (mm)	kg		
L	**XLXFL 250220-3.00-60**	29	24	46	3.10	20	60	85	0.07	GI001	KV
	XLXFL 250220-3.00-80	29	24	46	3.10	20	80	105	0.05	GI001	KV
	XLXFL 250220-3.00-100	29	24	46	3.10	20	100	155	0.03	GI001	KV
	XLXFL 250220-3.00-150	29	24	46	3.10	20	150	280	0.03	GI001	KV

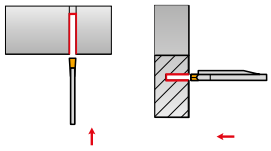
GI001	LFMX 3.1-.

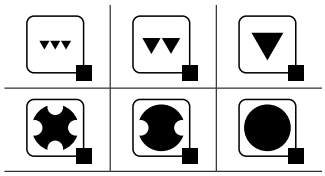
KV	KV 5x70

MS-EN

PRAMET

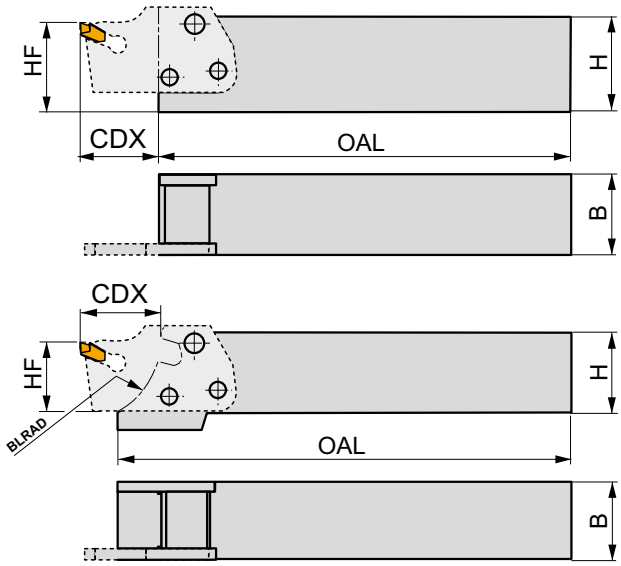






Porta-Ferramentas Modular para Lâminas de Ranhurar XLCCN, XLCF(NRL) ou XLXFL

Porta-ferramentas modular para lâminas de ranhurar XLC 25 BS, XLCF (NRL) BS, ou lâmina de ranhurar frontal XLXFL BS. Disponível com hastes de 12x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.



	Produto	HF (mm)	H (mm)	B (mm)	OAL (mm)	CDX (mm)	BLRAD (mm)	kg		
	MS-EN-1212 F	12	12	12	75	15	–	0.13	GI006	ND4
	MS-EN-1616 H	16	16	16	90	15	–	0.21	GI006	ND4
	MS-EN-2020 K	20	20	20	115	15	–	0.23	GI003	ND5
	MS-EN-2020 KS	20	20	20	129	15	25	0.42	GI060	ND5
	MS-EN-2525 M	25	25	25	140	15	–	0.65	GI003	ND5
	MS-EN-2525 MS	25	25	25	153	15	25	0.74	GI060	ND5
	MS-EN-3225 P	32	32	25	160	15	–	0.95	GI003	ND5
	MS-EN-3225 PS	32	32	25	174	15	25	1.00	GI060	ND5

GI003	XLC.. 25..15...	XLXFL 25…	XLC.. 25..25…	
GI006	XLCF. 16..15…	XLCF. 16..20…	–	
GI060	XLC.. 25..15…	XLC.. 25..25…	–	

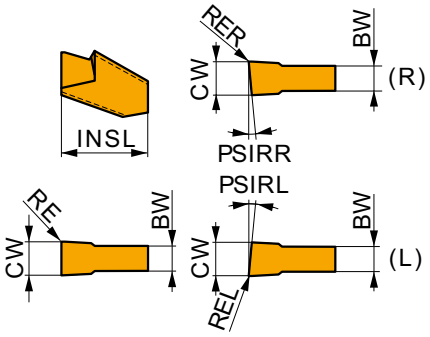
		Nm				Nm			
ND4	US 4011-T15P	3.5	M 4	10.6	–	–	–	–	FLAG T15P
ND5	US 45013-T20P	5.0	M 5	13	US 46017-T20P	5.0	M6	17	FLAG T15P

ND4 =3 x US 4011-T15P; ND5=2 x US 45013-T20P

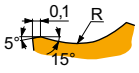
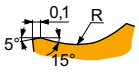
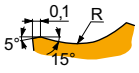
LFUX

PRAMET

	CW (mm)	BW (mm)	INSL (mm)
0308	3.00	2.51	11.5
0408	4.00	3.44	11.5
0508	5.00	4.30	11.5
0608	6.00	5.30	11.5



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	M vc (m/min)	M f (mm/rev)	K vc (m/min)	K f (mm/rev)	N vc (m/min)	N f (mm/rev)	S vc (m/min)	S f (mm/rev)	H vc (m/min)	H f (mm/rev)	PSIRR (°)	PSIRL (°)
																
			Geometria TN para sangrar e ranhurar, e cortes contínuos a ligeiramente interrompidos.													
LFUX 030802TN	**6640**	0.2	150	0.10	–	–	140	0.10	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.10	–	–	120	0.10	–	–	–	–	–	–	–	–
LFUX 040802TN	**6640**	0.2	150	0.12	–	–	140	0.12	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.12	–	–	120	0.12	–	–	–	–	–	–	–	–
LFUX 050802TN	**6640**	0.2	150	0.15	–	–	140	0.15	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.15	–	–	120	0.15	–	–	–	–	–	–	–	–
LFUX 060802TN	**6640**	0.2	150	0.20	–	–	140	0.20	–	–	–	–	–	–	–	–
	T8330	0.2	130	0.20	–	–	120	0.20	–	–	–	–	–	–	–	–
																
			Geometria TR, à direita, para sangrar e cortes contínuos a ligeiramente interrompidos.													
LFUX 030800TR	**6640**	0.2	150	0.10	–	–	140	0.10	–	–	–	–	–	–	5	–
	T8330	0.2	130	0.10	–	–	120	0.10	–	–	–	–	–	–	5	–
LFUX 040800TR	**6640**	0.2	150	0.12	–	–	140	0.12	–	–	–	–	–	–	5	–
	T8330	0.2	130	0.12	–	–	120	0.12	–	–	–	–	–	–	5	–
																
			Geometria TL, à esquerda, para sangrar, e cortes contínuos a ligeiramente interrompidos.													
LFUX 030800TL	**6640**	0.2	150	0.10	–	–	140	0.10	–	–	–	–	–	–	–	5
	T8330	0.2	130	0.10	–	–	120	0.10	–	–	–	–	–	–	–	5

XLCF(RL)

P M K N S H

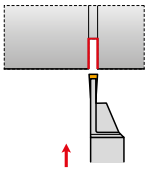
PRAMET

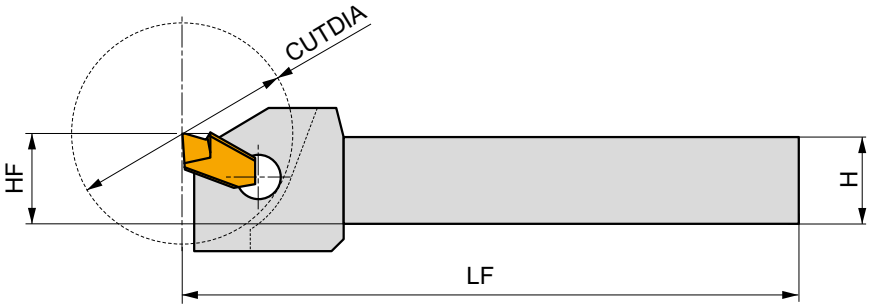
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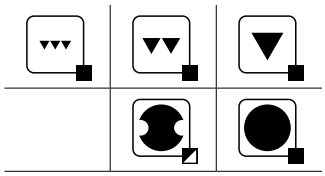


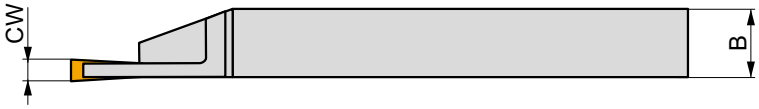
Ferramenta Exterior para Sangrar e Ranhurar para Pastilhas LFUX

Porta-ferramentas de exterior à direita ou à esquerda para abertura radial de ranhuras com pastilhas de uma só face LFUX 0308, 0408, 0508 ou 0608. Adequado para sangrar até ao máximo de Ø65 mm. Disponível com hastes de tamanho 16x12 até 32x25 mm. Corpo tratado para maior tempo de vida útil da ferramenta.













	Produto	HF (mm)	H (mm)	B (mm)	LF (mm)	CW (mm)	CUTDIA (mm)	kg		
R	XLCFR 1612 H 03	16	16	12	100	3.00	40	0.14	GI018	KV
	XLCFR 2016 K 03	20	20	16	130	3.00	50	0.30	GI018	KV
	XLCFR 2520 K 03	25	25	20	130	3.00	50	0.44	GI018	KV
	XLCFR 2016 K 04	20	20	16	130	4.00	50	0.30	GI019	KV
	XLCFR 2520 K 04	25	25	20	130	4.00	50	0.43	GI019	KV
	XLCFR 2520 K 05	25	25	20	130	5.00	50	0.45	GI020	KV
	XLCFR 3225 P 05	32	32	25	170	5.00	65	0.90	GI020	KV
	XLCFR 3225 P 06	32	32	25	170	6.00	65	0.91	GI021	KV
L	XLCFL 1612 H 03	16	16	12	100	3.00	40	0.15	GI018	KV
	XLCFL 2016 K 03	20	20	16	130	3.00	50	0.30	GI018	KV
	XLCFL 2520 K 03	25	25	20	130	3.00	50	0.47	GI018	KV
	XLCFL 2016 K 04	20	20	16	130	4.00	50	0.30	GI019	KV
	XLCFL 2520 K 04	25	25	20	130	4.00	50	0.46	GI019	KV
	XLCFL 2520 K 05	25	25	20	130	5.00	50	0.50	GI020	KV
	XLCFL 3225 P 05	32	32	25	170	5.00	65	0.95	GI020	KV
	XLCFL 3225 P 06	32	32	25	170	6.00	65	0.70	GI021	KV

GI018	LFUX 0308..
GI019	LFUX 0408..
GI020	LFUX 0508..
GI021	LFUX 0608..

KV	KV 5x70

XLCFN B LFUX

P M K N S H

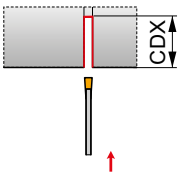
PRAMET

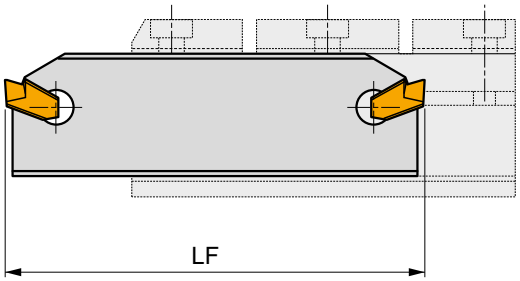
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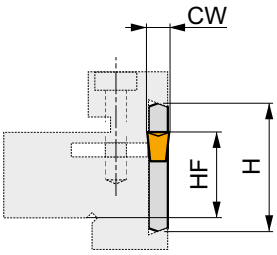


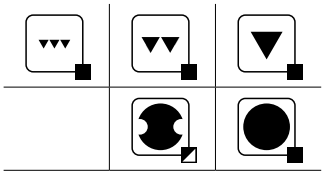
Lâmina de Sangrar de Ponta Dupla para Pastilhas LFUX

Lâmina para aplicações sangrar até 100 mm de profundidade máxima ou barra de Ø200 mm. Adequado para pastilhas LFUX de uma só face. Disponível nas alturas de 26, 32 ou 47 mm. Pode ser montada nos suportes básicos DU, D da Pramet. Lâmina tratada para maior tempo de vida útil da ferramenta.













	Produto	HF (mm)	H (mm)	LF (mm)	CW (mm)	CDX (mm)	kg		
N	**XLCFN 2603 J 03**	21.4	26	110	3.10	37.5	0.06	GI018	KV
	XLCFN 3202 M 03	25	32	150	3.10	50	0.09	GI018	KV
	XLCFN 3203 M 04	25	32	150	4.10	50	0.11	GI019	KV
	XLCFN 3204 M 05	25	32	150	5.10	60	0.14	GI020	KV
	XLCFN 4704 S 05	38	47	270	5.10	100	0.47	GI020	KV
	XLCFN 4705 S 06	38	47	270	6.10	100	0.50	GI021	KV

GI018	LFUX 0308..
GI019	LFUX 0408..
GI020	LFUX 0508..
GI021	LFUX 0608..

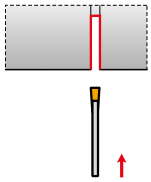
KV	KV 5x70

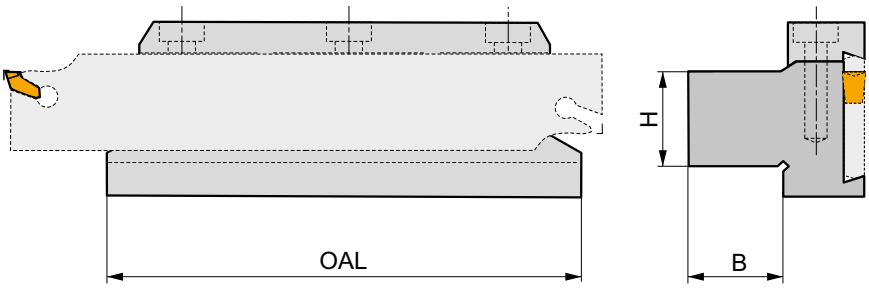
DU, D

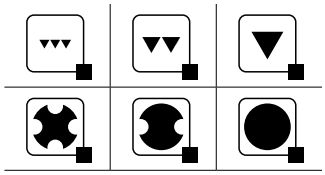


Bloco Porta Lâminas para Lâminas de Sangrar

Porta-ferramentas adequado para lâminas de sangrar GL ou XLC. Disponível com hastes de 20x20 até 40x40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.







Produto	H (mm)	B (mm)	OAL (mm)	kg		
26-DU 2020	20	20	90	0.70	GI007	ND2
26-D 2020	20	20	100	0.82	GI007	ND2
32-DU 2523	25	23	110	1.02	GI008	ND2
32-DU 2532	25	32	110	1.10	GI008	ND2
32-DU 3229	32	29	110	1.25	GI008	ND2
32-D 2530	25	30	115	1.30	GI008	ND2
45-DU 3229	32	29	110	1.50	GI009	ND7
45-DU 4036	40	36	110	2.05	GI009	ND7
47-D 4040	40	40	150	3.88	GI091	ND3

GI007	XLC.N 26..	GL.-S26.B
GI008	XLC.N 32..	GL.-S32.B
GI009	XLC.N 45..	–
GI091	XLC.N 47..	–

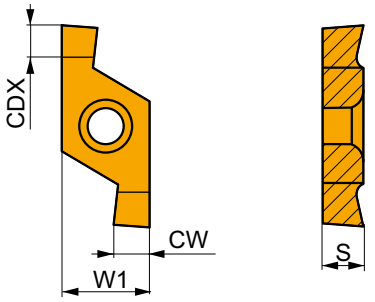
		Nm			
ND2	HS 0625	6.0	M 6	25	HXK 5
ND3	HS 1030	8.0	M 10	30	HXK 8
ND7	HS 0630	6.0	M 6	30	HXK 5

NEW

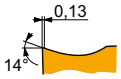
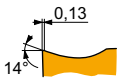
X 61

PRAMET

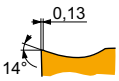
	W1	CWTOLL	CWTOLU	S
	(mm)	(mm)	(mm)	(mm)
0602	6.350	-0.03	0.03	2.33



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		CW	CDX
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(mm)	(mm)
																
X61-R exterior e interior,, geometria à direita, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
X61 0602-080 R	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.85	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 R	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.95	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-100 R	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	1.05	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	1.05	0.8
X61 0602-110 R	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.15	1.2
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 R	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.35	1.4
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.35	1.4
X61 0602-150 R	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.55	1.6
	G8330	–	135	0.06	80	0.05	125	0.06	–	–	–	–	–	–	1.55	1.6
X61 0602-160 R	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.65	1.7
	G8330	–	135	0.06	80	0.05	125	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 R	**6640**	–	150	0.09	90	0.08	140	0.09	–	–	–	–	–	–	1.90	2
	G8330	–	120	0.09	70	0.08	110	0.09	–	–	–	–	–	–	1.90	2
X61 0602-200 R	**G8330**	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.05	2.2
X61 0602-215 R	**6640**	–	145	0.09	85	0.08	135	0.09	–	–	–	–	–	–	2.20	2.4
	G8330	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.20	2.4
X61 0602-250 R	**G8330**	–	115	0.09	65	0.08	105	0.09	–	–	–	–	–	–	2.55	2.6
X61 0602-265 R	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	2.70	2.7
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	2.70	2.7
X61 0602-300 R	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	3.05	3
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	3.05	3
X61 0602-315 R	**6640**	–	125	0.12	75	0.11	115	0.12	–	–	–	–	–	–	3.20	3
	G8330	–	105	0.12	60	0.11	95	0.12	–	–	–	–	–	–	3.20	3
																
X61-L exterior e interior,geometria à esquerda, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
X61 0602-080 L	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.85	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 L	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.95	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-100 L	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	1.05	0.8
	G8330	–	145	0.06	85	0.05	135	0.06	–	–	–	–	–	–	1.05	0.8
X61 0602-110 L	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.15	1.2
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 L	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.35	1.4
	G8330	–	140	0.06	80	0.05	130	0.06	–	–	–	–	–	–	1.35	1.4

Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H			CW	CDX
			vc	f		vc	f		vc	f		vc	f		vc	f		vc	f			
		(mm)	(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(mm)	(mm)
																						

X 61-L exterior e interior,, geometria à esquerda, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.

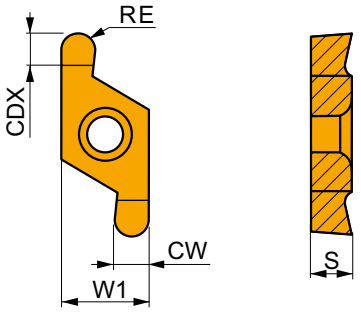
X61 0602-150 L	**6640**	–	180	0.06		105	0.05		170	0.06		–	–		–	–		–	–		1.55	1.6
	G8330	–	135	0.06		80	0.05		125	0.06		–	–		–	–		–	–		1.55	1.6
X61 0602-160 L	**6640**	–	180	0.06		105	0.05		170	0.06		–	–		–	–		–	–		1.65	1.7
	G8330	–	135	0.06		80	0.05		125	0.06		–	–		–	–		–	–		1.65	1.7
X61 0602-185 L	**6640**	–	150	0.09		90	0.08		140	0.09		–	–		–	–		–	–		1.90	2
	G8330	–	120	0.09		70	0.08		110	0.09		–	–		–	–		–	–		1.90	2
X61 0602-200 L	**G8330**	–	115	0.09		65	0.08		105	0.09		–	–		–	–		–	–		2.05	2.2
X61 0602-215 L	**6640**	–	145	0.09		85	0.08		135	0.09		–	–		–	–		–	–		2.20	2.4
	G8330	–	115	0.09		65	0.08		105	0.09		–	–		–	–		–	–		2.20	2.4
X61 0602-250 L	**G8330**	–	115	0.09		65	0.08		105	0.09		–	–		–	–		–	–		2.55	2.6
X61 0602-265 L	**6640**	–	125	0.12		75	0.11		115	0.12		–	–		–	–		–	–		2.70	2.7
	G8330	–	105	0.12		60	0.11		95	0.12		–	–		–	–		–	–		2.70	2.7
X61 0602-300 L	**6640**	–	125	0.12		75	0.11		115	0.12		–	–		–	–		–	–		3.05	3
	G8330	–	105	0.12		60	0.11		95	0.12		–	–		–	–		–	–		3.05	3
X61 0602-315 L	**6640**	–	125	0.12		75	0.11		115	0.12		–	–		–	–		–	–		3.20	3
	G8330	–	105	0.12		60	0.11		95	0.12		–	–		–	–		–	–		3.20	3

NEW

X 61 R

PRAMET

	W1	CWTOLL	CWTOLU	S
	(mm)	(mm)	(mm)	(mm)
0602	6.350	-0.03	0.03	2.33



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P			M			K			N			S			H			CW	CDX
			vc	f		vc	f		vc	f		vc	f		vc	f		vc	f			
		(mm)	(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(m/min)	(mm/rev)		(mm)	(mm)
																						

X 61 R-R exterior e interior, geometria à direita, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.

X61 0602-R100 R	**6640**	1.0	170	0.06		100	0.05		160	0.06		–	–		–	–		–	–		2.09	3
	G8330	1.0	130	0.06		75	0.05		120	0.06		–	–		–	–		–	–		2.09	3
X61 0602-R150 R	**6640**	1.5	170	0.06		100	0.05		160	0.06		–	–		–	–		–	–		3.09	3
	G8330	1.5	130	0.06		75	0.05		120	0.06		–	–		–	–		–	–		3.09	3





X 61 R-L exterior e interior, geometria à esquerda, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.

X61 0602-R100 L	**6640**	1.0	170	0.06		100	0.05		160	0.06		–	–		–	–		–	–		2.09	3
	G8330	1.0	130	0.06		75	0.05		120	0.06		–	–		–	–		–	–		2.09	3
X61 0602-R150 L	**6640**	1.5	170	0.06		100	0.05		160	0.06		–	–		–	–		–	–		3.09	3
	G8330	1.5	130	0.06		75	0.05		120	0.06		–	–		–	–		–	–		3.09	3

NEW

P61(RL) EXT

P M K N S

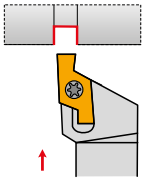
PRAMET

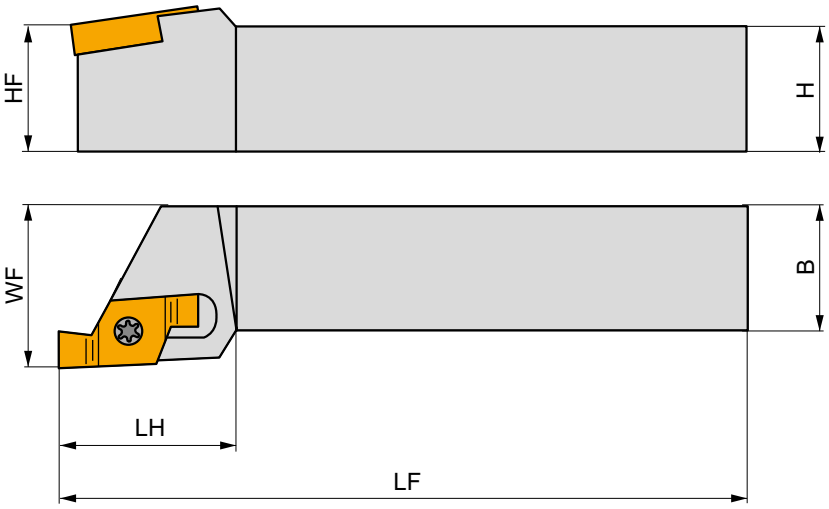
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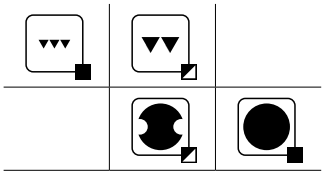


Porta-Ferramentas Exterior p/ Abertura de Ranhuras em O-rings e Anéis de Retenção, p/ Pastilhas X61

Porta-ferramentas de exterior à direita ou à esquerda para abertura radial de ranhuras em O-rings e anéis de retenção com pastilhas de duas faces X61. Proporciona uma ação de corte suave para obter tolerâncias apertadas. Disponível com hastes de tamanho 16x16 até 25x25 mm. Corpo tratado para maio tempo de vida útil da ferramenta.











	Produto	HF (mm)	H (mm)	B (mm)	WF (mm)	LF (mm)	LH (mm)	kg		
R	P61.SFR-1616H-06	16	16	16	20	100	21	0.23	GI332	SV11
	P61.SFR-2020K-06	20	20	20	25	125	25	0.40	GI332	SV11
	P61.SFR-2525M-06	25	25	25	32	150	32	0.73	GI332	SV11
L	P61.SFL-1616H-06	16	16	16	20	100	21	0.23	GI332	SV11
	P61.SFL-2020K-06	20	20	20	25	125	25	0.42	GI332	SV11
	P61.SFL-2525M-06	25	25	25	32	150	32	0.73	GI332	SV11

GI332	X61 0602..

		Nm			
SV11	US 2003-T07P	0.8	M 2.5	6.5	FLAG T07P

NEW

P61(RL) INT

P M K N S

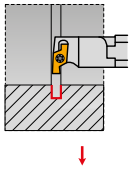
PRAMET

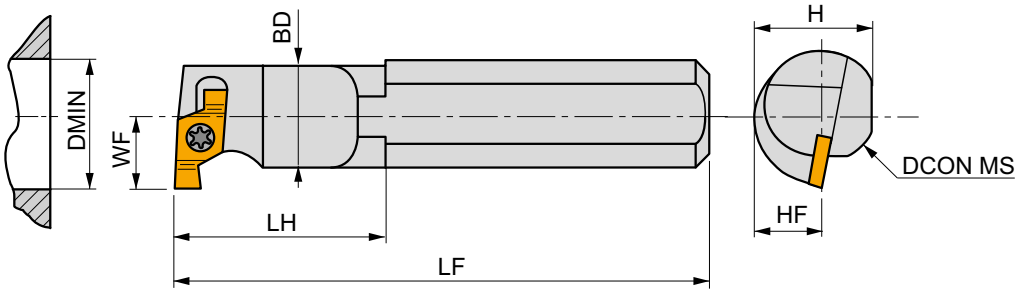
S

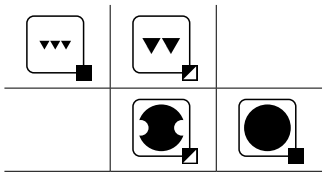


Porta-ferramentas Interior para Abertura de Ranhuras, para Pastilhas X61

Porta-ferramentas de interior à direita ou à esquerda para abertura de ranhuras com pastilhas X61 de dupla face. Diâmetro mínimo da ranhura interna Ø16 mm. Adequado para abertura de ranhuras internas em anéis de retenção ou O-rings. Disponível com hastes de Ø12 até Ø32 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	H (mm)	LF (mm)	LH (mm)	KAPR (°)		kg		
R	**P61.SGR-0012M-06**	12	16	11.5	9	11	150	22	0	–	0.17	GI332	SV11
	P61.SGR-A-0016M-06	16	20	15	11	15	150	29	0	✓	0.21	GI332	SV11
	P61.SGR-A-0020P-06	20	25	19	13	18	170	29	0	✓	0.38	GI332	SV11
	P61.SGR-A-0025R-06	25	32	24	17	23	200	31	0	✓	0.70	GI332	SV11
	P61.SGR-A-0032T-06	32	40	31	22	30	300	49	0	✓	1.72	GI332	SV11
L	**P61.SGL-0012M-06**	12	16	11.5	9	11	150	22	0	–	0.17	GI332	SV11
	P61.SGL-A-0016M-06	16	20	15	11	15	150	29	0	✓	0.24	GI332	SV11
	P61.SGL-A-0020P-06	20	25	19	13	18	170	29	0	✓	0.40	GI332	SV11
	P61.SGL-A-0025R-06	25	32	24	17	23	200	31	0	✓	0.72	GI332	SV11
	P61.SGL-A-0032T-06	32	40	31	22	30	300	49	0	✓	1.72	GI332	SV11

GI332	X61 0602..

		Nm			
SV11	US 2003-T07P	0.8	M 2.5	6.5	FLAG T07P

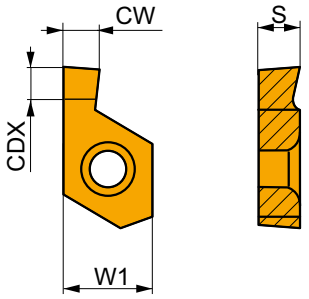
A pastilha esquerda monta na barra de mandrilar à direita.

NEW

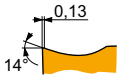
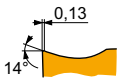
X 61-1

PRAMET

	W1	CWTOLL	CWTOLU	S
	(mm)	(mm)	(mm)	(mm)
0602	6.350	-0.03	0.03	2.33



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

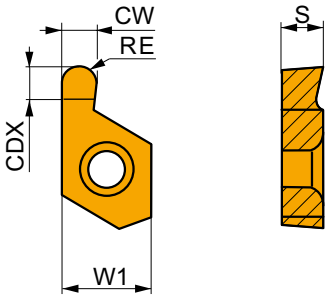
Produto		RE	P		M		K		N		S		H		CW	CDX
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(mm)	(mm)
																
X 61-1-R Interior, desenho à direita, com uma aresta de corte para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
X61 0602-080 R1	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 R1	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-110 R1	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 R1	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.35	1.4
X61 0602-160 R1	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 R1	**6640**	–	150	0.09	90	0.08	140	0.09	–	–	–	–	–	–	1.90	2
X61 0602-215 R1	**6640**	–	145	0.09	85	0.08	135	0.09	–	–	–	–	–	–	2.20	2.2
																
X 61-1-L interior desenho à esquerda, com uma aresta de corte para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
X61 0602-080 L1	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.85	0.8
X61 0602-090 L1	**6640**	–	195	0.06	115	0.05	185	0.06	–	–	–	–	–	–	0.95	0.8
X61 0602-110 L1	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.15	1.2
X61 0602-130 L1	**6640**	–	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.35	1.4
X61 0602-160 L1	**6640**	–	180	0.06	105	0.05	170	0.06	–	–	–	–	–	–	1.65	1.7
X61 0602-185 L1	**6640**	–	150	0.09	90	0.08	140	0.09	–	–	–	–	–	–	1.90	2
X61 0602-215 L1	**6640**	–	145	0.09	85	0.08	135	0.09	–	–	–	–	–	–	2.20	2.2

NEW

X 61 R-1

PRAMET

	W1 (mm)	CWTOLL (mm)	CWTOLU (mm)	S (mm)
0602	6.350	-0.03	0.03	2.33



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	M vc (m/min)	M f (mm/rev)	K vc (m/min)	K f (mm/rev)	N vc (m/min)	N f (mm/rev)	S vc (m/min)	S f (mm/rev)	H vc (m/min)	H f (mm/rev)	CW (mm)	CDX (mm)
																
X61 0602-R050 R1	6640	0.5	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.09	1.3
X61 0602-R100 R1	6640	1.0	170	0.06	100	0.05	160	0.06	–	–	–	–	–	–	2.09	2.8
																
X61 0602-R050 L1	6640	0.5	185	0.06	110	0.05	175	0.06	–	–	–	–	–	–	1.09	1.3
X61 0602-R100 L1	6640	1.0	170	0.06	100	0.05	160	0.06	–	–	–	–	–	–	2.09	2.8

X 61 R-1-R interior, desenho à direita, com uma aresta de corte para maquinar ranhuras de O-rings e anéis de retenção com cortes contínuos.

X 61 R-1-L interior desenho à esquerda, com uma aresta de corte para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.

NEW

P61S(RL)-1 INT

P M K N S

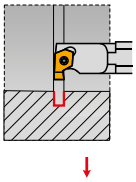
PRAMET

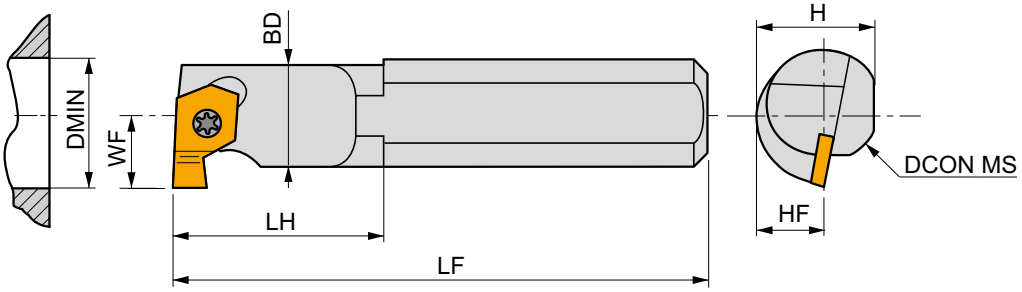
S

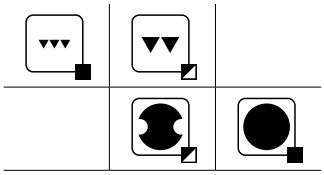


Porta-ferramentas Interior de Ranhurar para Pastilhas X61-1, para Ranhuras de Anéis de Retenção

Porta-ferramentas de interior à direita ou à esquerda para abertura de ranhuras com pastilhas X61-1 de uma face. Diâmetro mínimo da ranhura interna Ø12,5 mm. Adequado para abertura de ranhuras internas em anéis de retenção ou O-rings. Disponível com hastes de Ø10 e Ø12 mm. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	H (mm)	LF (mm)	LH (mm)	KAPR (°)	kg		
R	P61.SGR-0010M-06/1	10	12.5	10	7.5	9	150	19	0	0.24	GI333	SV11
	P61.SGR-0012M-06/1	12	12.5	10	7.5	11	150	19	0	0.17	GI333	SV11
L	P61.SGL-0010M-06/1	10	12.5	10	7.5	9	150	19	0	0.13	GI333	SV11
	P61.SGL-0012M-06/1	12	12.5	10	7.5	11	150	19	0	0.17	GI333	SV11

GI333	X61 0602..-1

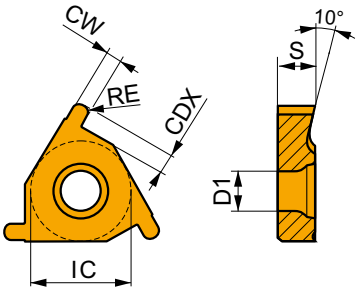
		Nm			
SV11	US 2003-T07P	0.8	M 2.5	6.5	FLAG T07P

Montagem da pastilha à esquerda na barra de mandrilar à direita.

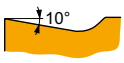
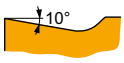
TN R EXT

PRAMET

	IC (mm)	D1 (mm)	S (mm)	CWTOLL (mm)	CWTOLU (mm)
16	9.525	3.90	3.58	0.00	0.05
22	12.700	4.90	4.70	0.00	0.05



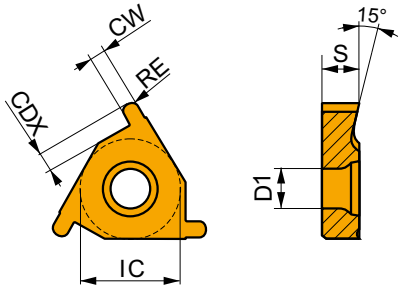
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	M vc (m/min)	M f (mm/rev)	K vc (m/min)	K f (mm/rev)	N vc (m/min)	N f (mm/rev)	S vc (m/min)	S f (mm/rev)	H vc (m/min)	H f (mm/rev)	CW (mm)	CDX (mm)
			U E													
TN ER-R exterior, geometria à direita, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
TN 16ER-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16ER-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22ER-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2
			U E													
TN EL-R exterior, geometria à esquerda, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
TN 16EL-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16EL-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22EL-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2

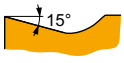
TN R INT

PRAMET

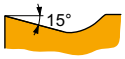
	IC (mm)	D1 (mm)	S (mm)	CWTOLL (mm)	CWTOLU (mm)
11	6.350	2.80	3.10	0.00	0.05
16	9.525	3.90	3.58	0.00	0.05
22	12.700	4.90	4.70	0.00	0.05



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	M vc (m/min)	M f (mm/rev)	K vc (m/min)	K f (mm/rev)	N vc (m/min)	N f (mm/rev)	S vc (m/min)	S f (mm/rev)	H vc (m/min)	H f (mm/rev)	CW (mm)	CDX (mm)
			U E													
TN NR-R iinterior, geometria à direita, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
TN 11NR-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16NR-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22NR-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2

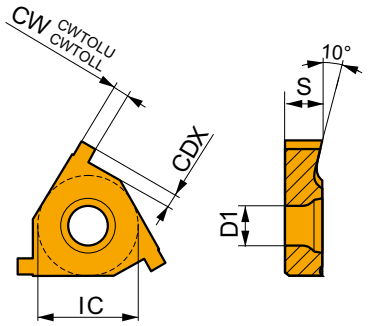
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		CW	CDX
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(mm)	(mm)
																
TN NL-R interior, geometria à direita, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																
TN 11NL-R050	**T8330**	0.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.00	1.3
TN 16NL-R100	**T8330**	1.0	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	2.00	1.85
TN 22NL-R150	**T8330**	1.5	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	3.00	2.2

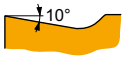
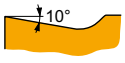
TN ZZ EXT

PRAMET

	IC (mm)	D1 (mm)	S (mm)
16	9.525	3.90	3.40
22	12.700	4.90	4.70



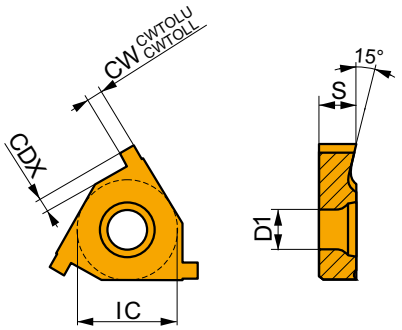
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		CW	CWTOLL	CWTOLU	CDX
			vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	vc (m/min)	f (mm/rev)	(mm)	(mm)	(mm)	(mm)
																		
TN ER-ZZ exterior, geometria à direita, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																		
TN 16ER090ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 16ER110ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16ER130ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	1.30	0.05	0.10	1.6
TN 16ER160ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	1.60	0.05	0.10	1.85
TN 16ER185ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	1.85	0.05	0.10	1.85
TN 16ER215ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.15	0.05	0.10	1.85
TN 16ER265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.05	0.10	2.05
TN 22ER265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.08	0.13	2.2
TN 22ER315ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	3.15	0.08	0.13	2.2
TN 22ER415ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	4.15	0.08	0.13	2.4
																		
TN EL-ZZ exterior, geometria à esquerda, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																		
TN 16EL090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 16EL110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16EL130ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.30	0.05	0.10	1.6
TN 16EL160ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.60	0.05	0.10	1.85
TN 16EL185ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.85	0.05	0.10	1.85
TN 16EL215ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.15	0.05	0.10	1.85
TN 16EL265ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.65	0.05	0.10	2.05
TN 22EL265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.08	0.13	2.2
TN 22EL315ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	3.15	0.08	0.13	2.2
TN 22EL415ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	4.15	0.08	0.13	2.4

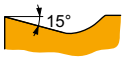
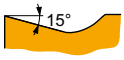
TN ZZ INT

PRAMET

	IC (mm)	D1 (mm)	S (mm)
11	6.350	2.80	3.00
16	9.525	3.90	3.40
22	12.700	4.90	4.70



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (f). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P f (mm/rev)	M vc (m/min)	M f (mm/rev)	K vc (m/min)	K f (mm/rev)	N vc (m/min)	N f (mm/rev)	S vc (m/min)	S f (mm/rev)	H vc (m/min)	H f (mm/rev)	CW (mm)	CWTOLL (mm)	CWTOLU (mm)	CDX (mm)
																		
TN NR-ZZ interior, geometria à direita, para maquinar O-rings e anéis de retenção, com cortes contínuos.																		
TN 11NR090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 11NR110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NR090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 16NR110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NR130ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.30	0.05	0.10	1.6
TN 16NR160ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.60	0.05	0.10	1.85
TN 16NR185ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.85	0.05	0.10	1.85
TN 16NR215ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.15	0.05	0.10	1.85
TN 16NR265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.05	0.10	2.05
TN 22NR265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.08	0.13	2.2
TN 22NR315ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	3.15	0.08	0.13	2.2
TN 22NR415ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	4.15	0.08	0.13	2.4
																		
TN NL-ZZ iinterior, geometria à esquerda, para maquinar ranhuras de O-rings e anéis de retenção, com cortes contínuos.																		
TN 11NL090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 11NL110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NL090ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	0.90	0.05	0.10	0.9
TN 16NL110ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.10	0.05	0.10	1.3
TN 16NL130ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.30	0.05	0.10	1.6
TN 16NL160ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.60	0.05	0.10	1.85
TN 16NL185ZZ	**T8330**	–	130	0.06	75	0.05	120	0.06	–	–	–	–	–	–	1.85	0.05	0.10	1.85
TN 16NL215ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.15	0.05	0.10	1.85
TN 16NL265ZZ	**T8330**	–	130	0.09	75	0.08	120	0.09	–	–	–	–	–	–	2.65	0.05	0.10	2.05
TN 22NL265ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	2.65	0.08	0.13	2.2
TN 22NL315ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	3.15	0.08	0.13	2.2
TN 22NL415ZZ	**T8330**	–	130	0.12	75	0.11	120	0.12	–	–	–	–	–	–	4.15	0.08	0.13	2.4

SE(RL)

P M K N S H

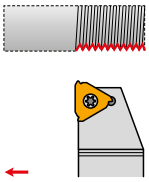
PRAMET

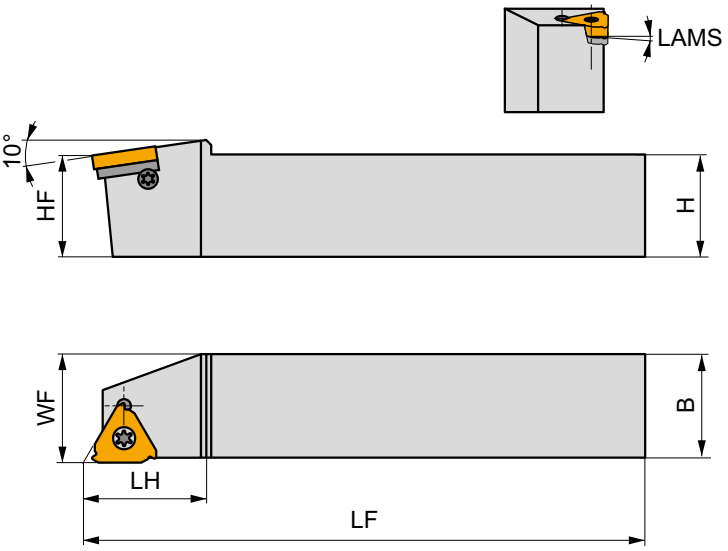
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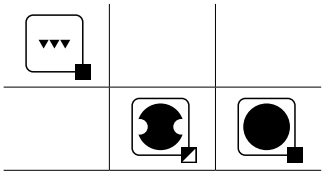


Porta-Ferramentas de Roscar Exterior, Fixação por Parafuso, para Pastilhas TN 11, 16 ou 22

Porta-ferramentas de roscar exterior à direita ou à esquerda com fixação por parafuso, para roscagem externa com pastilhas TN16 ou 22 ER / EL. Adequado para roscas métricas ou em polegadas. Também adequado para abertura de ranhuras pouco profundas. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	HF (mm)	B (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)		
R	**SER 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SER 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SER 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SER 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SER 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13
L	**SEL 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SEL 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SEL 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SEL 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SEL 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13

GI068	TN 16ER..	TN 16EL..
GI071	TN 22ER..	TN 22EL..

		Nm							
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	481
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	481

SI(RL)

P M K N S H

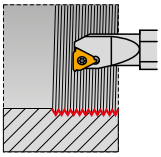
PRAMET

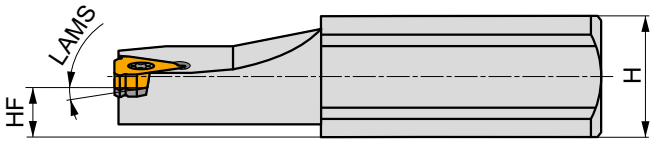
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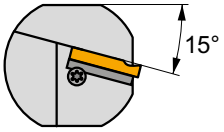


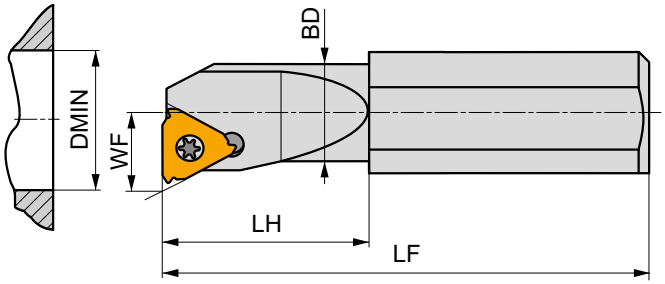
Porta-Ferramentas de Roscar Interior, Fixação por Parafuso, para Pastilhas TN 11, 16 ou 22

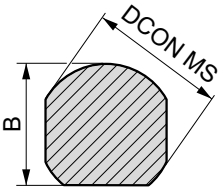
Porta-ferramentas de roscar interior à direita ou à esquerda com fixação por parafuso, para roscagem interna com pastilhas TN11, 16 ou 22 ER / EL. Adequado para roscas métricas ou em polegadas. Diâmetro interno mínimo Ø13 mm. Também adequado para abertura de ranhuras pouco profundas. Disponível com hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.

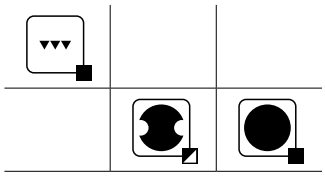














	Produto	B (mm)	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)			
R	**SIR 0010 K 11-0**	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIR 0010 K 11-1	14.5	16	13	10	7.45	14	7	125	25	1	–	GI085	Z11
	SIR 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIR 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIR 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIR 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIR 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIR 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIR 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIR 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIR 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIR 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIR 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13
L	**SIL 0010 K 11-0**	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIL 0010 K 11-1	14.5	16	13	10	7.55	14	7	125	25	1	–	GI085	Z11
	SIL 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIL 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIL 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIL 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIL 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIL 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIL 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIL 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIL 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIL 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIL 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13

GI022	TN 16NR..	TN 16NL..
GI076	TN 22NR..	TN 22NL..
GI085	TN 11NR..	TN 11NL..

Z10	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
Z11	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	481
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	481
Z14	US 4514A-T20	5.0	M 4.5	14	–	–	FLAG T20	–	–
Z9	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	P-16

Seleção do calço

Ângulo Hélice λ	Positivo					Negativo		Para pastilhas de ranhurar TN16.. ... ZZ, TN22.. ... ZZ
	4.5°	3.5°	2.5°	1.5°	0.5°	-0.5°	-1.5°	
Porta ferramentas	**Especificações da bigorna**							
SER .... .16; SIL .... .16	PE16+4.5	PE16+3.5	PE16+2.5	**PE16+1.5**	PE16+0.5	PE16-0.5	PE16-1.5	PE16ZZ
SEL .... .16; SIR .... .16	PI16+4.5	PI16+3.5	PI16+2.5	**PI16+1.5**	PI16+0.5	PI16-0.5	PI16-1.5	PI16ZZ
SER .... .22; SIL .... .22	PE22+4.5	PE22+3.5	PE22+2.5	**PE22+1.5**	PE22+0.5	PE22-0.5	PE22-1.5	PE22ZZ
SEL .... .22; SIR .... .22	PI22+4.5	PI22+3.5	PI22+2.5	**PI22+1.5**	PI22+0.5	PI22-0.5	PI22-1.5	PI22ZZ
SER-S .... .22; SIL-S .... .22	PE22S+4.5	PE22S+3.5	PE22S+2.5	**PE22S+1.5**	PE22S+0.5	PE22S-0.5	PE22S-1.5	-
SEL-S .... .22; SIR-S .... .22	PI22S+4.5	PI22S+3.5	PI22S+2.5	**PI22S+1.5**	PI22S+0.5	PI22S-0.5	PI22S-1.5	-

Nota: Normalmente os porta ferramentas são fornecidos com um ângulo de hélice λ = 1.5°. Pode ser selecionado um ângulo de hélice diferente mudando a base.
Os calços para porta ferramentas SER-S ...., SIR-S .... estão marcados com um „***S***“

TORNEAMENTO DE ROSCAS



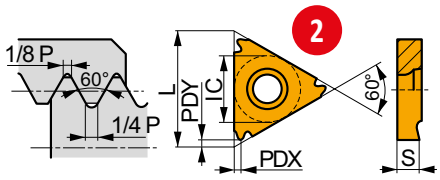
📖 6		WMG E ISO 13399
📖 10	TORNEAMENTO ISO	INSTRUÇÕES
📖 18		NAVEGADORES
📖 57		PASTILHAS POSITIVAS
📖 219		PASTILHAS NEGATIVAS
📖 386		SANGRAR E RANHURAR
📖 **482**		**TORNEAMENTO DE ROSCAS**
📖 528		ESCATELAR
📖 536		INFORMAÇÃO TÉCNICA GERAL

1 TN M INT

PRAMET

	IC [mm]	L [mm]	S [mm]
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71

3



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Product		RE [mm]	P vc [m/min]	M vc [m/min]	K vc [m/min]	N vc [m/min]	S vc [m/min]	H vc [m/min]	TP [mm]	TPI	PDX [mm]	PDY [mm]
4	5 15°		1 U E 6									
			10 TN M NR interior, desenho à direita, para maquinar roscas Métricas ISO, e cortes contínuos.									
TN 11NR050M	T8010	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 1[7]5M	[8]	[9]	175	105	165	[11]	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 11NR100M	T8010	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 11NR125M	T8010	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 11NR150M	T8010	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 11NR200M	T8010	–	175	105	165	–	40	–	2.00	–	0.9	0.8
	T8030	–	160	95	150	480	40	–	2.00	–	0.9	0.8
TN 16NR050M	T8010	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16NR075M	T8010	–	175	105	165	–	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16NR100M	T8010	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16NR125M	T8010	–	175	105	165	–	40	–	1.25	–	0.8	0.8

TN 16NR075M:T8010 Use o código de especificação completo da pastilha ao fazer o pedido!

- Qualidade
- Incluir dois pontos
- Código ISO

Página modelo de exibição para pastilhas - os detalhes específicos da página serão diferentes.

PASTILHAS PARA TORNEAMENTO DE ROSCAS - VISÃO GERAL

Pos.	Descrição
1	Designação da Pastilha
2	Desenho Esquemático da Pastilha
3	Tabela com tamanhos de pastilhas (mm)
4	Imagem representativa da pastilha
5	Perfil da aresta de corte principal
6	Símbolos - características específicas e tipo da aresta de corte

Pos.	Descrição
7	Código ISO da pastilha
8	Qualidade
9	Raios da Pastilha (mm)
10	Descrição da geometria
11	Área de aplicação da pastilha

1 **SI(RL)**

P M K N S H 2

PRAMET 3 S

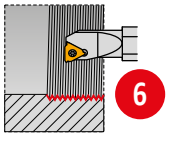


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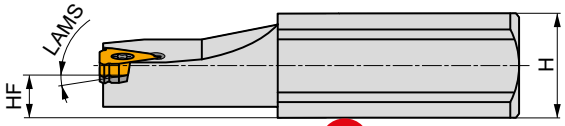
Porta-Ferramentas de Roscar Interior, Fixação por Parafuso, para Pastilhas TN 11, 16 ou 22

Porta-ferramentas de roscar interior à direita ou à esquerda com fixação por parafuso, para roscagem interna com pastilhas TN11, 16 ou 22 NR/NL. Adequado para roscas métricas ou em polegadas. Diâmetro interno mínimo Ø13 mm. Também adequado para abertura de ranhuras pouco profundas. Disponível com hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.

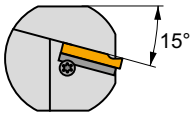
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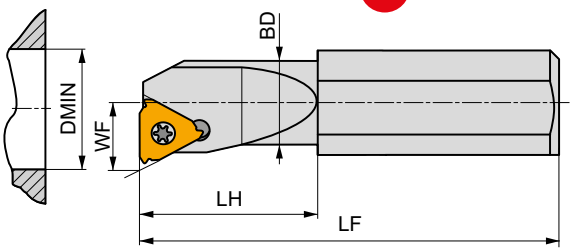


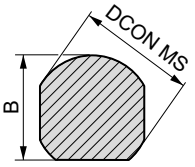
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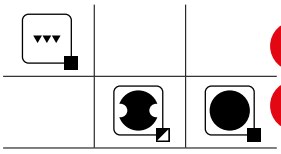


7









8 9

10

	Product	B [mm]	DCON MS [mm]	DMIN [mm]	BD [mm]	WF [mm]	H [mm]	HF [mm]	LF [mm]	LH [mm]	LAMS [°]			
	SIR 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIR 0010 K 11-1	14.5	16	13	10	7.45	14	7	125	25	1	–	GI085	Z11
	SIR 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0			
11	**SIR 0013** 12	14.5	16	16		13 9	14	7	150	32	1	14	15	16
	SIR 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
R	**SIR 1416 N 16-1**	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIR 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIR 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIR 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIR 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIR 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIR 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIR 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13

17

GI022	TN 16NR..	TN 16NL..
GI076	TN 22NR..	TN 22NL..
GI085	TN 11NR..	TN 11NL..

		Nm			18				
Z10	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
Z11	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	Page xx
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	Page xx
Z14	US 4514A-T20	5.0	M 4.5	14	–	–	FLAG T20	–	–
Z9	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	P-16

Página modelo exibindo suportes de torneamento - os detalhes específicos da página serão diferentes.

SUPORTES PARA TORNEAMENTO DE ROSCAS - VISÃO GERAL

Pos.	Descrição
1	Designação do suporte para torneamento de roscas
2	Recomendações do grupo de material
3	Sistema de fixação da pastilha
4	Foto ilustrativa[1)]
5	Descrição da ferramenta
6	Perfil da peça de trabalho
7	Desenho esquemático da ferramenta
8	Qualidade de superfície alcançável
9	Tipo de corte / condições de trabalho

Pos.	Descrição
10	Aplicações do produto
11	Desenho da ferramenta
12	Código ISO do suporte
13	Dimensões (mm) e ângulos[2)] (°) do suporte
14	Alimentação de refrigerante interno
15	Grupo de pastilhas compatíveis[3)]
16	Grupo de peças sobressalentes[3), 4)]
17	Pastilhas compatíveis
18	Peças sobressalentes

1) Os porta ferramentas são apresentados em desenho à direita (R)

2) GAMO = ângulo ortogonal (ver secção técnica)
LAMS = ângulo de saída do fio de corte (ver secção técnica)

3) O código do grupo de pastilhas compatíveis, peças sobressalentes e acessórios especiais utiliza-se apenas para uso deste catálogo. Não pode ser utilizado para pedidos.

4) Os ícones das peças sobressalentes e acessórios especiais estão desenhados esquemáticamente para uma melhor compreensão. Não estão incluídos na lista de iconos. Em alguns casos, a informação dos parafusos completa-se com a informação de aperto em Nm, comprimento e tamanho de rosca.

TORNEAMENTO DE ROSCAS - VISÃO GERAL DOS SÍMBOLOS

SÍMBOLOS GERAIS

■	Utilização principal
◪	Utilização possível

▼▼▼	Acabamento - qualidade de superfície muito boa
▼▼	Maquinação média - qualidade de superfície boa
▼	Desbaste - rugosidade de superfície ilimitada

●	Adequado para condições de trabalho estáveis
●	Adequado para condições de trabalho instáveis
●	Adequado para condições de trabalho muito instáveis

CARACTERÍSTICAS

	Torneamento de roscas - exterior
	Torneamento de roscas - interior

REVESTIMENTO

	Primeira escolha
	Para materiais resistentes (apara longa)

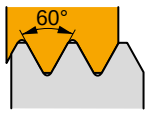
	Opção de gama ampla universal
	Aresta arredondada

	Aresta afiada

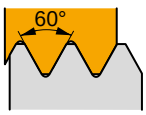
OUTRO

	Torque de aperto do parafuso (Nm)
	Alimentação interna de refrigerante

M
Perfil completo

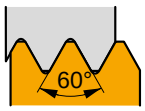
TN M EXT NEW


495

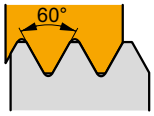
TN M INT NEW


497

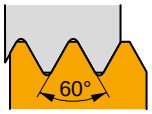
M
Perfil parcial

TN 60° PP EXT


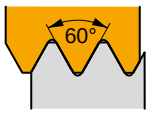
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TN 60° PP INT


500

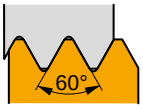
TN 60°-S PP EXT


501

TN 60°-S PP INT


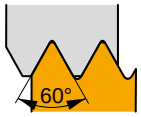
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MJ
Perfil completo

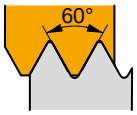
TN MJ EXT NEW


499

UN
Perfil completo

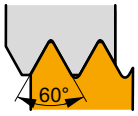
TN UN EXT


502

TN UN INT


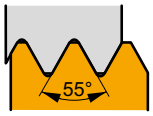
503

UNJ
Perfil completo

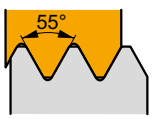
TN UNJ EXT NEW


504

W
Perfil completo

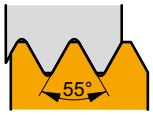
TN W EXT


505

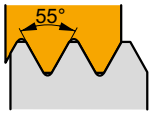
TN W INT


506

W
Perfil parcial

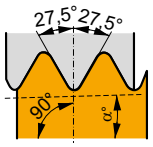
TN 55° PP EXT


508

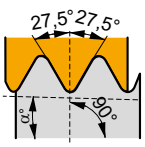
TN 55° PP INT


509

BSPT
Perfil completo

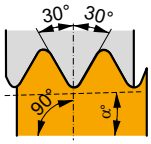
TN BSPT EXT


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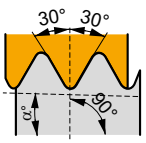
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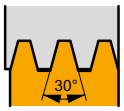
TN NPT EXT


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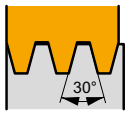
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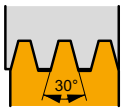
TR
Perfil completo

TN TR EXT


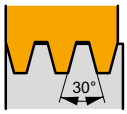
512

TN TR INT


513

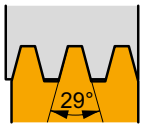
TN TR-S EXT


514

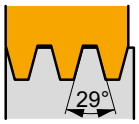
TN TR-S INT


514

ACME
Perfil completo

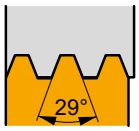
TN ACME EXT


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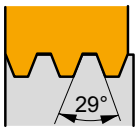
TN ACME INT


516

STACME
Perfil completo

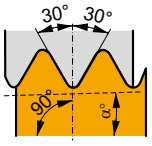
TN STACME EXT NEW


517

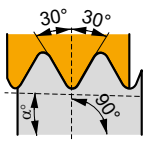
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518

API RD
Perfil completo

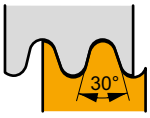
TN API RD EXT


519

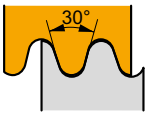
TN API RD INT


519

RD
Perfil completo

TN RD EXT


520

TN RD INT


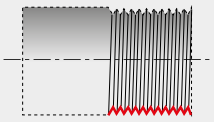
520

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de Corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do Refrigerante	Descrição da Qualidade
T8010	P05 - P15 M05 - M15 K10 - K20 S10 - S15	■ ■ ■ ◪				PVD		submicron H	+ + +	Esta qualidade é adequada para torneamento contínuo de alta precisão de aços, aço inoxidável, ferro fundido e superligas. Oferecendo excelente resistência ao desgaste, garante a confiabilidade operacional
T8030	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Sem dúvida, a qualidade mais versátil, é adequada para maquinar todos os tipos de materiais e pode ser aplicada em quase todas as operações de torneamento. Os seus principais benefícios são uma alta confiabilidade operacional e excelentes propriedades de fricção; portanto, é adequado para aplicações em velocidades de corte médias a baixas.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■				×		submicron H	+ +	Qualidade sem revestimento, projetada principalmente para a maquinação de metais não ferrosos; mas também pode ser usada para outros materiais maquinados (exceto aço). Este material pode ser usado em torneamento, fresagem e até mandrilagem.

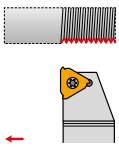
Substrato	
submicron H	Substrato de grão fino à base de W.C.-Co (< 1 µm)

Revestimento	
PVD	Método físico de revestimento a baixa temperatura

TORNEAMENTO DE ROSCAS ISO - EXTERIOR

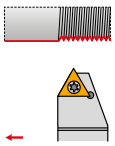


SE(RL)



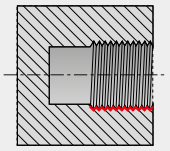
	TN..
	16 22
20×20 32×25	
522	459 – 521

SE(RL)-S

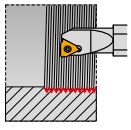


	TN..
	22
25×25 32×25	
523	459 – 521

TORNEAMENTO DE ROSCAS ISO - INTERIOR

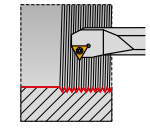


SI(RL)



	TN..
	11 16 22
13 48	
524	459 – 521

SI(RL)-S

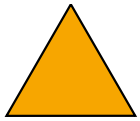


	TN..
	22
39 48	
526	459 – 521

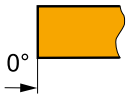
PASTILHAS DE CORTE INDEXÁVEIS PARA ROSCAGEM ISO - DESIGNAÇÃO DE CÓDIGO

	1	2	3	4	5	6	7		8
ISO	**T**	**N**	**16**	**E**	**R**	**175**	**M**	–	**P1**
ANSI	T	N	16	E	R	120	W	–	P1

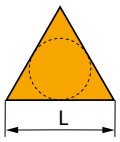
1 Forma de Pastilha

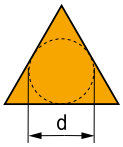
T	

2 Ângulo de incidência

N	

3 Comprimento do fio de corte (tamanho da pastilha)





L		d = IC	
(mm)	(")	(mm)	(")
11	.433"	**6,350**	1/4"
16	.650"	**9,525**	3/8"
22	.866"	**12,7**	1/2"

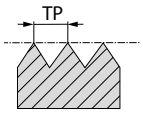
4 Exterior - Interior

E	Exterior
N	Interior

5 Direção de corte

R	Direita
L	Esquerda
N	Neutra

6 Passo de rosca



s × 100

Passo de rosca mm × 100

6 No. de fios

Número de fios por polegada × 10

7 Perfil de Rosca

M	Métrica 60°	**TR**	TR 30° ISO 2901/3–1977
MJ	SEA MA1370	**UN**	Americana UN 60° ISO 5864–1978
W	Whitworth 55° ISO 228-1982	**UNJ**	SEA AS8879
RD	Redondo 30°	**ACME**	ACME 29° ANSI B1.5–1988
BSPT	ISO 228/1 35 21 1959 ISO 7/1	**STACME**	ASME/ANSI B1.8-1988
NPT	ANSI B1.1–1983	**API RD**	API

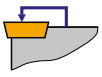
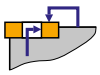
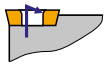
8 Designação do quebra aparas

P1	Inserção
AL	Materiais não ferrosos

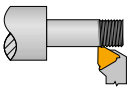
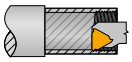
DESIGNAÇÃO DO CÓDIGO ISO - SUPORTES PARA ROSCAGEM

	1	2	3		4	5	6	7		8
ISO	**S**	**E**	**R**	–	**S**	**2525**	**M**	**16**	–	
ANSI	1	2	3		4	5	6	7		8
	S	E	R	–	S	16	D	16	–	

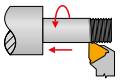
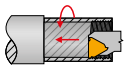
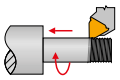
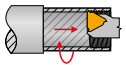
1 Sistema de fixação

C	
P	
M	
S	

2 Tipo de mecanização

E	Exterior	
I	Interior	

3 Direção do corte

R	Direita	Exterior	
		Interior	
L	Esquerda	Exterior	
		Interior	

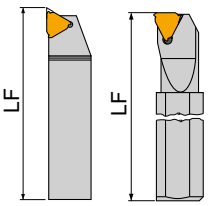
4 Tipo de construção

–	Normal
S	Especial

5 Dimensões do porta ferramentas (mm)

Mecanizado exterior	**2525**	25 × 25 mm
Mecanizado interior	**1416**	Montagem – 14 mm Encabadouro Ø – 16 mm

6 Comprimento total (mm)

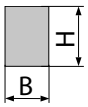


	LF (mm)
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300

7 Comprimento do fio de corte (tamanho da pastilha)

d = IC		T
(mm)	(")	
6.350	1/4"	11
9.525	3/8"	16
12.700	1/2"	22

5 Dimensões da ferramenta (")



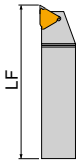
	B (")	H (")
10	5/8"	5/8"
12	3/4"	3/4"
16	1"	1"
85	1"	1 1/4"
86	1"	1 1/2"
20	1 1/4"	1 1/4"

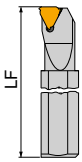


	DCON (")
08	.500"
10	.625"
12	.750"
16	1.000"
20	1.250"
24	1.500"

Para encabadouros quadrados, este é o número de 1/16 da polegada de largura e altura. Para encabadouros retangulares, o primeiro digito é o numero de 1/8 da polegada de largura, e o segundo digito é o numero de 1/4 da polegada de altura

6 Comprimento total (")





	LF (")
C	5.000"
D	6.000"
E	7.000"
F	8.000"
K	5.000"
M	6.000"
P	6.250"
Q	7.250"
R	8.000"
S	10.000"
T	12.000"
U	14.000"

8 Ângulo de hélice λ

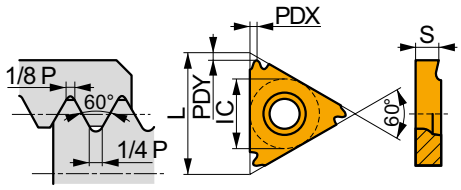
0	Ângulo de hélice λ = 0°
1	Ângulo de hélice λ = 1°
2	Ângulo de hélice λ = 2°

NEW

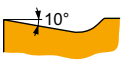
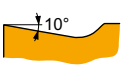
TN M EXT

PRAMET

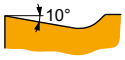
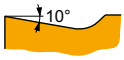
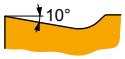
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN M ER exterior, desenho à direita, para maquinar roscas Métricas ISO, e cortes contínuos.									
TN 16ER050M	**T8010**	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16ER075M	**T8010**	–	175	105	165	–	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16ER080M	**T8010**	–	175	105	165	–	40	–	0.80	–	0.6	0.8
	T8030	–	160	95	150	480	40	–	0.80	–	0.6	0.8
TN 16ER100M	**T8010**	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16ER125M	**T8010**	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 16ER150M	**T8010**	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 16ER175M	**T8010**	–	175	105	165	–	40	–	1.75	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	1.75	–	1.5	1.2
TN 16ER200M	**T8010**	–	175	105	165	–	40	–	2.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.00	–	1.5	1.2
TN 16ER250M	**T8010**	–	175	105	165	–	40	–	2.50	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.50	–	1.5	1.2
TN 16ER300M	**T8010**	–	175	105	165	–	40	–	3.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	3.00	–	1.5	1.2
TN 16ER350M	**T8030**[1)]	–	160	95	150	480	40	–	3.50	–	1.7	1.2
TN 22ER350M	**T8010**	–	175	105	165	–	40	–	3.50	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	–	2.5	1.8
TN 22ER400M	**T8010**	–	175	105	165	–	40	–	4.00	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	4.00	–	2.5	1.8
TN 22ER450M	**T8010**	–	175	105	165	–	40	–	4.50	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	4.50	–	2.5	1.8
TN 22ER500M	**T8010**	–	175	105	165	–	40	–	5.00	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	5.00	–	2.5	1.8
												
			TN M EL exterior, desenho à esquerda, para maquinar roscas Métricas ISO, e cortes contínuos.									
TN 16EL050M	**T8030**	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16EL075M	**T8030**	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16EL080M	**T8030**	–	160	95	150	480	40	–	0.80	–	0.6	0.8
TN 16EL100M	**T8010**	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16EL125M	**T8010**	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8

Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
TN M EL exterior, desenho à esquerda, para maquinar roscas Métricas ISO e cortes contínuos.												
TN 16EL150M	**T8010**	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 16EL175M	**T8010**	–	175	105	165	–	40	–	1.75	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	1.75	–	1.5	1.2
TN 16EL200M	**T8010**	–	175	105	165	–	40	–	2.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.00	–	1.5	1.2
TN 16EL250M	**T8010**	–	175	105	165	–	40	–	2.50	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.50	–	1.5	1.2
TN 16EL300M	**T8010**	–	175	105	165	–	40	–	3.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	3.00	–	1.5	1.2
TN 16EL350M	**T8030**[1)]	–	160	95	150	480	40	–	3.50	–	1.7	1.2
TN 22EL350M	**T8030**	–	160	95	150	480	40	–	3.50	–	2.5	1.8
TN 22EL400M	**T8030**	–	160	95	150	480	40	–	4.00	–	2.5	1.8
TN 22EL450M	**T8030**	–	160	95	150	480	40	–	4.50	–	2.5	1.8
TN 22EL500M	**T8030**	–	160	95	150	480	40	–	5.00	–	2.5	1.8
												
TN M-P1 ER exterior prensada, desenho à direita, para maquinar roscas Métricas ISO e cortes contínuos.												
TN 16ER100M-P1	**T8030**	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16ER125M-P1	**T8030**	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 16ER150M-P1	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 16ER175M-P1	**T8030**	–	160	95	150	480	40	–	1.75	–	1.5	1.2
TN 16ER200M-P1	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.2
TN 16ER250M-P1	**T8030**	–	160	95	150	480	40	–	2.50	–	1.5	1.2
TN 16ER300M-P1	**T8030**	–	160	95	150	480	40	–	3.00	–	1.5	1.2
												
TN M-AL ER exterior, desenho à direita, para maquinar roscas Métricas ISO, e cortes contínuos.												
TN 16ER050M-AL	**HF7**	–	–	95	–	480	–	–	0.50	–	0.8	0.8
TN 16ER075M-AL	**HF7**	–	–	95	–	480	–	–	0.75	–	0.8	0.8
TN 16ER080M-AL	**HF7**	–	–	95	–	480	–	–	0.80	–	0.6	0.8
TN 16ER100M-AL	**HF7**	–	–	95	–	480	–	–	1.00	–	0.8	0.8
TN 16ER125M-AL	**HF7**	–	–	95	–	480	–	–	1.25	–	0.8	0.8
TN 16ER150M-AL	**HF7**	–	–	95	–	480	–	–	1.50	–	0.8	0.8
TN 16ER175M-AL	**HF7**	–	–	95	–	480	–	–	1.75	–	1.5	1.2
TN 16ER200M-AL	**HF7**	–	–	95	–	480	–	–	2.00	–	1.5	1.2
TN 16ER250M-AL	**HF7**	–	–	95	–	480	–	–	2.50	–	1.5	1.2
TN 16ER300M-AL	**HF7**	–	–	95	–	480	–	–	3.00	–	1.5	1.2

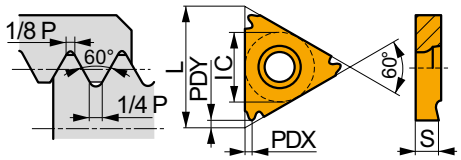
[1)] Suportes têm de ser modificados

NEW

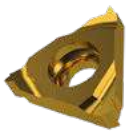
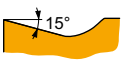
TN M INT

PRAMET

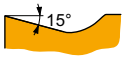
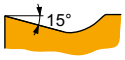
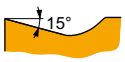
	IC (mm)	L (mm)	S (mm)
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN M NR iinterior, desenho à direita, para maquinar roscas Métricas ISO, e cortes contínuos.												
TN 11NR050M	**T8010**	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 11NR075M	**T8010**	–	175	105	165	–	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 11NR100M	**T8010**	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 11NR125M	**T8010**	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 11NR150M	**T8010**	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 11NR200M	**T8010**	–	175	105	165	–	40	–	2.00	–	0.9	0.8
	T8030	–	160	95	150	480	40	–	2.00	–	0.9	0.8
TN 16NR050M	**T8010**	–	175	105	165	–	40	–	0.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.50	–	0.8	0.8
TN 16NR075M	**T8010**	–	175	105	165	–	40	–	0.75	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	0.75	–	0.8	0.8
TN 16NR100M	**T8010**	–	175	105	165	–	40	–	1.00	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16NR125M	**T8010**	–	175	105	165	–	40	–	1.25	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.25	–	0.8	0.8
TN 16NR150M	**T8010**	–	175	105	165	–	40	–	1.50	–	0.8	0.8
	T8030	–	160	95	150	480	40	–	1.50	–	0.8	0.8
TN 16NR175M	**T8010**	–	175	105	165	–	40	–	1.75	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	1.75	–	1.5	1.2
TN 16NR200M	**T8010**	–	175	105	165	–	40	–	2.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.00	–	1.5	1.2
TN 16NR250M	**T8010**	–	175	105	165	–	40	–	2.50	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	2.50	–	1.5	1.2
TN 16NR300M	**T8010**	–	175	105	165	–	40	–	3.00	–	1.5	1.2
	T8030	–	160	95	150	480	40	–	3.00	–	1.5	1.2
TN 16NR350M	**T8030**[1)]	–	160	95	150	480	40	–	3.50	–	1.6	1.2
TN 22NR350M	**T8010**	–	175	105	165	–	40	–	3.50	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	–	2.5	1.8
TN 22NR400M	**T8010**	–	175	105	165	–	40	–	4.00	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	4.00	–	2.5	1.8
TN 22NR450M	**T8010**	–	175	105	165	–	40	–	4.50	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	4.50	–	2.5	1.8
TN 22NR500M	**T8010**	–	175	105	165	–	40	–	5.00	–	2.5	1.8
	T8030	–	160	95	150	480	40	–	5.00	–	2.5	1.8

Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		TP	TPI	PDX	PDY
			vc		vc		vc		vc		vc		vc					
		(mm)	(m/min)		(m/min)		(m/min)		(m/min)		(m/min)		(m/min)		(mm)		(mm)	(mm)
																		
TN M NL iinterior, desenho à esquerda, para maquinar roscas Métricas ISO, e cortes contínuos.																		
TN 11NL050M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.50	–	0.8	0.8
TN 11NL075M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.75	–	0.8	0.8
TN 11NL100M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 11NL125M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.25	–	0.8	0.8
TN 11NL150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 11NL200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.00	–	0.9	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	0.9	0.8
TN 16NL050M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.50	–	0.8	0.8
TN 16NL075M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	0.75	–	0.8	0.8
TN 16NL100M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.00	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 16NL125M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.25	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.25	–	0.8	0.8
TN 16NL150M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.50	–	0.8	0.8
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16NL175M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	1.75	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	1.75	–	1.5	1.2
TN 16NL200M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	1.5	1.2
TN 16NL250M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	2.50	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	2.50	–	1.5	1.2
TN 16NL300M	**T8010**	–	■	175	◪	105	■	165		–	◪	40		–	3.00	–	1.5	1.2
	T8030	–	■	160	■	95	■	150	◪	480	◪	40		–	3.00	–	1.5	1.2
TN 16NL350M	**T8030**[1)]	–	■	160	■	95	■	150	◪	480	◪	40		–	3.50	–	1.6	1.2
TN 22NL350M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	3.50	–	2.5	1.8
TN 22NL400M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	4.00	–	2.5	1.8
TN 22NL500M	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	5.00	–	2.5	1.8
																		
TN M-P1 NR interior prensada, desenho à direita, para maquinar roscas Métricas ISO, e cortes contínuos.																		
TN 11NR100M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 11NR150M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16NR100M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.00	–	0.8	0.8
TN 16NR150M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	1.50	–	0.8	0.8
TN 16NR200M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	2.00	–	1.5	1.2
TN 16NR250M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	2.50	–	1.5	1.2
TN 16NR300M-P1	**T8030**	–	■	160	■	95	■	150	◪	480	◪	40		–	3.00	–	1.5	1.2
																		
TN M-AL NR interior, desenho à direita, para maquinar roscas Métricas ISO, e cortes contínuos.																		
TN 16NR050M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.50	–	0.8	0.8
TN 16NR075M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	0.75	–	0.8	0.8
TN 16NR100M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.00	–	0.8	0.8
TN 16NR125M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.25	–	0.8	0.8
TN 16NR150M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.50	–	0.8	0.8
TN 16NR175M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	1.75	–	1.5	1.2
TN 16NR200M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	2.00	–	1.5	1.2
TN 16NR250M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	2.50	–	1.5	1.2
TN 16NR300M-AL	**HF7**	–		–	◪	95		–	■	480		–		–	3.00	–	1.5	1.2

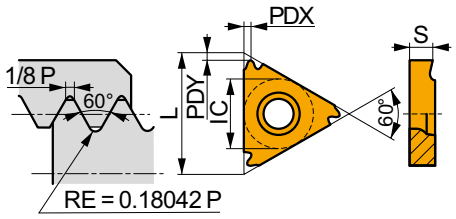
[1)] Suportes têm de ser modificados.

NEW

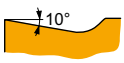
TN MJ EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



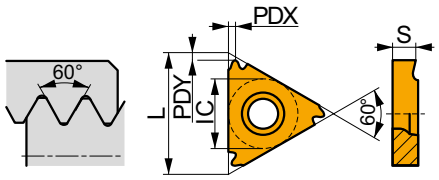
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
			 TN MJ ER exterior, desenho à direita, para maquinar roscas Métricas "forma J", e cortes contínuos.									
TN 16ER100MJ	**T8030**	–	160	95	150	480	40	–	1.00	–	0.8	0.8
TN 16ER150MJ	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.8

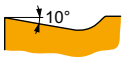
TN 60° PP EXT

PRAMET

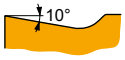
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
			 TN M60 PP ER exterior, desenho à direita, para maquinar roscas Métricas e Unificadas, e cortes contínuos.											
TN 16ERA60	**T8010**	–	175	105	165	–	40	–	0.50	1.50	16	48	0.8	0.6
	T8030	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.6
TN 16ERAG60	**T8010**	–	175	105	165	–	40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16ERG60	**T8010**	–	175	105	165	–	40	–	1.75	3.00	8	14	1.5	1.1
	T8030	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22ERN60	**T8010**	–	175	105	165	–	40	–	3.50	5.00	5	7	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8

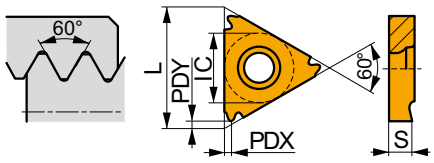
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
														
			TN M60 PP EL exterior, desenho à esquerda, para maquinar roscas Métricas e Unificadas, e cortes contínuos.											
TN 16ELA60	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.6
TN 16ELAG60	**T8010**	–	175	105	165	–	40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16ELG60	**T8030**	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22ELN60	**T8030**	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8

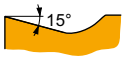
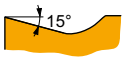
TN 60° PP INT

PRAMET

	IC (mm)	L (mm)	S (mm)
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



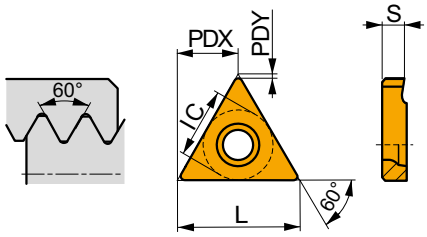
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
														
			TN M60 PP NR iinterior, desenho à direita, para maquinar roscas Métricas e Unificadas, e cortes contínuos.											
TN 11NRA60	**T8010**	–	175	105	165	–	40	–	0.50	1.50	16	48	0.8	0.7
	T8030	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.7
TN 16NRA60	**T8010**	–	175	105	165	–	40	–	0.50	1.50	16	48	0.8	0.7
	T8030	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.7
TN 16NRAG60	**T8010**	–	175	105	165	–	40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16NRG60	**T8010**	–	175	105	165	–	40	–	1.75	3.00	8	14	1.5	1.1
	T8030	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22NRN60	**T8010**	–	175	105	165	–	40	–	3.50	5.00	5	7	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8
														
			TN M60 PP NL interior, desenho à esquerda, para maquinar roscas Métricas e Unificadas, e cortes contínuos.											
TN 11NLA60	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.7
TN 16NLA60	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.7
TN 16NLAG60	**T8010**	–	175	105	165	–	40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16NLG60	**T8030**	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22NLN60	**T8030**	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8

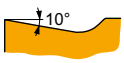
TN 60°-S PP EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
22	12.700	22.00	4.60



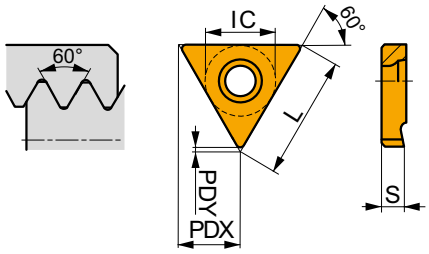
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
			1 Ü E											
TN M60-S PP EN exterior, desenho à esquerda e à direita, para maquinar roscas Métricas e Unificadas, e cortes contínuos.														
TN 22EN350-500M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	11.0	0.5
TN 22EN550-800M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	5.50	8.00	3	4.5	11.0	0.8

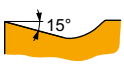
TN 60°-S PP INT

PRAMET

	IC (mm)	L (mm)	S (mm)
22	12.700	22.00	4.60

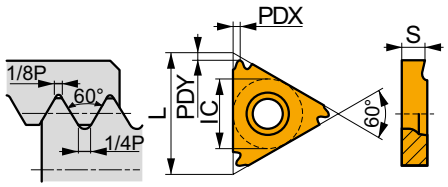


Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

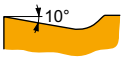
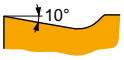
Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
			1 Ü E											
TN M60-S PP NN interior, desenho à esquerda e à direita, para maquinar roscas Métricas e Unificadas, e cortes contínuos.														
TN 22NN350-500M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	11.0	0.2
TN 22NN550-800M	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	5.50	8.00	3	4.5	11.0	0.5

TN UN EXT

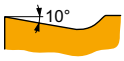
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN UN ER exterior, desenho à direita, para maquinar roscas Unificadas, e cortes contínuos.									
TN 16ER320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16ER280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16ER200UN	**T8010**	–	175	105	165	–	40	–	–	20.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16ER140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER130UN	**T8030**	–	160	95	150	480	40	–	–	13.0	1.5	1.2
TN 16ER120UN	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16ER115UN	**T8030**	–	160	95	150	480	40	–	–	11.5	1.5	1.2
TN 16ER110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16ER100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER090UN	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16ER080UN	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22ER070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22ER060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22ER050UN	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.8
												
			TN UN EL exterior, desenho à esquerda, para maquinar roscas Unificadas, e cortes contínuos.									
TN 16EL320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16EL280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16EL200UN	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16EL180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16EL160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16EL140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16EL120UN	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16EL110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16EL100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16EL090UN	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16EL080UN	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22EL070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22EL060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22EL050UN	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.8

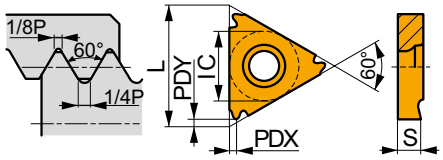
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN UN-P1 ER exterior prensada, desenho à direita, para maquinar roscas Unificadas, e cortes contínuos.									
TN 16ER200UN-P1	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER180UN-P1	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160UN-P1	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16ER140UN-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER120UN-P1	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16ER080UN-P1	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

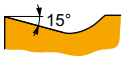
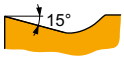
TN UN INT

PRAMET

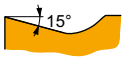
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN UN NR interior, desenho à direita, para maquinar roscas Unificadas, e cortes contínuos.									
TN 16NR320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16NR280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NR240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NR200UN	**T8010**	–	175	105	165	–	40	–	–	20.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NR180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16NR160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NR140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR130UN	**T8030**	–	160	95	150	480	40	–	–	13.0	1.5	1.2
TN 16NR120UN	**T8010**	–	175	105	165	–	40	–	–	12.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NR115UN	**T8030**	–	160	95	150	480	40	–	–	11.5	1.5	1.2
TN 16NR110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16NR100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NR080UN	**T8010**	–	175	105	165	–	40	–	–	8.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22NR070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22NR060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22NR050UN	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.8
												
			TN UN NL interior, desenho à esquerda, para maquinar roscas Unificadas, e cortes contínuos.									
TN 16NL320UN	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8

Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN 16NL280UN	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NL240UN	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NL200UN	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NL180UN	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16NL160UN	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NL140UN	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NL120UN	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NL110UN	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16NL100UN	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NL080UN	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22NL070UN	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22NL060UN	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8

TN UN NL interior, desenho à esquerda, para maquinar roscas Unificadas, e cortes contínuos.




TN UN-P1 NR interior prensada, desenho à direita, para maquinar roscas Unificadas, e cortes contínuos.

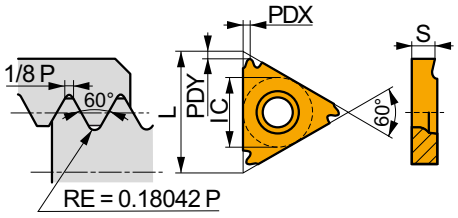
TN 16NR200UN-P1	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NR180UN-P1	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16NR160UN-P1	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NR140UN-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR120UN-P1	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NR080UN-P1	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

NEW

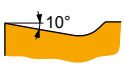
TN UNJ EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47

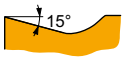


Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN 16ER320UNJ	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16ER280UNJ	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER240UNJ	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16ER200UNJ	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER180UNJ	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160UNJ	**T8030**	–	160	95	150	480	40	–	–	16.0	1.5	1.2
TN 16ER120UNJ	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2

TN UNJ ER exterior, desenho à direita, para maquinar roscas unificadas "forma J" (UNJ), e cortes contínuos.

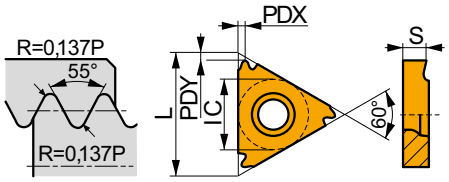
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
		(mm)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
			TN UNJ EL exterior, desenho à esquerda, para maquinar roscas Unificadas "forma J" (UNJ), e cortes contínuos.									
TN 16EL320UNJ	**T8030**	–	160	95	150	480	40	–	–	32.0	0.8	0.8
TN 16EL280UNJ	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL240UNJ	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16EL200UNJ	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16EL180UNJ	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16EL160UNJ	**T8030**	–	160	95	150	480	40	–	–	16.0	1.5	1.2
TN 16EL120UNJ	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2

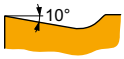
TN W EXT

PRAMET

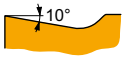
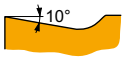
	IC	L	S
	(mm)	(mm)	(mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
		(mm)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
			TN W ER exterior, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.									
TN 16ER280W	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER260W	**T8030**	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16ER240W	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16ER200W	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16ER190W	**T8010**	–	175	105	165	–	40	–	–	19.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16ER180W	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.8
TN 16ER160W	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16ER140W	**T8010**	–	175	105	165	–	40	–	–	14.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER120W	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16ER110W	**T8010**	–	175	105	165	–	40	–	–	11.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16ER100W	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER090W	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16ER080W	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22ER070W	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22ER060W	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22ER050W	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.7

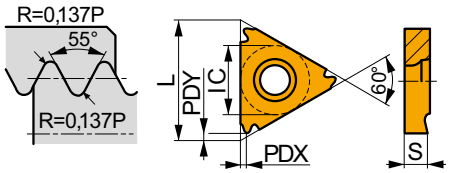
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN W EL exterior,desenho à esquerda, para maquinar roscas forma Whitworth, e cortes contínuos.												
TN 16EL280W	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL260W	**T8030**	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16EL240W	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16EL200W	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16EL190W	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16EL160W	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16EL140W	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16EL120W	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16EL110W	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16EL100W	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16EL090W	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16EL080W	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22EL070W	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22EL060W	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22EL050W	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.7
												
TN W-P1 ER exterior prensada, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.												
TN 16ER190W-P1	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16ER140W-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER110W-P1	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2

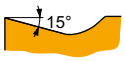
TN W INT

PRAMET

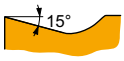
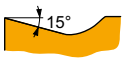
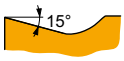
	IC (mm)	L (mm)	S (mm)
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN W NR interior, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.												
TN 11NR190W	**T8010**	–	175	105	165	–	40	–	–	19.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 11NR140W	**T8010**	–	175	105	165	–	40	–	–	14.0	0.9	0.7
	T8030	–	160	95	150	480	40	–	–	14.0	0.9	0.7
TN 16NR280W	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NR260W	**T8030**	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16NR240W	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NR200W	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8

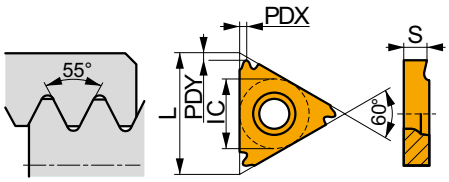
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN W NR interior, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.									
TN 16NR190W	**T8010**	–	175	105	165	–	40	–	–	19.0	0.8	0.8
	T8030	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16NR160W	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NR140W	**T8010**	–	175	105	165	–	40	–	–	14.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR120W	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NR110W	**T8010**	–	175	105	165	–	40	–	–	11.0	1.5	1.2
	T8030	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16NR100W	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NR090W	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16NR080W	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22NR070W	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22NR060W	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22NR050W	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.7
												
			TN W NL interior, desenho à esquerda, para maquinar roscas forma Whitworth, e cortes contínuos.									
TN 11NL190W	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 11NL140W	**T8030**	–	160	95	150	480	40	–	–	14.0	0.9	0.7
TN 16NL280W	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NL260W	**T8030**	–	160	95	150	480	40	–	–	26.0	0.8	0.8
TN 16NL240W	**T8030**	–	160	95	150	480	40	–	–	24.0	0.8	0.8
TN 16NL200W	**T8030**	–	160	95	150	480	40	–	–	20.0	0.8	0.8
TN 16NL190W	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 16NL160W	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NL140W	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NL120W	**T8030**	–	160	95	150	480	40	–	–	12.0	1.5	1.2
TN 16NL110W	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
TN 16NL100W	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NL090W	**T8030**	–	160	95	150	480	40	–	–	9.0	1.5	1.2
TN 16NL080W	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 22NL070W	**T8030**	–	160	95	150	480	40	–	–	7.0	2.5	1.8
TN 22NL060W	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
TN 22NL050W	**T8030**	–	160	95	150	480	40	–	–	5.0	2.5	1.7
												
			TN W-P1 NR interior prensada, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.									
TN 11NR190W-P1	**T8030**	–	160	95	150	480	40	–	–	19.0	0.8	0.8
TN 11NR140W-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	0.9	0.7
TN 16NR140W-P1	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR110W-P1	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2

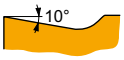
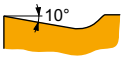
TN 55° PP EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71

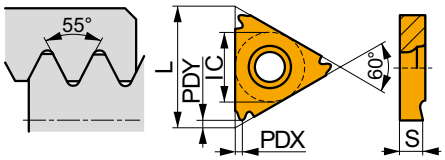


Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

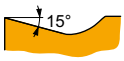
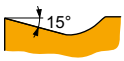
Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
														
			1 U E											
TN W55 PP ER exterior, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.														
TN 16ERA55	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.6
TN 16ERAG55	**T8010**	–	175	105	165	–	40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16ERG55	**T8030**	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22ERN55	**T8010**	–	175	105	165	–	40	–	3.50	5.00	5	7	2.5	1.8
	T8030	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8
														
			1 U E											
TN W55 PP EL exterior,desenho à esquerda, para maquinar roscas forma Whitworth, e cortes contínuos.														
TN 16ELA55	**T8030**	–	160	95	150	480	40	–	0.50	1.50	16	48	0.8	0.6
TN 16ELAG55	**T8030**	–	160	95	150	480	40	–	0.50	3.00	8	48	1.5	1.1
TN 16ELG55	**T8030**	–	160	95	150	480	40	–	1.75	3.00	8	14	1.5	1.1
TN 22ELN55	**T8030**	–	160	95	150	480	40	–	3.50	5.00	5	7	2.5	1.8

TN 55° PP INT

	IC (mm)	L (mm)	S (mm)
11	6.350	11.00	3.00
16	9.525	16.50	3.47
22	12.700	22.00	4.71



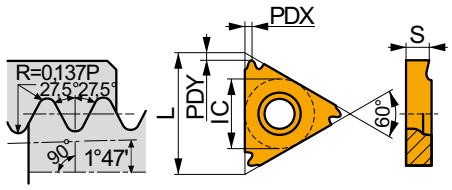
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TPN (mm)	TPX (mm)	TPIN	TPIX	PDX (mm)	PDY (mm)
														
			TN W55 PP NR exterior, desenho à direita, para maquinar roscas forma Whitworth, e cortes contínuos.											
TN 11NRA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NRA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NRAG55	**T8010**	–	■ 175	◪ 105	■ 165	–	◪ 40	–	0.50	3.00	8	48	1.5	1.1
	T8030	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	3.00	8	48	1.5	1.1
TN 16NRG55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.75	3.00	8	14	1.5	1.1
TN 22NRN55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	2.5	1.8
														
			TN W55 PP NL interior, desenho à esquerda, para maquinar roscas forma Whitworth, e cortes contínuos.											
TN 11NLA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NLA55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	1.50	16	48	0.8	0.6
TN 16NLAG55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	0.50	3.00	8	48	1.5	1.1
TN 16NLG55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	1.75	3.00	8	14	1.5	1.1
TN 22NLN55	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	3.50	5.00	5	7	2.5	1.8

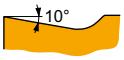
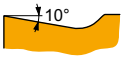
TN BSPT EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



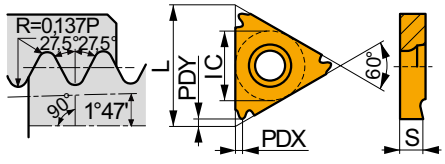
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			1 U E									
			TN BSPT ER exterior, desenho à direita, para maquinar roscas BSPT, e cortes contínuos.									
TN 16ER280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16ER190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2
TN 16ER140BSPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16ER110BSPT	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
												
			1 U E									
			TN BSPT EL exterior, desenho à esquerda, para maquinar roscas BSPT, e cortes contínuos.									
TN 16EL280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16EL190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2
TN 16EL140BSPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16EL110BSPT	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2

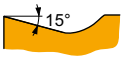
TN BSPT INT

PRAMET

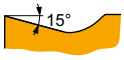
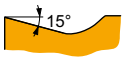
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			1 U E									
			TN BSPT NR interior, desenho à direita, para maquinar roscas BSPT e cortes contínuos.									
TN 16NR280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NR190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2

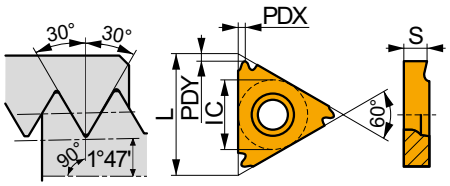
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
			1 U E									
			TN BSPT NR interior, desenho à direita, para maquinar roscas BSPT e cortes contínuos.									
TN 16NR140BSPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NR110BSPT	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2
												
			1 U E									
			TN BSPT NL interior, desenho à esquerda, para maquinar roscas BSPT e cortes contínuos.									
TN 16NL280BSPT	**T8030**	–	160	95	150	480	40	–	–	28.0	0.8	0.8
TN 16NL190BSPT	**T8030**	–	160	95	150	480	40	–	–	19.0	1.5	1.2
TN 16NL140BSPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.5	1.2
TN 16NL110BSPT	**T8030**	–	160	95	150	480	40	–	–	11.0	1.5	1.2

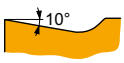
TN NPT EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



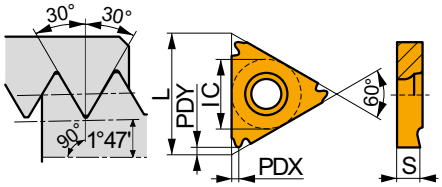
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
			1 U E									
			TN NPT ER exterior,desenho à direita, para maquinar roscas NPT, e cortes contínuos.									
TN 16ER270NPT	**T8030**	–	160	95	150	480	40	–	–	27.0	0.8	0.7
TN 16ER180NPT	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.7
TN 16ER140NPT	**T8010**	–	175	105	165	–	40	–	–	14.0	1.5	1.1
	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.1
TN 16ER115NPT	**T8010**	–	175	105	165	–	40	–	–	11.5	1.5	1.1
	T8030	–	160	95	150	480	40	–	–	11.5	1.5	1.1
TN 16ER080NPT	**T8030**	–	160	95	150	480	40	–	–	8.0	1.6	1.1

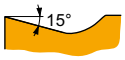
TN NPT INT

PRAMET

	IC (mm)	L (mm)	S (mm)
11	6.350	11.00	3.00
16	9.525	16.50	3.47



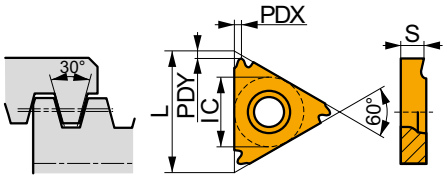
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN NPT NR interior, desenho à direita, para maquinar roscas NPT, e cortes contínuos.												
TN 11NR180NPT	**T8030**	–	160	95	150	480	40	–	–	18.0	0.8	0.7
TN 11NR140NPT	**T8030**	–	160	95	150	480	40	–	–	14.0	1.0	0.7
TN 16NR140NPT	**T8010**	–	175	105	165	–	40	–	–	14.0	1.5	1.1
	T8030	–	160	95	150	480	40	–	–	14.0	1.5	1.1
TN 16NR115NPT	**T8010**	–	175	105	165	–	40	–	–	11.5	1.5	1.1
	T8030	–	160	95	150	480	40	–	–	11.5	1.5	1.1
TN 16NR080NPT	**T8030**	–	160	95	150	480	40	–	–	8.0	1.6	1.1

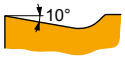
TN TR EXT

PRAMET

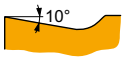
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN TR ER exterior, desenho à direita, para maquinar roscas Trapezoidais, e cortes contínuos.												
TN 16ER150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16ER200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16ER300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22ER400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22ER500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8

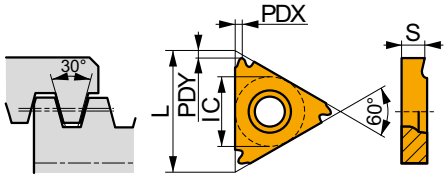
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
			1 Ú E									
			TN TR EL exterior, desenho à esquerda, para maquinar roscas Trapezoidais, e cortes contínuos.									
TN 16EL150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16EL200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16EL300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22EL400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22EL500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8

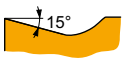
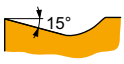
TN TR INT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



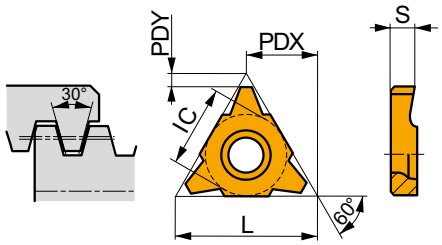
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
			1 Ú E									
			TN TR NR interior, desenho à direita, para maquinar roscas Trapezoidais, e cortes contínuos.									
TN 16NR150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16NR200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16NR300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22NR400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22NR500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8
												
			1 Ú E									
			TN TR NL interior, desenho à esquerda, para maquinar roscas Trapezoidais, e cortes contínuos.									
TN 16NL150TR	**T8030**	–	160	95	150	480	40	–	1.50	–	0.8	0.9
TN 16NL200TR	**T8030**	–	160	95	150	480	40	–	2.00	–	1.5	1.3
TN 16NL300TR	**T8030**	–	160	95	150	480	40	–	3.00	–	1.6	1.3
TN 22NL400TR	**T8030**	–	160	95	150	480	40	–	4.00	–	2.2	1.8
TN 22NL500TR	**T8030**	–	160	95	150	480	40	–	5.00	–	2.2	1.8

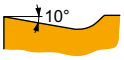
TN TR-S EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
22	12.700	22.00	4.60



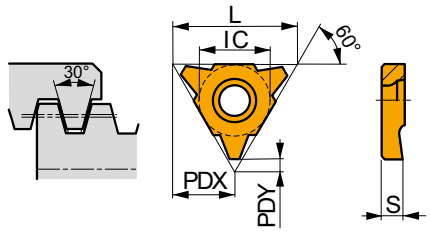
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN TR-S PP EN exterior, desenho à esquerda e à direita, para maquinar roscas Trapezoidais, e cortes contínuos.												
TN 22EN600TR	**T8030**	–	160	95	150	480	40	–	6.00	–	11.0	1.9
TN 22EN700TR	**T8030**	–	160	95	150	480	40	–	7.00	–	11.0	1.9

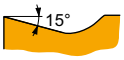
TN TR-S INT

PRAMET

	IC (mm)	L (mm)	S (mm)
22	12.700	22.00	4.60

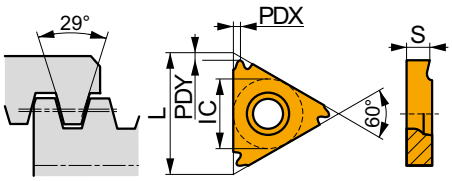


Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

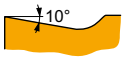
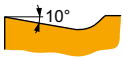
Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN M60-S PP NN interior, desenho à esquerda e à direita, para maquinar roscas Métricas e Unificadas, e cortes contínuos.												
TN 22NN600TR	**T8030**	–	160	95	150	480	40	–	6.00	–	11.0	1.9
TN 22NN700TR	**T8030**	–	160	95	150	480	40	–	7.00	–	11.0	1.9

TN ACME EXT

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



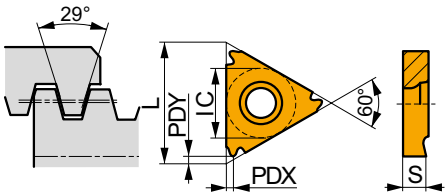
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN ACME ER exterior, desenho à direita, para maquinar roscas ACME, e cortes contínuos.												
TN 16ER120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16ER100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16ER080ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22ER060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22ER050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0
												
TN ACME EL exterior, desenho à esquerda, para maquinar roscas ACME, e cortes contínuos.												
TN 16EL120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16EL100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16EL080ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22EL060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22EL050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0

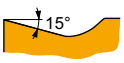
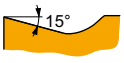
TN ACME INT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN ACME NR interior, desenho à direita, para maquinar roscas ACME, e cortes contínuos.									
TN 16NR120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16NR100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16NR080ACME	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22NR060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22NR050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0
												
			TN ACME NL interior, desenho à esquerda, para maquinar roscas ACME, e cortes contínuos.									
TN 16NL120ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	1.5	1.3
TN 16NL100ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16NL080ACME	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 22NL060ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	2.0
TN 22NL050ACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	5.0	2.3	2.0

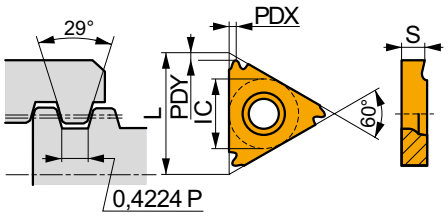
[1)] Suportes têm de ser modificados

NEW

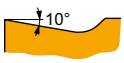
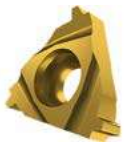
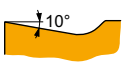
TN STACME EXT

PRAMET

	IC	L	S
	(mm)	(mm)	(mm)
16	9.525	16.50	3.47



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

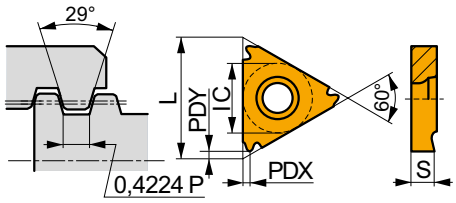
Produto		RE	P vc	M vc	K vc	N vc	S vc	H vc	TP	TPI	PDX	PDY
		(mm)	(m/min)	(m/min)	(m/min)	(m/min)	(m/min)	(m/min)	(mm)		(mm)	(mm)
												
			1 Ú E									
TN STACME ER exterior, desenho à direita, para maquinar roscas Stub ACME, e cortes contínuos.												
TN 16ER160STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	16.0	0.8	0.8
TN 16ER120STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	0.8	0.8
TN 16ER100STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16ER080STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 16ER060STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.4	1.3
												
			1 Ú E									
TN STACME EL exterior, desenho à esquerda, para maquinar roscas Stub ACME, e cortes contínuos.												
TN 16EL160STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	16.0	0.8	0.8
TN 16EL120STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	12.0	0.8	0.8
TN 16EL100STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.3
TN 16EL080STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.3
TN 16EL060STACME	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.4	1.3

NEW

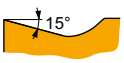
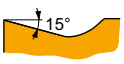
TN STACME INT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

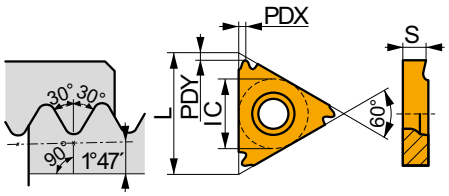
Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
			TN STACME NR interior, desenho à direita, para maquinar roscas Stub ACME, e cortes contínuos.									
TN 16NR160STACME	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NR120STACME	**T8030**	–	160	95	150	480	40	–	–	12.0	0.8	0.8
TN 16NR100STACME	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.3
TN 16NR080STACME	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.3
TN 16NR060STACME	**T8030**[1)]	–	160	95	150	480	40	–	–	6.0	1.3	1.3
												
			TN STACME NL interior, desenho à esquerda, para maquinar roscas Stub ACME, e cortes contínuos.									
TN 16NL160STACME	**T8030**	–	160	95	150	480	40	–	–	16.0	0.8	0.8
TN 16NL120STACME	**T8030**	–	160	95	150	480	40	–	–	12.0	0.8	0.8
TN 16NL100STACME	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.3
TN 16NL080STACME	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.3
TN 16NL060STACME	**T8030**[1)]	–	160	95	150	480	40	–	–	6.0	1.3	1.3

[1)] Suportes têm de ser modificados

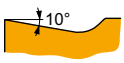
TN API RD EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



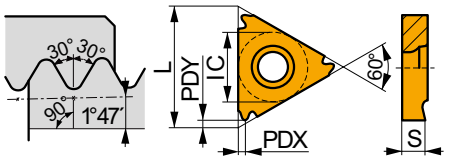
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN API ER exterior, desenho à direita, para maquinar roscas API, e cortes contínuos.												
TN 16ER100API-RD01	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.2
TN 16ER080API-RD01	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.2

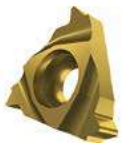
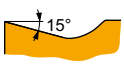
TN API RD INT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47



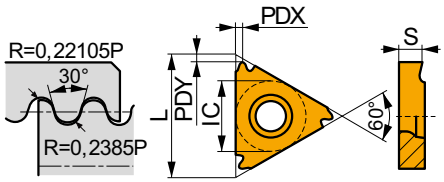
Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
												
TN API NR interior, desenho à direita, para maquinar de roscas API, e cortes contínuos.												
TN 16NR100API-RD01	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.2
TN 16NR080API-RD01	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.2

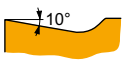
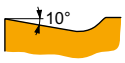
TN RD EXT

PRAMET

	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

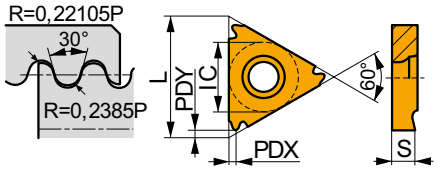
Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
			 TN RD ER exterior, desenho à direita, para maquinar roscas Métricas Redondas, e cortes contínuos.									
TN 16ER100RD	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16ER080RD	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 16ER060RD	**T8030**[1)]	–	160	95	150	480	40	–	–	6.0	1.5	1.2
TN 22ER060RD	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8
			 TN RD EL exterior, desenho à esquerda, para maquinar roscas Métricas Redondas, e cortes contínuos.									
TN 16EL100RD	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16EL080RD	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2
TN 16EL060RD	**T8030**[1)]	–	160	95	150	480	40	–	–	6.0	1.5	1.2
TN 22EL060RD	**T8030**	–	160	95	150	480	40	–	–	6.0	2.5	1.8

[1)] Suportes têm de ser modificados

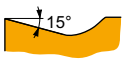
TN RD INT

PRAMET

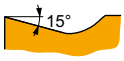
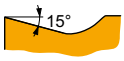
	IC (mm)	L (mm)	S (mm)
16	9.525	16.50	3.47
22	12.700	22.00	4.71



Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	M vc (m/min)	K vc (m/min)	N vc (m/min)	S vc (m/min)	H vc (m/min)	TP (mm)	TPI	PDX (mm)	PDY (mm)
			 TN RD NR interior, desenho à direita, para maquinar roscas Métricas Redondas, e cortes contínuos.									
TN 16NR100RD	**T8030**	–	160	95	150	480	40	–	–	10.0	1.5	1.2
TN 16NR080RD	**T8030**	–	160	95	150	480	40	–	–	8.0	1.5	1.2

Recomendação e valores iniciais para velocidade de corte (vc). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P	M	K	N	S	H	TP	TPI	PDX	PDY
			vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	vc (m/min)	(mm)		(mm)	(mm)
												
TN RD NR interior, desenho à direita, para maquinar roscas Métricas Redondas, e cortes contínuos.												
TN 16NR060RD	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.5	1.2
TN 22NR060RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	1.8
												
TN RD NL interior, desenho à esquerda, para maquinar roscas Métricas Redondas, e cortes contínuos.												
TN 16NL100RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	10.0	1.5	1.2
TN 16NL080RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	8.0	1.5	1.2
TN 16NL060RD	**T8030**[1)]	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	1.5	1.2
TN 22NL060RD	**T8030**	–	■ 160	■ 95	■ 150	◪ 480	◪ 40	–	–	6.0	2.5	1.8

[1)] Suportes têm de ser modificados

SE(RL)

P M K N S H

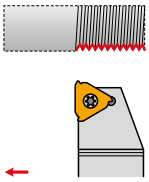
PRAMET

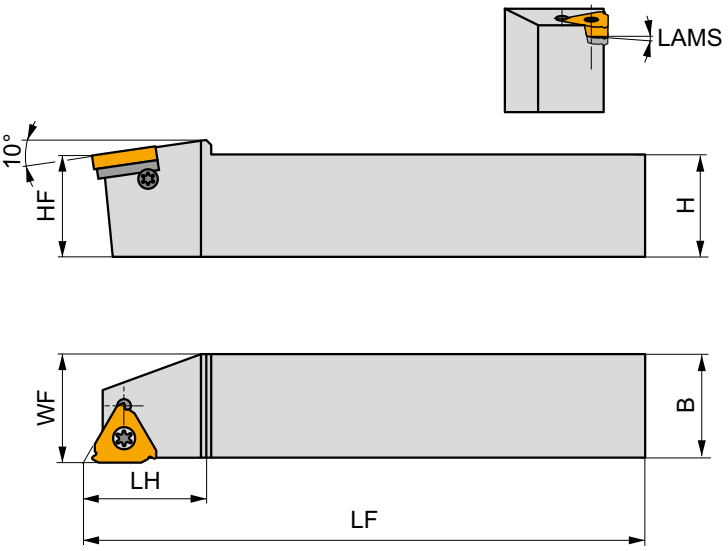
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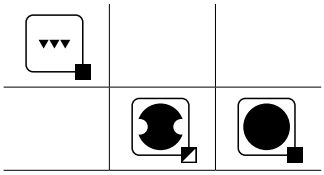


Porta-Ferramentas de Roscar Exterior, Fixação por Parafuso, para Pastilhas TN 11, 16 ou 22

Porta-ferramentas de roscar exterior à direita ou à esquerda com fixação por parafuso, para roscagem externa com pastilhas TN16 ou 22 ER / EL. Adequado para roscas métricas ou em polegadas. Também adequado para abertura de ranhuras pouco profundas. Corpo tratado para maior tempo de vida útil da ferramenta.









	Produto	H (mm)	HF (mm)	B (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)		
R	**SER 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SER 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SER 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SER 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SER 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13
L	**SEL 2020 K 16**	20	20	20	20	125	22.5	–	GI068	Z12
	SEL 2525 M 16	25	25	25	25	150	24	–	GI068	Z12
	SEL 3225 P 16	32	32	25	25	170	24.5	–	GI068	Z12
	SEL 2525 M 22-A	25	25	25	25	150	25.5	–	GI071	Z13
	SEL 3225 P 22-A	32	32	25	25	170	25.5	–	GI071	Z13

GI068	TN 16ER..	TN 16EL..
GI071	TN 22ER..	TN 22EL..

		Nm							
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	604
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	604

SE(RL)-S

P M K N S H

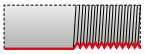
PRAMET

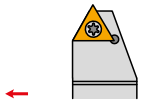
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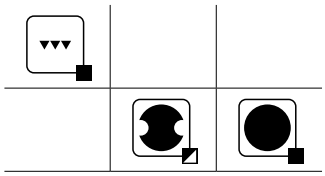


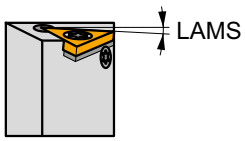
Porta-Ferramentas de Roscar Exterior, Fixação por Parafuso, para Pastilhas Neutras TN 22

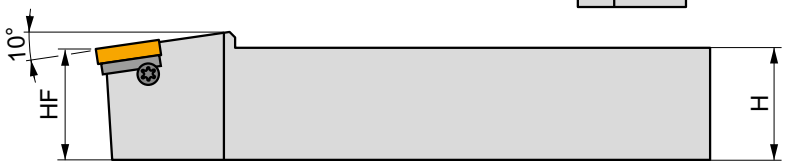
Porta-ferramentas de roscar exterior à direita ou à esquerda com fixação por parafuso, para roscagem exterior de passo grosso com pastilhas TN22 EN. Adequado para roscas métricas ou em polegadas. Corpo tratado para maior tempo de vida útil da ferramenta.

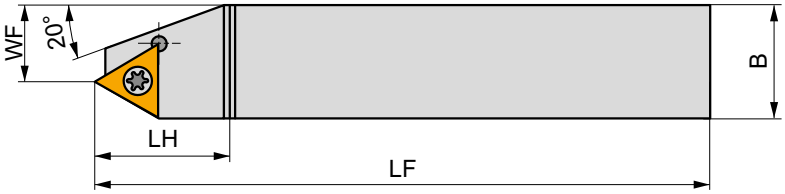














	Produto	H (mm)	HF (mm)	B (mm)	WF (mm)	LF (mm)	LH (mm)	LAMS (°)		
R	**SER-S 2525 M 22-A**	25	25	25	14	150	30	–	GI086	Z15
	SER-S 3225 P 22-A	32	32	25	14	170	30	–	GI086	Z15
L	**SEL-S 2525 M 22-A**	25	25	25	14	150	30	–	GI086	Z15
	SEL-S 3225 P 22-A	32	32	25	14	170	30	–	GI086	Z15

GI086	TN 22EN..

Z15	US 4514A-T20	5.0 Nm	M 4.5	14	SP 0405	FLAG T20	604

SI(RL)

P M K N S H

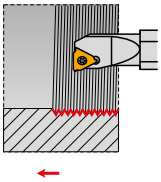
PRAMET

S

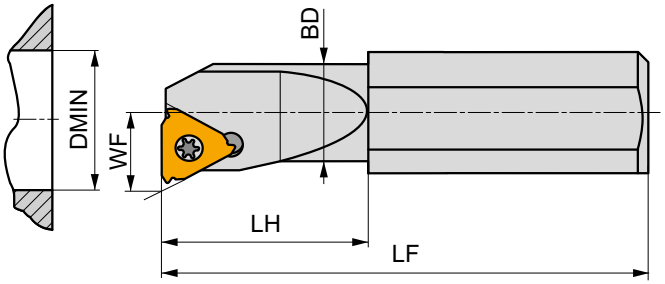


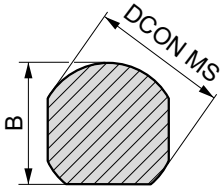
Porta-Ferramentas de Roscar Interior, Fixação por Parafuso, para Pastilhas TN 11, 16 ou 22

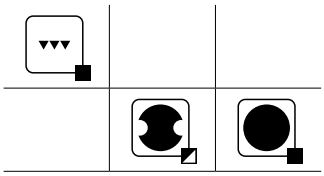
Porta-ferramentas de roscar interior à direita ou à esquerda com fixação por parafuso, para roscagem interna com pastilhas TN11, 16 ou 22 NR/NL. Adequado para roscas métricas ou em polegadas. Diâmetro interno mínimo Ø13 mm. Também adequado para abertura de ranhuras pouco profundas. Disponível com hastes de Ø16 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.













	Produto	B (mm)	DCON MS (mm)	DMIN (mm)	BD (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LH (mm)	LAMS (°)			
R	SIR 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIR 0010 K 11-1	14.5	16	13	10	7.45	14	7	125	25	1	–	GI085	Z11
	SIR 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIR 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIR 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIR 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIR 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIR 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIR 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIR 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIR 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIR 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIR 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13
L	SIL 0010 K 11-0	14.5	16	13	10	7.45	14	7	125	25	0	–	GI085	Z11
	SIL 0010 K 11-1	14.5	16	13	10	7.55	14	7	125	25	1	–	GI085	Z11
	SIL 0013 M 11-0	14.5	16	16	13	9	14	7	150	32	0	–	GI085	Z11
	SIL 0013 M 11-1	14.5	16	16	13	9	14	7	150	32	1	–	GI085	Z11
	SIL 1416 N 16-0	14	16	22	17	11.4	14.5	7.5	160	–	0	–	GI022	Z9
	SIL 1416 N 16-1	14	16	22	17	11.4	14.5	7.5	160	–	1	–	GI022	Z9
	SIL 1416 N 16-2	14	16	16.5	15.5	10.6	14.5	7.5	160	40	2	✓	GI022	Z10
	SIL 1820 P 16	18.5	20	27	21	13.85	18	9	170	–	–	–	GI022	Z12
	SIL 2325 Q 16	23.5	25	29	26	16.55	23	11.5	180	–	–	–	GI022	Z12
	SIL 2532 S 16	30	32	36	32	19.75	25	12.5	250	–	–	–	GI022	Z12
	SIL 2532 S 22-2	30	32	25	25	16.65	25	12.5	250	80	2	✓	GI076	Z14
	SIL 2532 S 22-A	30	32	36	32	21.65	25	12.5	250	–	–	–	GI076	Z13
	SIL 3240 T 22-A	38	40	48	40	25.85	32	16	300	–	–	–	GI076	Z13

GI022	TN 16NR..	TN 16NL..
GI076	TN 22NR..	TN 22NL..
GI085	TN 11NR..	TN 11NL..

Z10	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	–
Z11	US 2506-T07P	0.9	M 2.5	6.3	–	–	FLAG T07P	–	–
Z12	US 3512A-T15P	3.0	M 3.5	12.7	–	HS 0304	FLAG T15P	HXK 2.5	📖 604
Z13	US 4514A-T20	5.0	M 4.5	14	SP 0405	–	FLAG T20	–	📖 604
Z14	US 4514A-T20	5.0	M 4.5	14	–	–	FLAG T20	–	–
Z9	US 3510A-T15P	3.0	M 3.5	10.6	–	–	FLAG T15P	–	P-16

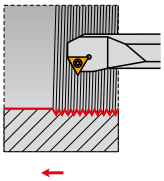
SI(RL)-S

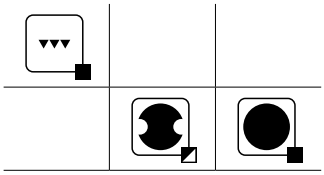
P M K N S H

PRAMET

S

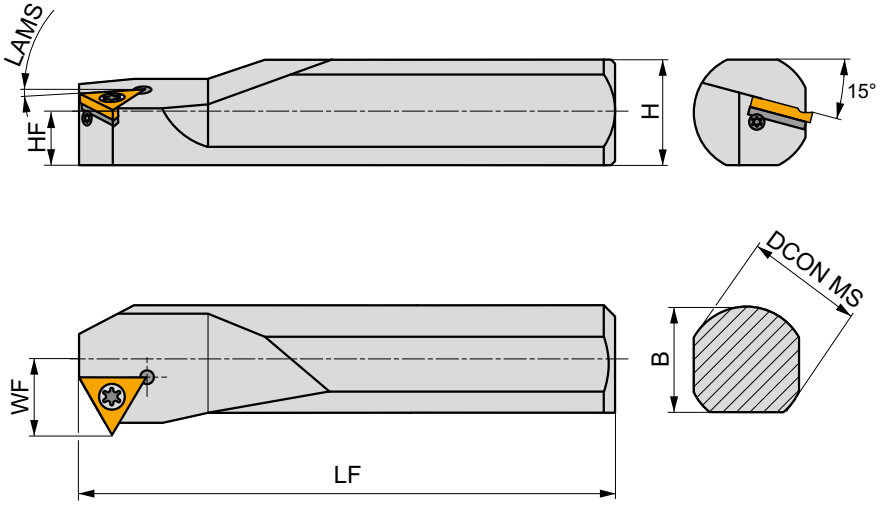






Porta-Ferramentas de Roscar Interior, Fixação por Parafuso, para Pastilhas Neutras TN 22

Porta-ferramentas de roscar interior à direita ou à esquerda com fixação por parafuso, para roscagem interna de passo grosso com pastilhas TN22 NN. Adequado para rosca métricas ou em polegadas. Ø interno mínimo 39 mm. Disponível com hastes de Ø32 até Ø40 mm. Corpo tratado para maior tempo de vida útil da ferramenta.





	Produto	B (mm)	DCON MS (mm)	DMIN (mm)	WF (mm)	H (mm)	HF (mm)	LF (mm)	LAMS (°)		
R	**SIR-S 2532 S 22-A**	30	32	39	22.3	25	12.5	250	–	GI107	Z15
	SIR-S 3240 T 22-A	38	40	48	27	32	16	300	–	GI107	Z15
L	**SIL-S 2532 S 22-A**	30	32	39	22.3	25	12.5	250	–	GI107	Z15
	SIL-S 3240 T 22-A	38	40	48	27	32	16	300	–	GI107	Z15

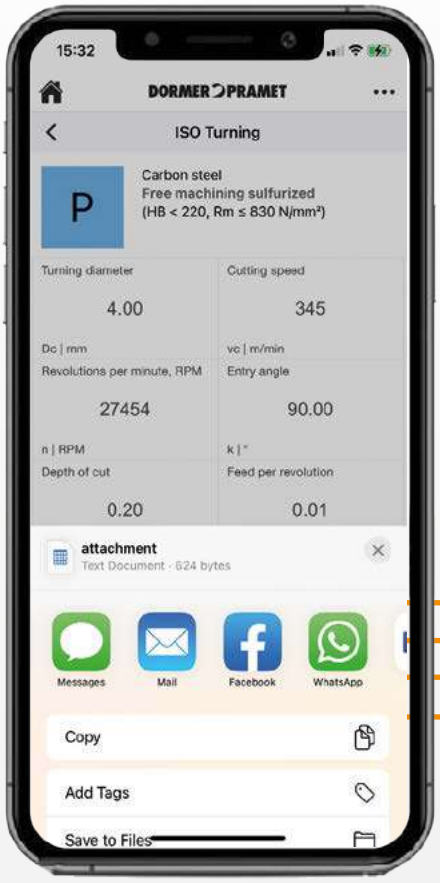
GI107	TN 22NN..

Z15	US 4514A-T20	5.0 Nm	M 4.5	14	SP 0405	FLAG T20	604

DORMER PRAMET

TODOS OS MATERIAIS

Maquinação de aço, aço inoxidável, ferro fundido, superligas ou materiais não ferrosos, todos eles estão considerados na nossa aplicação de calculadora. Descarregue hoje de sua loja de aplicações.**Simplesmente confiável.**





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ESCATELAR



📖 6		WMG E ISO 13399
📖 10	TORNEAMENTO ISO	INSTRUÇÕES
📖 18		NAVEGADORES
📖 57		PASTILHAS POSITIVAS
📖 219		PASTILHAS NEGATIVAS
📖 386		SANGRAR E RANHURAR
📖 482		TORNEAMENTO DE ROSCAS
📖 **528**		**ESCATELAR**
📖 536		INFORMAÇÃO TÉCNICA GERAL

ESCATELAR - VISÃO GERAL DOS SÍMBOLOS

SÍMBOLOS GERAIS

- Utilização principal
- Utilização possível
- Acabamento - qualidade de superfície muito boa
- Maquinação média - qualidade de superfície boa
- Desbaste - rugosidade de superfície ilimitada
- Adequado para condições de trabalho estáveis
- Adequado para condições de trabalho instáveis
- Adequado para condições de trabalho muito instáveis

CARACTERÍSTICAS

- Modelagem interior
- Opção de gama ampla universal
- Aresta afiada

OUTRO

- Torque de aperto do parafuso(Nm)
- Alimentação de refrigerante interno

PASTILHAS PARA ESCATELAR - NAVEGADOR

HZ



531

HZ-2



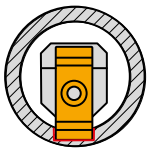
532

SUPORTES DE ESCATELAR - NAVEGADOR

PHZ

	HZ
	03 04 05 06 08 10 12
 Ø 9,5 Ø 24,7	
533	531

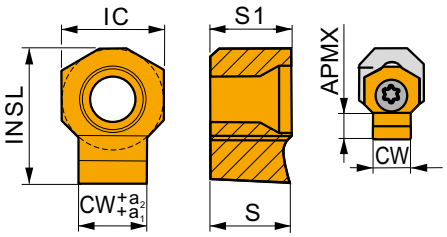
PHZ-2

	HZ/2..
	14 16 18 20
 Ø 44 Ø 58	
534	532

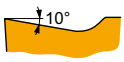
HZ

PRAMET

	IC	INSL	APMX	S	S1	CW
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
0604-30	6.000	7.5	1.60	4.66	4.76	3.00
0604-40	6.000	8.0	2.50	4.66	4.76	4.00
0604-50	6.000	8.0	3.00	4.66	4.76	5.00
1006-60	10.000	13.5	4.20	6.25	6.35	6.00
1006-80	10.000	13.5	5.20	6.25	6.35	8.00
1309-100	13.000	18.5	6.20	9.40	9.53	10.00
1309-120	13.000	18.5	7.20	9.40	9.53	12.00



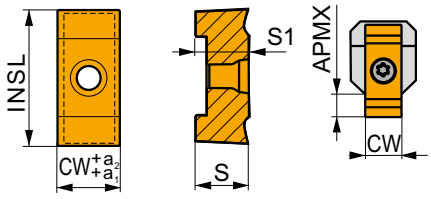
Recomendação e valores iniciais para velocidade de corte (vc) e avanço (fz). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE	P		M		K		N		S		H		CW	CWTOLL	CWTOLU
			vc	fz	vc	fz	vc	fz	vc	fz	vc	fz	vc	fz			
		(mm)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(m/min)	(mm/tooth)	(mm)	(mm)	(mm)
			U F														
			Geometria positiva para escatelar (uma aresta de corte).														
HZ 1006-60 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	0.07	0.14
HZ 1006-60 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	0.03	0.08
HZ 1006-60 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	0.00	0.01
HZ 1006-60 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	6.00	-0.04	-0.01
HZ 1006-80 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	0.08	0.17
HZ 1006-80 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	0.04	0.10
HZ 1006-80 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	0.00	0.02
HZ 1006-80 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	8.00	-0.05	-0.02
HZ 1309-100 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	0.08	0.17
HZ 1309-100 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	0.04	0.10
HZ 1309-100 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	0.00	0.02
HZ 1309-100 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	10.00	-0.05	-0.02
HZ 1309-120 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	0.10	0.21
HZ 1309-120 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	0.05	0.12
HZ 1309-120 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	0.00	0.02
HZ 1309-120 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	12.00	-0.06	-0.02
HZ90 0604-30 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	0.06	0.12
HZ90 0604-30 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	0.02	0.06
HZ90 0604-30 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	0.00	0.01
HZ90 0604-30 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	3.00	-0.03	-0.01
HZ90 0604-40 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	0.07	0.14
HZ90 0604-40 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	0.03	0.08
HZ90 0604-40 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	0.00	0.01
HZ90 0604-40 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	4.00	-0.04	-0.01
HZ90 0604-50 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	0.07	0.14
HZ90 0604-50 D10	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	0.03	0.08
HZ90 0604-50 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	0.00	0.01
HZ90 0604-50 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	5.00	-0.04	-0.01

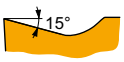
HZ-2

PRAMET

	INSL (mm)	APMX (mm)	S (mm)	S1 (mm)	CW (mm)
14-14	36.0	8.00	13.90	14.00	14.00
16-16	36.0	9.00	13.90	14.00	16.00
18-18	45.0	12.00	15.90	16.00	18.00
20-20	45.0	13.00	15.90	16.00	20.00



Recomendação e valores iniciais para velocidade de corte (vc) e avanço (fz). Consulte a nossa app Calculadora de Maquinação para cálculos adicionais.

Produto		RE (mm)	P vc (m/min)	P fz (mm/tooth)	M vc (m/min)	M fz (mm/tooth)	K vc (m/min)	K fz (mm/tooth)	N vc (m/min)	N fz (mm/tooth)	S vc (m/min)	S fz (mm/tooth)	H vc (m/min)	H fz (mm/tooth)	CW (mm)	CWTOLL (mm)	CWTOLU (mm)
																	
Geometria positiva para escatelar (duas arestas de corte).																	
HZ/2 14-14 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	14.00	0.10	0.21
HZ/2 14-14 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	14.00	0.00	0.02
HZ/2 14-14 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	14.00	-0.06	-0.02
HZ/2 16-16 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	16.00	0.10	0.21
HZ/2 16-16 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	16.00	0.00	0.02
HZ/2 16-16 P9	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	16.00	-0.06	-0.02
HZ/2 18-18 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	18.00	0.10	0.21
HZ/2 18-18 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	18.00	0.00	0.02
HZ/2 18-18 P9	**333TN**	–	50	0.10	30	0.10	45	0.10	–	–	–	–	–	–	18.00	-0.06	-0.02
HZ/2 20-20 C11	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	20.00	0.11	0.24
HZ/2 20-20 H7	**333TN**	–	50	0.10	30	0.09	45	0.10	–	–	–	–	–	–	20.00	0.00	0.02
HZ/2 20-20 P9	**333TN**	–	50	0.10	30	0.10	45	0.10	–	–	–	–	–	–	20.00	-0.07	-0.02

PHZ

P M K N S H

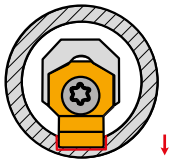
PRAMET

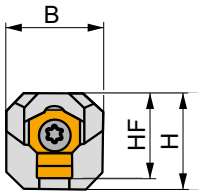
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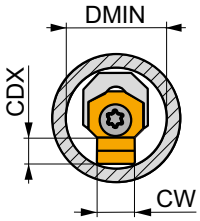


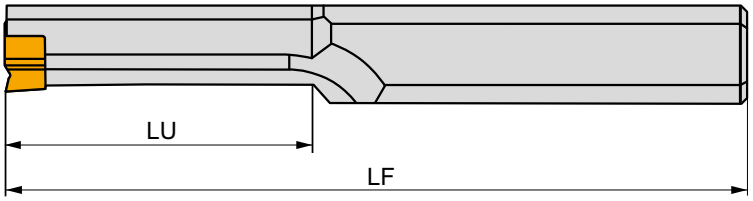
Porta-Ferramentas de Interior de Escatelar para Diâmetros Pequenos com Pastilhas HZ de uma face

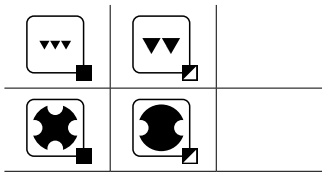
Porta-ferramentas de interior para brochar até 12 mm de largura. Diâmetro interno mínimo Ø9,5 mm. Corpo tratado para maior tempo de vida útil da ferramenta.













	Produto	H (mm)	HF (mm)	B (mm)	OAL (mm)	LU (mm)	CW (mm)	DMIN (mm)	CDX (mm)	kg		
N	**PHZ 90 1104-06**	11.3	9	8.5	160	35	3.00	9.5	1.6	0.17	GI239	SH21
	PHZ 90 1107-06	11.3	10	7	200	60	–	–	–	0.19	GI240	SH21
	PHZ 90 1111-06	11.3	12	–	200	60	–	–	–	0.19	GI240	SH21
	PHZ 1512-10	15.5	16.2	–	220	–	–	–	–	0.40	GI224	SH22
	PHZ 2014-13	20.6	21.5	–	250	–	–	–	–	0.65	GI225	SH23

GI224	HZ 1006-60	HZ 1006-80
GI225	HZ 1309-100	HZ 1309-120
GI239	HZ90 0604-30	–
GI240	HZ90 0604-40	HZ90 0604-50

SH21	DVF 3593	0.8	M 2.5	10	TX207PLUS
SH22	DVF 2260	3.6	M 4	15	TX215PLUS
SH23	5513 020-14	8.5	M 6	18	TX225PLUS

PHZ-2

P M K N S H

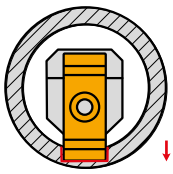
PRAMET

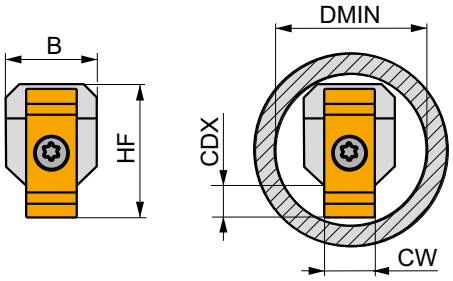
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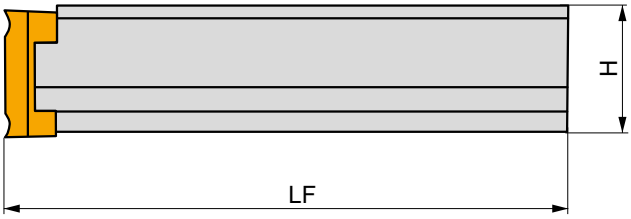


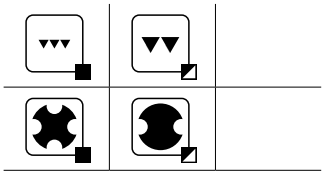
Porta-Ferramentas de Interior de Escatelar para Diâmetros Grandes com Pastilhas HZ de duas faces

Porta-ferramentas de interior para brochar até 20 mm de largura. Diâmetro interno mínimo Ø44 mm. Corpo tratado para maior tempo de vida útil da ferramenta.











	Produto	H (mm)	HF (mm)	B (mm)	OAL (mm)	CW (mm)	DMIN (mm)	CDX (mm)	kg		
N	**PHZ/2 3625-14**	36	37.5	25	300	–	44	–	1.86	GI235	SH23
	PHZ/2 4832-18	48	50	32	400	–	58	–	2.00	GI241	SH24

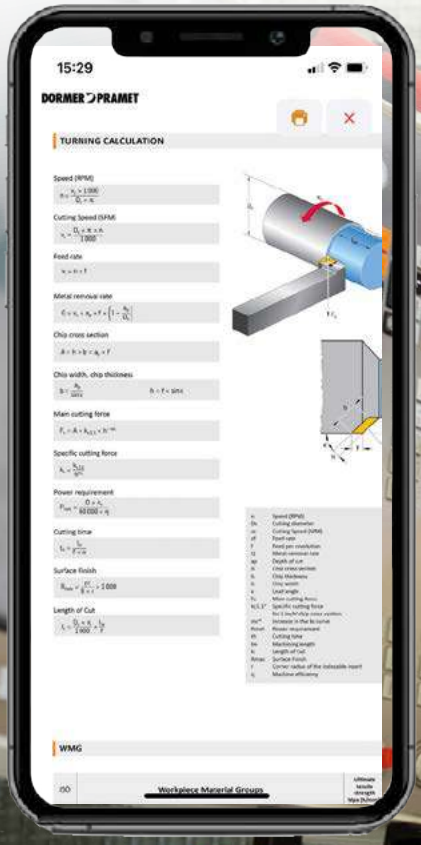
GI235	HZ/2 14-14	HZ/2 16-16
GI241	HZ/2 18-18	HZ/2 20-20

		Nm			
SH23	5513 020-14	8.5	M 6	18	TX225PLUS
SH24	5513 021-03	13.0	M 8	22	DMN 3124

DORMER PRAMET

A AJUDA ESTÁ À MÃO

A nossa equipa de suporte técnico está sempre à disposição para ajudar com quaisquer dúvidas técnicas ou dúvidas acerca das nossas aplicações técnicas. Utilize os detalhes de contato para entrar em contato com o escritório de vendas local da Dormer Pramet. **Simplesmente confiável.**



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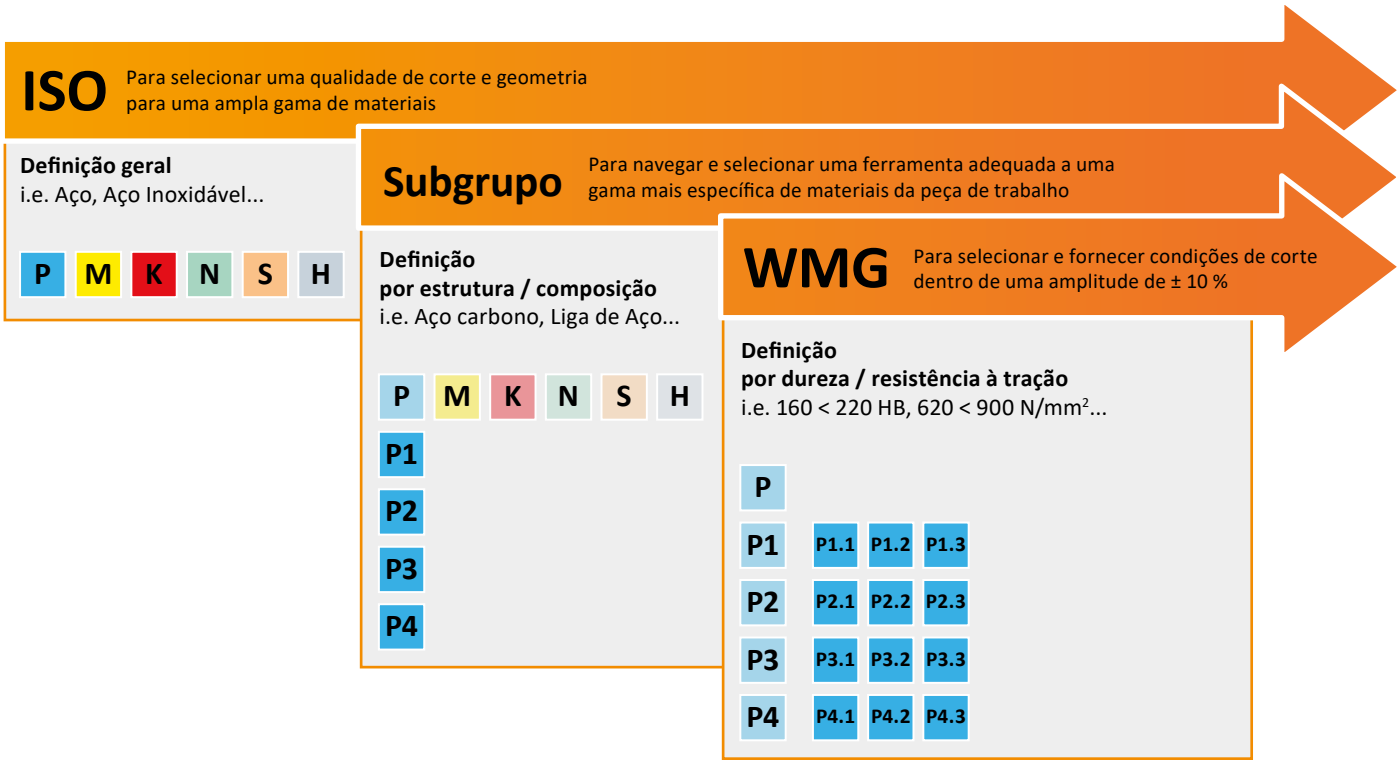
INFORMAÇÃO TÉCNICA GERAL



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GRUPOS DE MATERIAIS DE PEÇAS DE TRABALHO (WMG)



ACERCA DA CLASSIFICAÇÃO DORMER PRAMET SOBRE MATERIAIS DAS PEÇAS DE TRABALHO

(WMG) Tabela de Grupos de Materiais é utilizada para oferecer suporte fácil e seleção confiável da ferramenta de corte correta e valores iniciais para condições de maquinação em aplicações particulares. A Dormer Pramet classifica os materiais das peças em seis grupos de côr diferentes;

- **Azul:** Aço e aço fundido (grupo P)
- **Amarelo:** Aço inoxidável (grupo M)
- **Vermelho:** Ferro fundido (grupo K)
- **Verde:** Metais não ferrosos (grupo N)
- **Castanho:** Ligas de alta temperatura (grupo S)
- **Cinza:** Materiais endurecidos (grupo H)

Cada um deles é dividido em subgrupos com base na sua estrutura e / ou composição. Por exemplo, o aço do grupo P e o aço fundido são divididos em quatro subgrupos, nomeadamente;

- **P1** - Aço para maquinação livre
- **P2** - Aço carbono
- **P3** - Liga de aço
- **P4** - Aço ferramenta

Uma divisão final inclui propriedades do material, como dureza e resistência à tração. Isto é para fornecer aos nossos clientes uma recomendação completa da ferramenta, incluindo valores iniciais para velocidade de corte e avanço. A tabela na próxima página inclui uma descrição de cada grupo de materiais, bem como exemplos de designações mais frequentemente utilizadas.

Grupo ISO		Subgrupo		WMG (Grupo de Material da Peça		k_{vg}	Exemplos de materiais (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P	**Aço e aço fundido (aços com teor de liga ≤ 10% e uma dureza de <45HRC)**	P1	Aço de maquinação livre (aços carbono com maior maquinabilidade))	P1.1	Aço carbono sulfurado de maquinação livre com uma dureza <240 HB	1.33	AISI **1108,** EN **15S22,** DIN **1.0723,** SS **1922,** ČSN **11120,** BS **210A15,** UNE **F.210F,** GB **Y15,** AFNOR **10F1,** GOST **A30,** UNI **CF10S20**
				P1.2	Aço carbono sulfurado e fosforado de maquinação livre com uma dureza <180 HB	1.49	AISI **1211,** EN **11SMn30,** DIN **1.0715,** SS **1912,** ČSN **11109,** BS **230M7,** UNE **F.2111,** GB **Y15,** AFNOR **S250,** GOST **A40G,** UNI **CF9SMn28**
				P1.3	Aço carbono com chumbo e aço sulfurado/ fosforado de maquinação livre com uma dureza <180 HB	1.53	AISI **12L13,** EN **11SMnPb30,** DIN **1.0718,** SS **1914,** ČSN **12110,** BS **210M16,** UNE **F.2114,** GB **Y15Pb,** AFNOR **S250Pb,** GOST **AS35G2,** UNI **CF10SPb20**
		P2	Aço carbono macio (aços compostos principalmente de ferro e carbono)	P2.1	Aço macio com baixo teor de carbono <0,25% C, e com uma dureza <180 HB	1.14	AISI **1015,** EN **C15,** DIN **1.0401,** SS **1350,** ČSN **11301 ,** BS **080A15,** UNE **F.111,** GB **15,** AFNOR **C18RR,** GOST **St2ps,** UNI **Fe360**
				P2.2	Aço macio com um teor médio de carbono <0,55% C, e com uma dureza <240 HB	1.00	AISI **1030,** EN **C30,** DIN **1.0528,** SS **1550,** ČSN **12031,** BS **080M32,** UNE **F.1130,** GB **30,** AFNOR **AF50C30,** GOST **30G,** UNI **Fe590**
				P2.3	Aço carbono simples com um teor elevado de carbono > 0,55% C, e com uma dureza de <300 HB	0.89	AISI **1060,** EN **C60,** DIN **1.0601,** SS **1655,** ČSN **12061,** BS **080A62,** UNE **F513,** GB **60,** AFNOR **1C60,** GOST **60G,** UNI **C60**
		P3	Liga de aço (aços carbono com um teor de liga ≤ 10%)	P3.1	Liga de aço com dureza <180 HB	0.92	AISI **5015,** EN **16Mo3,** DIN **1.5415,** SS **2912,** ČSN **15020,** BS **1501-240,** UNE **F.2601,** GB **16Mo,** AFNOR **15D3,** GOST **15M,** UNI **16Mo3KW**
				P3.2	Liga de aço com dureza de 180 - 260 HB	0.74	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
				P3.3	Liga de aço com dureza de 260 - 360 HB	0.63	AISI **4140,** EN **42CrMo4,** DIN **1.7225,** SS **2244,** ČSN **15142,** BS **708M40,** UNE **F.8232,** GB **42CrMo,** AFNOR **42CD4,** GOST **40ChFA,** UNI **42CrMo4**
		P4	Aço ferramenta (liga de aço especial para ferramentas, moldes e matrizes)	P4.1	Aço ferramenta com dureza <26 HRC	0.55	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.2	Aço ferramenta com dureza de 26 - 39 HRC	0.47	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**
				P4.3	Aço ferramenta com dureza de 39 - 45 HRC	0.38	AISI **D2,** EN **X155CrVMo12-1,** DIN **1.2370,** SS **2736,** ČSN **19573,** BS **BD2,** UNE **F.520A,** GB **Cr12Mo1V1,** AFNOR **Z160CDV12,** GOST **Ch12MF,** UNI **X155CrVMo121KU**

Grupo ISO		Subgrupo		WMG ((Grupo de Material da Peça)		k_{vG}	Exemplos de materiais (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M	**Aço inoxidável (aços resistentes à corrosão com um teor de cromo ≥ 11%)**	**M1**	Aço inoxidável ferrítico (ligas de crómio não endurecíveis)	**M1.1**	Aço inoxidável, ferrítico com dureza <160 HB	**1.22**	AISI **S429,** EN **X7Cr14,** DIN **1.4001,** SS **2326,** BS **434S17,** UNE **F.3401,** AFNOR **Z8C12,** GOST **08Ch13,** UNI **X6CrTi12**
				M1.2	Aço inoxidável ferrítico com dureza de 160 - 220 HB	**1.03**	AISI **446,** EN **X10CrAl24,** DIN **1.4762,** SS **2322,** ČSN **17113,** BS **430S17,** UNE **F.3154,** GB **10Cr17,** AFNOR **Z10CAS24,** GOST **12Ch17,** UNI **X16Cr26**
		M2	Aço inoxidável martensítico (ligas de crómio endurecíveis)	**M2.1**	Aço inoxidável martensítico com dureza <200 HB	**1.08**	AISI **430F,** EN **X14CrMoS17,** DIN **1.4104,** SS **2383,** ČSN **17140,** BS **410S21,** UNE **F.3117,** AFNOR **Z10CF17,** UNI **X10CrS17**
				M2.2	Aço inoxidável martensítico com dureza de 200 - 280 HB	**0.89**	AISI **440C,** EN **X105CrMo17,** DIN **1.4125,** SS **2385,** ČSN **17023,** BS **425C11,** UNE **F.3402,** GB **102Cr17Mo,** AFNOR **Z100CD17,** GOST **95Ch18,** UNI **GX6CrNi 13 04**
				M2.3	Aço inoxidável martensítico com dureza de 280 - 380 HB	**0.75**	AISI **420,** EN **X45Cr13,** DIN **1.4034,** ČSN **17029,** BS **425C11,** UNE **F.3405,** AFNOR **Z44C14,** GOST **20X17H12,** UNI **X30Cr13**
		M3	Aço inoxidável austenítico (ligas de cromo níquel e cromo níquel manganês)	**M3.1**	Aço inoxidável, austenítico com uma dureza <200 HB	**1.00**	AISI **304,** EN **X5CrNi18-12,** DIN **1.4303,** SS **2352,** ČSN **17249,** BS **305S17,** UNE **F.3513,** GB **10Cr18Ni12,** AFNOR **Z8CN18.12,** UNI **X7CrNi18 10**
				M3.2	Aço inoxidável, austenítico com uma dureza de 200 - 260 HB	**0.86**	AISI **309,** EN **X15CrNiSi20-12,** DIN **1.4828,** ČSN **17251,** BS **309S24,** UNE **F.3312,** GB **1Cr23Ni13,** AFNOR **Z15CNS20.12,** GOST **20Ch20N14S2,** UNI **16CrNi23 14**
				M3.3	Aço inoxidável, austenítico com uma dureza de 260 - 300 HB	**0.77**	AISI **5848,** EN **X45CrNiW18-9,** DIN **1.4873,** BS **331S40,** UNE **F.3211,** AFNOR **Z35CNWS14-4,** UNI **X45CrNiW 18 9**
		M4	Super austenítico, duplex ou aço inoxidável de endurecimento por precipitação (ligas austeníticas com > 20% de Ni, microestrutura austenítico ferrítica de endurecimento por precipitação)	**M4.1**	Aço inoxidável, austenítico ferrítico ou super austenítico com uma dureza <300 HB	**0.75**	AISI **329,** EN **X1-NiCrMoCU25-20-5,** DIN **1.4539,** SS **2562,** ČSN **17265,** BS **318S13,** UNE **F.3552,** GB **022Cr25NiMo2N,** AFNOR **Z1NCDU25.20**
				M4.2	Aço inoxidável, austenítico com endurecimento por precipitação com uma dureza de 300 - 380 HB	**0.64**	AISI **631 (17-7PH),** EN **X7CrNiAL17-7,** DIN **1.4568,** SS **2388,** ČSN **17465 ,** BS **301S13,** UNE **F.3217,** GB **07Cr17Ni7Al,** AFNOR **29CNA17-07,** GOST **09Ch17N7Ju1,** UNI **X53CrMnNiN21 9**

Grupo ISO		Subgrupo		WMG (Grupo de Material da Peça)		k_{vG}	Exemplos de materiais (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K	**Ferro Fundido (fundições de ferro e ligas de carbono com teor de carbono >2%)**	**K1**	Ferro cinzento (GG) (fundições de ferro carbono com uma microestrutura de grafite lamelar)	**K1.1**	Ferro cinzento, ferrítico ou ferrítico perlítico com uma dureza <180 HB	**1.35**	ASTM **A48 Grade 20 (F11401),** EN-**JL-100,** DIN **GG-10 (0.6010),** SS **0110,** STN **422410,** BS **Grade 150,** UNE **FG10,** GB **HAT 100,** AFNOR **Ft10D,** GOST **SC 10,** UNI **G10**
				K1.2	Ferro cinzento, ferrítico perlítico ou perlítico com uma dureza de 180 - 240 HB	**1.00**	ASTM **A48 Grade 30 (F12101),** EN-**JL-1030,** DIN **GG-20 (0.6020),** SS **0120,** STN **422420,** BS **Grade 220,** UNE **FG20,** GB **HT200,** AFNOR **Ft20D,** GOST **СЧ20,** UNI **G20**
				K1.3	Ferro cinzento, perlítico com uma dureza de 240 - 280 HB	**0.75**	ASTM **A48 Grade 50 (F13501),** EN-**JL-1060,** DIN **GG-35 (0.6035),** SS **0135,** STN **422435,** BS **Grade 350,** UNE **FG35,** GB **HAT300,** AFNOR **Ft35D,** GOST **SC35,** UNI **G35**
		K2	Ferro maleável (GTS / GTW) (fundições de ferro carbono tratadas termicamente com uma microestrutura sem grafite))	**K2.1**	Ferro maleável, ferrítico com dureza <160 HB	**1.39**	ASTM **A602 Grade M3210 (F20000),** EN-**JM-1130,** DIN **GTS-35 (0.8135),** SS **0815,** BS **B340/12,** UNE **Type A,** AFNOR **MN 35-10,** GOST **КЧ35-10**
				K2.2	Ferro maleável, ferrítico ou perlítico com um dureza de 160 - 200 HB	**1.13**	ASTM **A602 Grade M4504 (F20001),** EN-**JM-1040,** DIN **GTS-50-05 (0.8045),** BS **P50-05,** AFNOR **MB 45-7**
				K2.3	Ferro maleável, perlítico com dureza de 200 - 240 HB	**0.90**	ASTM **A602 Grade M7002 (F20004),** EN-**JM-1140,** DIN **GTS-45 (0.8145),** SS **0854,** STN **422540,** BS **P 45-06,** UNE **Typ B,** AFNOR **MP 50-5,** GOST **КЧ45-7,** UNI **GMN 45**
		K3	Ferro dúctil (GGG) (fundições de ferro carbono com uma microestrutura de grafite nodular)	**K3.1**	Ferro dúctil (nodular / esferoidal), ferrítico com dureza <180 HB	**1.23**	ASTM **A536 Grade 60-40-18 (F32800),** EN-**JS-1030,** DIN **GGG-40 (0.7040),** SS **0717,** STN **422304,** BS **420/12,** UNE **FGE 42-12,** GB **QT 400,** AFNOR **FGS 400-12,** GOST **ВЧ40**
				K3.2	Ferro dúctil (nodular / esferoidal), ferrítico e perlítico com uma dureza de 180 - 220 HB	**0.94**	ASTM **A536 Grade 80-55-06 (F33800),** EN-**JS-1050,** DIN **GGG-50 (0.7050),** SS **0727,** STN **422305,** BS **500/7,** UNE **FGE 50-7,** GB **QT 500-7,** AFNOR **FGS 500-7,** GOST **ВЧ50**
				K3.3	Ferro dúctil (nodular / esferoidal), perlítico com uma dureza de 220 - 260 HB	**0.76**	ASTM **A536 Grade 100-70-03 (F34800),** EN-**JS-1060,** DIN **GGG-60 (0.7060),** SS **0732,** STN **422306,** BS **600/3,** UNE **FG70-2,** GB **QT 600-3,** AFNOR **FGS 600-3,** GOST **ВЧ60**
		K4	Ferro austenítico ou dúctil austemperado (Ni-Resist / ADI) (fundições de liga de ferro carbono com microestrutura austenítica ou ausferrítica))	**K4.1**	Ferro fundido austenítico com uma dureza de <180 HB	**1.14**	ASTM **A436 Type 1 (L-NiCuCr 15 6 2, F41000),** EN-**JL-3011,** DIN **GGL-NiMn 13 7 (0.6652),** SS **0523,** BS **Grade F1,** AFNOR **FGL-Ni13Mn7,** GOST **S-NiMn 13 7**
				K4.2	Ferro fundido austenítico com uma dureza de 180 - 240 HB	**0.86**	ASTM **A439 Type D-2B (S-NiCr 20 3, F43001),** EN-**JS-3021,** DIN **GGG-NiMn 23 4,** SS **0776,** BS **Grade S2M,** AFNOR **FGS Ni23 Mn4,** GOST **ЧН19Х3Ш**
				K4.3	Ferro dúctil austemperado com dureza de 240 - 280 HB	**0.63**	ASTM **A897 Grade 110-70-11**
				K4.4	Ferro dúctil austemperado com dureza de 280 - 320 HB	**0.54**	ASTM **A897 Grade 125-80-10,** EN-**JS-1100,** DIN **GGG-90 (5.3400)**
				K4.5	Ferro dúctil austemperado com dureza de 320 - 360 HB	**0.45**	ASTM **A897 Grade 2 (150-110-07),** EN-**JS-1110,** DIN **GGG-100 (5.3403)**
		K5	Ferro grafite compactado (CGI) (fundições de ferro carbono com uma estrutura de grafite vermicular)	**K5.1**	Vermicular, Ferro grafite compactado com uma dureza <180 HB	**1.29**	ASTM **A842 Grade 300,** EN-**GJV-300,** DIN **GGV 30,** GOST **ЧВГ30,**
				K5.2	Vermicular, Ferro grafite compactado com uma dureza de 180 - 220 HB	**0.97**	ASTM **A842 Grade 350,** EN-**GJV-350,** DIN **GGV 35 (5.2200),** GOST **ЧВГ30,**
				K5.3	Vermicular, Ferro grafite compactado com uma dureza de 220 - 260 HB	**0.75**	ASTM **A842 Grade 450,** EN-**GJV-450,** DIN **GGV 45,** GOST **ЧВГ45,**

Grupo ISO		Subgrupo		WMG (Grupo de Material da Peça)		k_{vG}	Exemplos de materiais (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
N	Metais não ferrosos (metais incluindo ligas sem uma quantidade apreciável de ferro)	N1	Alumínio forjado	N1.1	Alumínio puro e ligas de alumínio forjado com dureza <60 HB	1.33	UNS **A91200,** EN **AL99.6,** DIN **3.0205,** SS **4010,** STN **424009,** BS **1C,** UNE **L-3001,** GB **L5,** AFNOR **A4,** GOST **АДС,** UNI **3567**
				N1.2	Ligas de alumínio forjado com dureza de 60 - 100 HB	1.00	UNS **A93004,** EN **AlMn0.5Mg0.5,** DIN **3.0505,** SS **4054,** STN **424432,** BS **N31,** UNE **L-3831,** GB **LF2,** AFNOR **A-M1,** GOST **АМц,** UNI **3568**
				N1.3	Ligas de alumínio forjado com dureza de 100 - 150 HB	0.67	UNS **A95083,** EN **AlMg4.5Mn0.7,** DIN **3.3547,** SS **4140,** STN **424415,** BS **N8,** UNE **L-3321,** GB **AlMg4.5Mn,** AFNOR **A-G4.5Mn,** GOST **Amg 4.5,** UNI **P-AlMg4.4**
		N2	Alumínio fundido	N2.1	Ligas de alumínio fundido com dureza <75 HB	0.67	UNS **A02080,** EN **AlCu4S,** BS **LM11,** STN **424331,** UNE **Al Si1Cu,** GOST **AMg5K,** UNI **G-AlSi7Mg**
				N2.2	Ligas de alumínio fundido com dureza de 75 - 90 HB	0.60	UNS **A02420,** EN **AlCu4Ni2Mg2,** SS **AlSi7MgFe,** BS **LM6,** STN **424519,** UNE **Al-7SiMg,** AFNOR **A-S7G,** GOST **AK7,** UNI **G-AlSi7Mg**
				N2.3	Ligas de alumínio fundido com uma dureza de 90 <140 HB	0.43	UNS **A03360,** EN **G-ALCu4NiMg2,** SS **ALSi10Mg,** STN **424336,** BS **LM 30,** AFNOR **A-S10G,** UNI **G-AlSi9Mg**
		N3	Cobre ou ligas de cobre	N3.1	Materiais de liga de cobre de corte livre com excelentes propriedades de maquinação	0.70	UNS **C14700,** EN **CuPb1P,** DIN **2.1498,** STN **423214,** BS **C111,** AFNOR **CuZn35Pb2,** GOST **L63-3,** UNI **CuS(P0.01)**
				N3.2	Ligas de cobre de aparas curtas com propriedades de maquinação boas a moderadas	0.41	UNS **C81540,** EN **CuNi2SiCr,** DIN **2.0857,** STN **423220,** BS **NS113,** UNE **CuSn12,** AFNOR **CuZn40,** GOST **L60,** UNI **P-CuZn-40**
				N3.3	Cobre eletrolítico e ligas de cobre de aparas longas com propriedades de maquinação de moderadas a fracas	0.21	UNS **C10100,** EN **CuAg0.1,** DIN **2.1203,** SS **5010,** UNE **CUSi3Mn1,** AFNOR **Cu-C2,** GOST **M1f,** UNI **Cu-OF**
		N4	Polímeros (materiais sintéticos ou semi-sintéticos)	N4.1	Polímeros termoplásticos	0.70	ABS, Acryl, Duraplast, Elastomer, EP, Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, MF, MPF, PA, PAI, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
				N4.2	polímeros termo endurecíveis	0.27	Aramid, Epoxy, Fluoropolymer, Mehacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
				N4.3	Polímeros reforçados ou compósitos	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
		N5	Grafite	N5.1		1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01RO, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650,

Grupo ISO		Subgrupo		WMG (Grupo de Material da Peça)		k_{vg}	Exemplos de materiais (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S	Ligas de alta temperatura (superligas com resistência a alta temperatura e resistentes à corrosão ultrapassando a do aço inoxidável)	S1	Titânio ou ligas de titânio	S1.1	Titânio ou ligas de titânio, com uma dureza <200 HB	1.94	UNS **R50250 (Grade 1),** EN **Ti 99.6,** DIN **3.7035,** BS **TA.2,** UNE **Ti-Po2,** AFNOR **T-40,** GOST **BT1-00,** AISI **R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,**
				S1.2	Ligas de titânio, com uma dureza de 200 - 280 HB	1.72	UNS **R56404 (Grade 29),** EN **Ti2Cu,** DIN **3.7124,** BS **TA.21,** UNE **Ti-P11,** AFNOR **T-U2 ,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
				S1.3	Ligas de titânio, com uma dureza de 280 - 360 HB	1.44	UNS **R54250 (Grade 38),** EN **TiAl6V4,** DIN **3.7165,** ČSN **TiAl6VELI,** BS **TA. 13,** UNE **Ti-P63,** AFNOR **T-A6V,** GOST **BT6,** AISI **TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553**
		S2	Ligas de alta temperatura à base de Ferro (Fe)	S2.1	Ligas de alta temperatura à base de Fe com uma dureza <200 HB	1.33	UNS **N08801 (Incoloy 801),** EN **X8 NiCrAlTi31-21,** DIN **1.4959,** BS **NA 15,** AFNOR **Z8NC33-21,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
				S2.2	Ligas de alta temperatura à base de Fe com uma dureza de 200 - 280 HB	1.17	UNS **N19907,** EN **X6NiCrTiMoVB25-15-2,** DIN **1.4980,** SS **2570,** BS **HR52,** AFNOR **Z6NCTDV25.15B,** GOST **36HXTЮ,** AISI **A-286, Discaloy, Haynes 556, Iconel 909, Greek Ascolloy**
		S3	Ligas de alta temperatura à base de níquel (Ni)	S3.1	Ligas de alta temperatura à base de Ni com uma dureza <280 HB	1.00	UNS **A09706 (Inconel 706),** EN **NiCr25FeAl,** DIN **2.4856,** BS **HR 6,** ČSN **Inconel 625,** UNE **F.3313,** GB **1Cr16Ni35,** AFNOR **NC22FeDNB,** GOST **XH38BT,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
				S3.2	Ligas de alta temperatura à base de Ni com uma dureza de 280 - 360 HB	0.83	UNS **N07001,** EN **NiCr20Co13Mo4Ti3Al,** DIN **2.4654,** BS **HR 2,** ČSN **Waspaloy,** AFNOR **NCKD 20ATV,** GOST **XH80TБЮ,** AISI **Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625**
		S4	Ligas de alta temperatura à base de Cobalto (Co)	S4.1	Ligas de alta temperatura à base de Co com uma dureza <240 HB	0.78	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**
				S4.2	Ligas de alta temperatura à base de Co com uma dureza de 240 - 320 HB	0.67	UNS **R30016 (Stellite 6b),** EN **CoCr20W15Ni,** DIN **2.4964,** AFNOR **KC 20 WN,** GOST **ЛК52,** AISI **Haynes 25, Stellite 21, 31**

Grupo ISO		Subgrupo		WMG (Grupo de Material da Peça)		k_{vG}	Exemplos de materiais (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H	**Materiais endurecidos (qualquer metal de engenharia com dureza > 45 HRC)**	**H1**	Ferro fundido refrigerado	**H1.1**	Ferro fundido refrigerado com uma dureza <440 HB	**1.52**	UNS **F45001,** EN-**GJS-1050-6,** DIN **5.3406,** SS **0512,** BS **Grade 2A**
		H2	Ferro fundido endurecido	**H2.1**	Ferro fundido endurecido com uma dureza <55 HRC	**0.90**	UNS **F45003,** EN-**GJS-1400-1,** DIN **5.3405,** SS **0457,** BS **Grade 3D**
				H2.2	Ferro fundido endurecido com uma dureza > 55 HRC	**0.77**	UNS **F45003,** EN **G-X260NiCr4-2,** DIN **0.9620,** SS **0466,** BS **Grade S**
		H3	Aço temperado <55 HRC	**H3.1**	Aço temperado com uma dureza <51 HRC	**1.00**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **AC38ХГМ,** UNI **35CrMo4KB**
				H3.2	Aço temperado com uma dureza de 51 - 55 HRC	**0.82**	AISI **4135,** EN **34CrMo4,** DIN **1.7220,** SS **2234,** STN **415131,** BS **198,** UNE **F.1250,** GB **35CrMo,** AFNOR **35CD4,** GOST **AC38ХГМ,** UNI **35CrMo4KB**
		H4	Aço temperado > 55 HRC	**H4.1**	Aço temperado com uma dureza de 55 - 59 HRC	**0.64**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**
				H4.2	Aço temperado com uma dureza > 59 HRC	**0.54**	UNS **T31501,** EN **100MnCrW4,** DIN **1.2510,** SS **2140,** STN **419413,** BS **BO1,** UNE **F.5220,** GB **9CrWMn,** AFNOR **90MWCrV5,** GOST **9ХВГ,** UNI **95MNWCr5KU**

Fatores de correção para um tipo específico de operação C_{VcO}

X.V	FF			F			M			R			HR		
a_p	0.5			1.5			2.5			5.0			12.0		
	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
f ⇨	0.05	0.08	0.10	0.10	0.15	0.20	0.20	0.30	0.40	0.40	0.60	0.80	0.80	1.00	1.30
Quebra aparas para acabamento fino (FF, FF2…)	1.15	1.00	0.95	0.85	0.80	–	–	–	–	–	–	–	–	–	–
Quebra aparas para acabamento (NF, SF..)	–	–	1.20	1.05	1.00	1.05	1.00	0.90	–	–	–	–	–	–	–
Quebra aparas para maquinação média (FM, M, NM, NMR, SM…)	–	–	–	–	–	1.15	1.10	1.00	0.95	0.85	–	–	–	–	–
Quebra aparas para Desbaste (RM, NRM, NR, R…)	–	–	–	–	–	–	–	–	1.25	1.10	1.00	0.95	0.65	–	–
Quebra aparas para desbaste pesado (HR, HR2, NR2, OR…) for 45 min durability	–	–	–	–	–	–	–	–	–	1.25	1.20	1.15	1.05	1.00	0.95

Fatores de correção para durabilidade exigida C_{VcT}

minutos	10	15	20	30	45	60
Operações gerais de maquinação (de acabamento fino a desbaste)	1.13	1.00	0.93	0.84	0.76	0.71
Operações de maquinação pesada (desbaste pesado)	–	–	–	1.10	1.00	0.93

Fatores de correção adicionais C_{VcA}

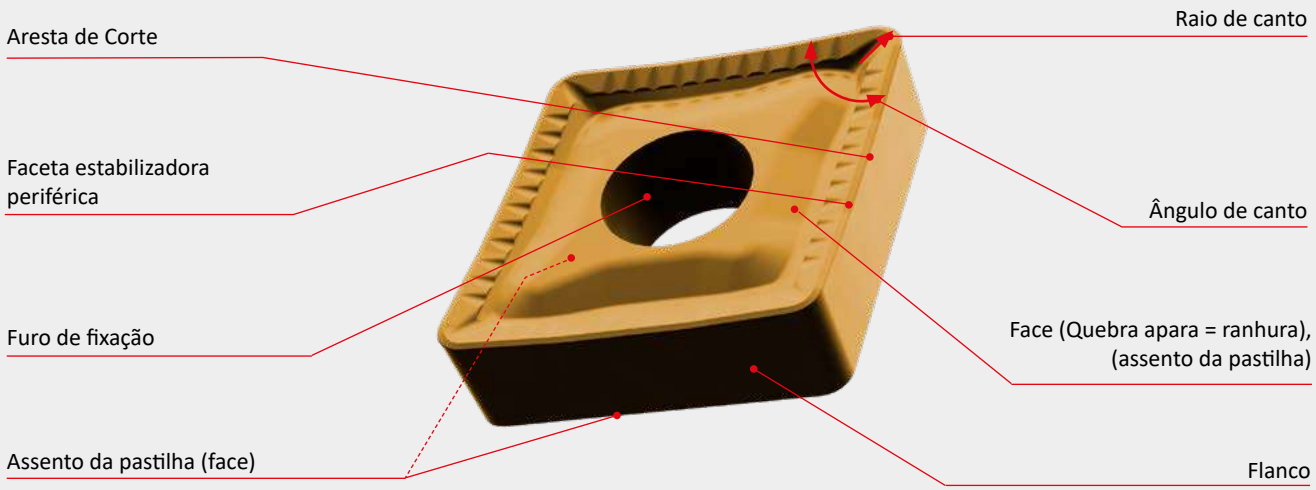
Ambiente de Maquinação	C_{VcA}
Condições do material de trabalho (capa dura devido a forja ou fundição)	0.70
Torneamento interior	0.75
Sangrar e ranhurar (radial)	0.88
Ranhura frontal	0.80
Corte interrompido	0.80
Condições de maquinação instáveis	0.85
Condições de maquinação comuns	1.00
Condições de maquinação estáveis	1.20

Velocidade de corte corrigida resultante v_{cC}

$$v_{cC} = v_c \cdot k_{vG} \cdot C_{VcO} \cdot C_{VcT} \cdot C_{VcA}$$

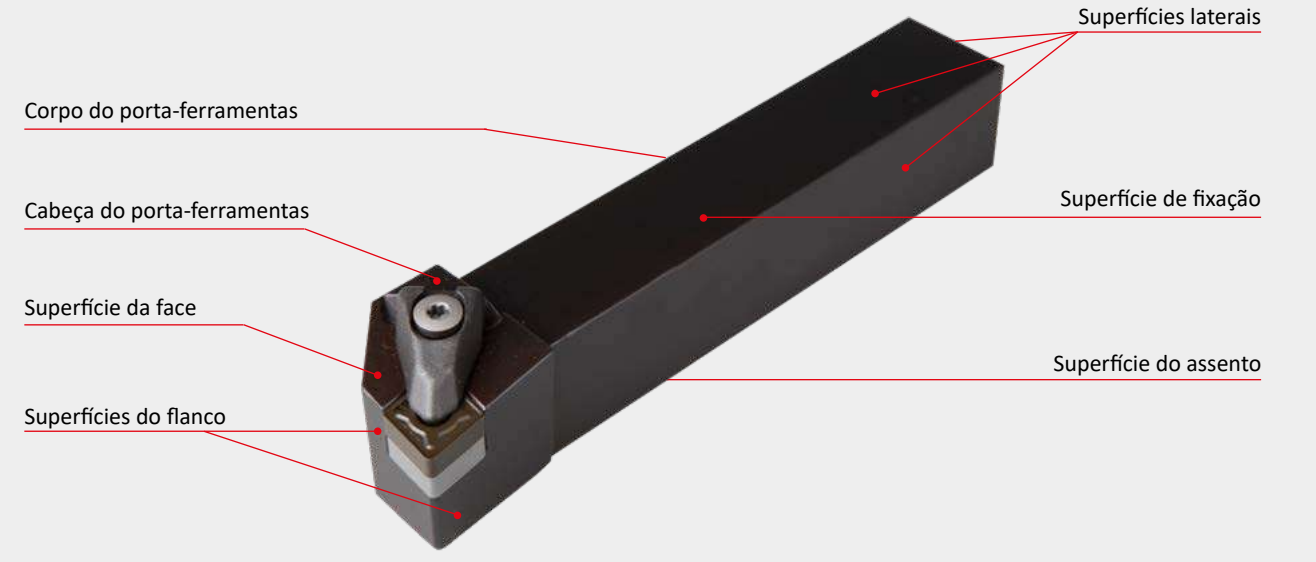
k_{vG} – coeficiente do material usado
v_c – velocidade inicial da página do catálogo

PARTES DA PASTILHA



Raio de canto - determina na maioria dos casos a profundidade mínima de corte recomendada e, em conjunto com o avanço, também determina a rugosidade obtida.
A Aresta de corte é a interseção das superfícies da face e do flanco. A sua rugosidade longitudinal é um dos primeiros critérios ao avaliar uma pastilha.
O ângulo do canto da pastilha é muito importante no que diz respeito ao comprimento da aresta de corte útil resistência no corte interrompido, dissipação de calor do ponto de corte, etc.
A faceta estabilizadora periférica é uma área localizada atrás da aresta de corte. A sua largura é frequentemente variável e o ângulo também muda regularmente. Na maioria dos casos, a largura da faceta T junto com o ângulo de ajuste no qual a pastilha trabalha, é um fator limitante para especificar o avanço mínimo.
O quebra aparas em conjunto com a faceta T determina a área de aplicação (ranhuras estreitas - acabamento e materiais com aparas curtas, ranhuras largas - principalmente operações de desbaste e materiais difíceis de maquinar).
O furo de fixação - se não houver furo, a pastilha será definitivamente projetada para o sistema de fixação ISO C. Se o furo for cilíndrico, a pastilha é projetada para os sistemas de fixação ISO P, M, D + (em quase todos os casos o ângulo de flanco é 0 °. Se o furo for em forma de trombeta e o flanco for positivo, a pastilha é de uma face e está desenhada para o sistema de fixação ISO S. Se o furo for cônico e for o mesmo em ambos os lados da pastilha, é mais provável que seja uma pastilha tangencial (dupla face).
Assento da pastilha - se for formado pelo mesmo relevo da superfície frontal, a pastilha é de dupla face, caso seja diferente, a pastilha é de uma só face. Deve ser avaliada em função da carga prevista ou do tipo de corte. (o tamanho e distância do raio e as arestas de corte).

Partes do porta-ferramentas



A ferramenta de torneamento consiste em duas partes básicas:
1) O Corpo consistindo em:
. superfície de assento
. superfície de fixação
. superfícies laterais (que podem ainda ser fornecidas com parafusos de ajuste)
Nota: Para torneamento exterior, o corpo do porta-ferramentas é geralmente uma seção transversal quadrada (quadrada ou retangular). Para torneamento interior, a seção transversal do corpo do suporte é circular e, para seções transversais grandes, é fornecido com superfícies de ajuste. Mas também o corpo do suporte pode ser formado por um tipo especial de haste, como CAPTO (PSC) ou HSK

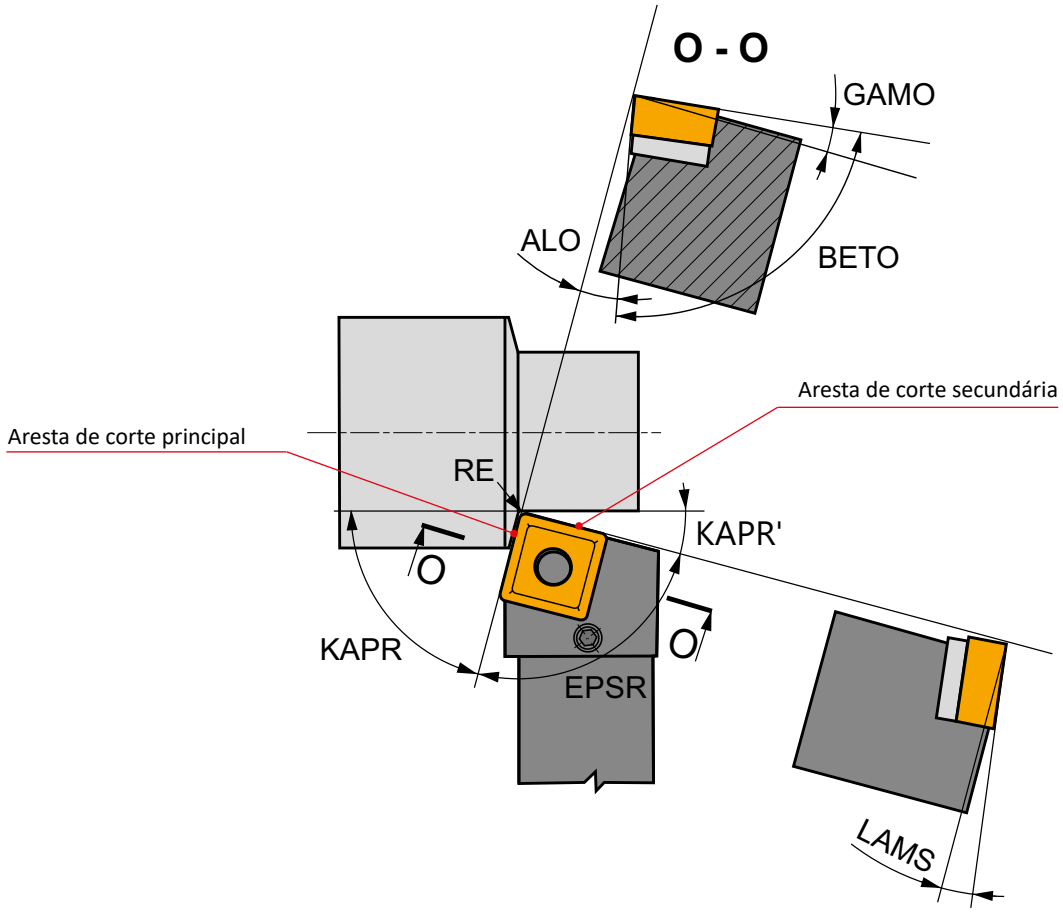
2) A Cabeça consta de:
. Rosto
. superfícies de flanco
A cabeça do porta-ferramentas inclui também um sistema de fixação no qual as pastilhas são inseridas
Do lado da face (para pastilhas radiais) ou do lado da superfície do flanco (para pastilhas tangenciais)
Nota: os tipos de cabeças são:
. Retos - permitem tornear em ambas as direções
. Laterais - podem ser de desenho à direito ou à esquerda
. Dobrado - distingue-se entre desenho à direita à esquerda (permite melhor acesso
ao tornear superfícies mais complexas)

Ângulos de trabalho e construção de ferramentas de torneamento

A posição e orientação da aresta de corte em relação à peça e a sua forma geométrica determinam as características do ângulo de corte. Os ângulos da aresta de corte são determinados por um sistema de duas coordenadas:

a) desenho
b) trabalho

a) sistema de coordenadas da ferramenta (estacionário), que é usado para determinar a geometria da aresta de corte durante o projeto, produção e verificação.
Todos os ângulos definidos neste sistema são chamados ângulos de corte da ferramenta. Todos os ângulos definidos pelos padrões ISO de acordo com o formato da pastilha pertencem a este grupo.



b) sistema de coordenadas de trabalho, utilizado para determinar a geometria da aresta de corte durante o processo de maquinação. Estes ângulos são chamados ângulos de trabalho e dependem da posição da pastilha fixada no porta-ferramentas. Por exemplo, a pastilha de corte ***SNUN*** ..... tem um ângulo de incidência da ferramenta ***AN*** = 0 ° e um ângulo de saída ***GAMP*** = 0 °, no entanto, a pastilha é fixada no porta-ferramentas para dar um ângulo de incidência de trabalho ***ALO*** = 6 ° e um ângulo de saída de trabalho ***GAMO*** = -6 °. Os ângulos de trabalho afetam os ângulos da ferramenta com quebra aparas pré-formados. No entanto, o mais importante são os ângulos de trabalho para o processo de corte.

Os ângulos básicos da ferramenta são indicados na imagem no plano básico da ferramenta (intercalados pela superfície de apoio do porta-ferramenta) e no plano normal da ferramenta (intercalados na aresta de corte - corte O-O).

Interessam-nos os seguintes ângulos:

O ângulo de saída ***GAMO*** - afeta substancialmente o processo de corte. O seu tamanho determina o progresso e a intensidade da deformação plástica durante a formação de aparas; também determina o valor das forças de corte e da tensão térmica na aresta de corte. A faixa de ângulos de saída é ampla, de ***GAMO*** = + 25 ° a -15 ° para ferramentas de corte com pastilhas de corte intercambiáveis para fresagem e torneamento. Um ângulo de saída positivo melhora as condições de formação de aparas, reduz as forças de corte e o nível de temperatura de corte. Um ângulo de saída negativo melhora a resistência da aresta de corte, no entanto, aumenta a deformação plástica durante a formação de aparas e, portanto, também as forças de corte e as temperaturas.

O ângulo de saída ***ALO*** afeta o valor do atrito entre o flanco e a superfície maquinada. Aumentando o ângulo de saída ***ALO*** reduz esse atrito e, portanto, o desgaste do flanco também.

O ângulo interno ***BETO*** é o ângulo da cunha da pastilha de corte.

Aumentar o ângulo ***BETO*** aumenta a força da aresta de corte (resistência ao choque), porém também aumenta a resistência de corte.

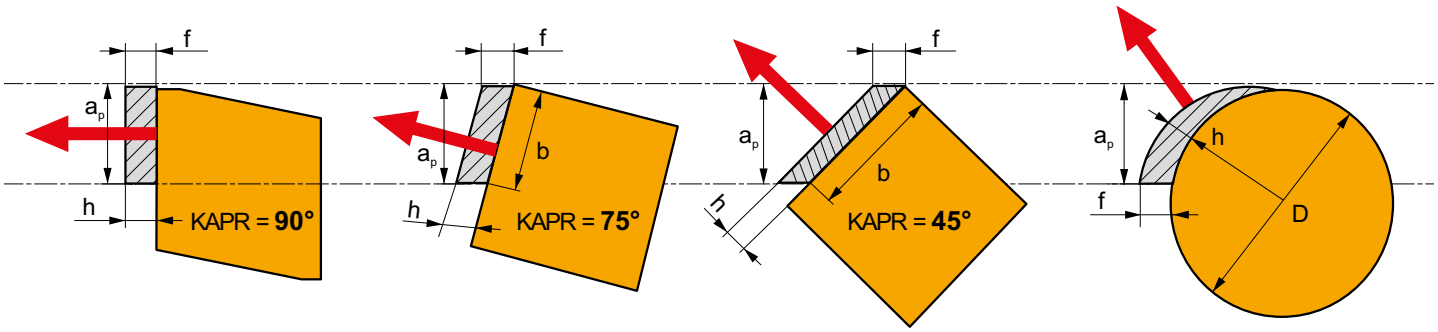
O ângulo de inclinação da aresta de corte principal ***LAMS*** - determina o ponto de primeiro contato entre a aresta de corte e a peça de trabalho, o que é importante no caso de cortes interrompidos. Se o ***LAMS*** for positivo, o ponto de contato está próximo da ponta da pastilha de corte. O ângulo negativo ***LAMS*** desloca o ponto de primeiro contato para longe da ponta e, portanto, afeta a resistência da aresta de corte face à tensão mecânica.

Além disso, o ***LAMS*** afeta a direção de evacuação das aparas. Se o ***LAMS*** for negativo,o escoamento das aparas vai em direção à superfície maquinada. Ao passo que se o ***LAMS*** for positivo, a direção do escoamento das aparas está longe da superfície maquinada.

O ajuste do ângulo da aresta de corte principal ***KAPR*** tem influência principal nos valores das forças de corte e na forma da seção transversal da apara.

Reduzir o ângulo ***KAPR*** torna a apara mais fina com um determinado avanço ***f*** e profundidade de corte ap. Considerando que, se ***KAPR*** = 90 °, a espessura da apara ***h*** = ***f*** e a largura da apara ***b*** = a_p torna-se maior. Com relação ao ângulo de ajuste decrescente, a largura da função da faceta ***T*** está aumentando e o ângulo de saída da pastilha está diminuindo.

Definindo o ângulo da aresta de corte menor ***KAPR´*** em conjunto com o raio de canto ***RE*** define a qualidade final da superfície.

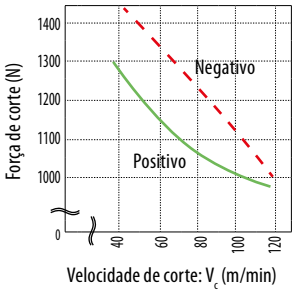
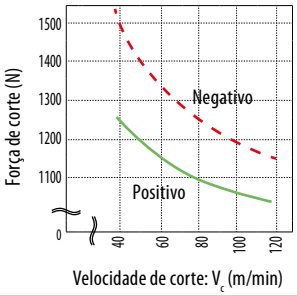
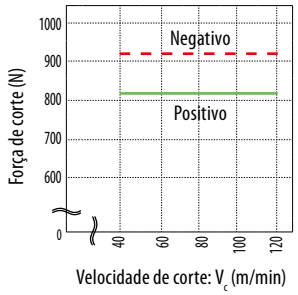
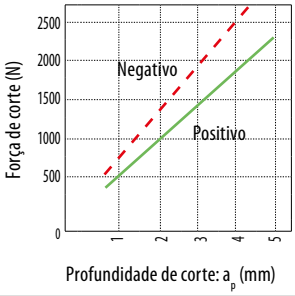
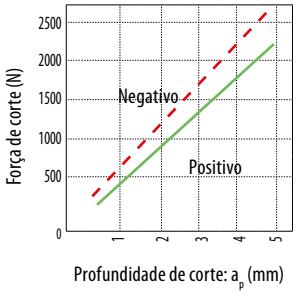
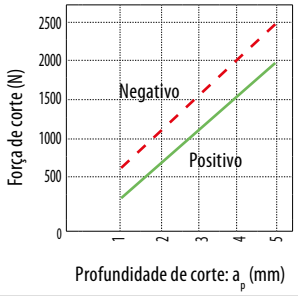
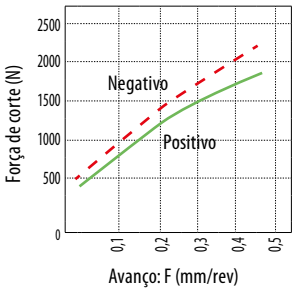
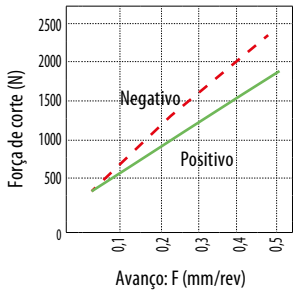
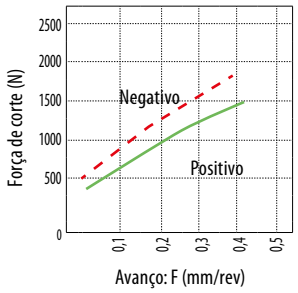
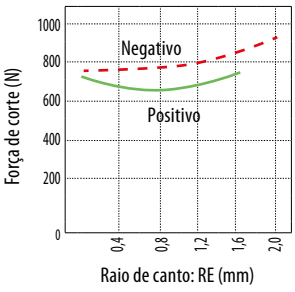
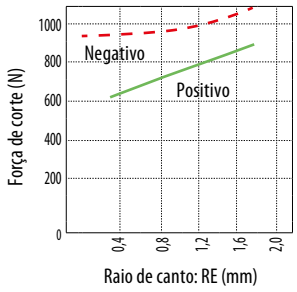
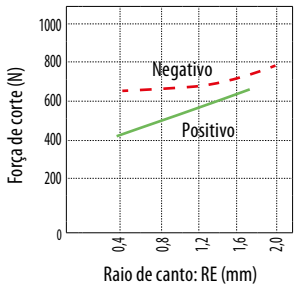
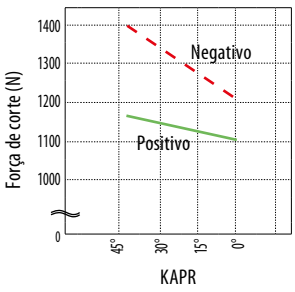
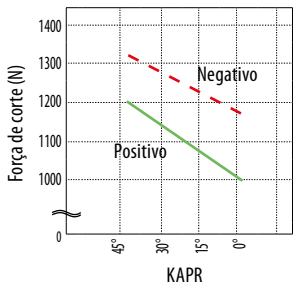
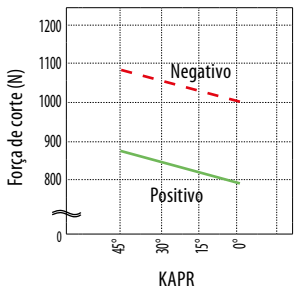
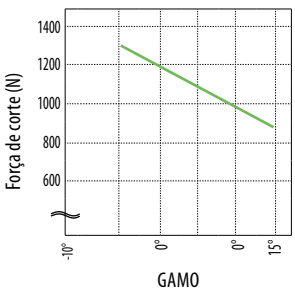
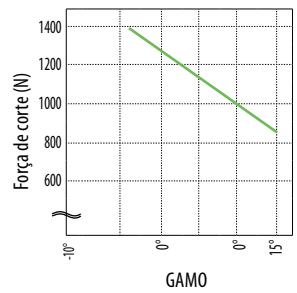
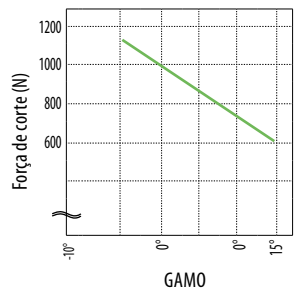


h = ***f*** | ***h*** = **0,96** ***f*** | ***h*** = **0,71** ***f*** | ***h*** = **0 ÷** ***f***

Efeito da geometria da ferramenta de trabalho

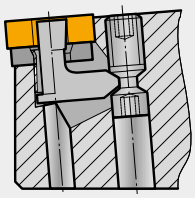
Parâmetro	Alteração	Abrasão do flanco	Formação de desgaste de cratera	Tendência para a deformação plástica	Resistência a condições de trabalho adversas	Superfície	Forças de corte	Tendência para a vibração	Temperatura de corte média	Formação de apara
Ângulo da aresta de corte principal	**Menor ou maior que 90º**	Ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente melhorado	Efeito não comprovado	Ligeiramente aumentado	Aumentado	Inferior	A apara é mais fina e mais larga (alterações b / h)
Ângulo da aresta de corte secundária	**Diminuiu**	Ligeiramente reduzido	Efeito não comprovado	Ligeiramente aumentado	Muito ligeiramente melhorado	Melhorado (condicional)	Ligeiramente aumentado	Aumentado	Muito ligeiramente mais elevado	Efeito insignificante
Ângulo de canto	**Aumentou**	Efeito não comprovado	Efeito não comprovado	Reduzido	Melhorado	Efeito não comprovado	Efeito não comprovado (-)	Ligeiramente aumentado	Muito ligeiramente mais elevado	Efeito insignificante
Raio de canto	**Aumentou**	Reduzido (a certo nível)	Reduzido (a certo nível)	Reduzido	Melhorado	Melhorado (condicional)	Aumentado (acerto nível)	Aumentado	Ligeiramente mais elevado	Formação mais suave (principalmente - com base no quebra aparas)
Ângulo do flanco	**Mais positivo**	Reduzido	Efeito não comprovado	Muito ligeiramente reduzido	Ligeiramente pior	Melhorado (condicional))	Ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente inferior	Efeito não comprovado
Ângulo da face	**Mais positivo**	Muito ligeiramente reduzido	Reduzido	Ligeiramente reduzido	Ligeiramente pior	Efeito não comprovado (+)	Ligeiramente reduzido	Reduzido	Inferior	A apara é menos comprimida, mas é forçada para mais perto da aresta de corte
Ângulo da aresta de corte	**Positivo**	Efeito não comprovado	Ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente pior	Efeito não comprovado (+)	Ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente inferior	Desvia a apara da peça de trabalho
Largura da faceta T	**Mais largo**	Ligeiramente aumentado	Slightly increased	Ligeiramente aumentado	Ligeiramente melhorado	Efeito não comprovado (+)	Aumentado	Aumentado	Superior	A apara é mais comprimida, mas pressiona para uma superfície maior
Ângulo da faceta T (trabalho)	**Positivo**	Muito ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente reduzido	Ligeiramente pior	Efeito não comprovado (+)	Reduzido	Reduzido	Ligeiramente inferior	A apara é menos comprimida

O que afeta as forças de corte e como?

Condições	Aço Carbono (HB230)	Aço Inoxidável (HB145)	Ferro Fundido Cinzento (HB130)
Velocidade de corte e força de corte f = 0.2 mm/rev a_p = 2 mm KAPR 90° RE 0.4			
Profundidade de corte e força de corte V_c = 100 m/min a_p = 0.2 mm/rev KAPR 90° RE 0.4			
Avanço de corte e força de corte V_c = 100 m/min a_p = 2 mm KAPR 90° RE 0.4			
Raio do canto e força de corte V_c = 100 m/min f = 0.2 mm/rev a_p = 1.2 mm KAPR 90°			
Ângulo da aresta de corte principal V_c = 100 m/min f = 0.2 mm/rev a_p = 2 mm KAPR 45°, 60°, 75°, 90° (values on the x axis) RE 0.4			
Ângulo de saída e força de corte V_c = 100 m/min f = 0.2 mm/rev a_p = 2 mm KAPR 90° RE 0.4			

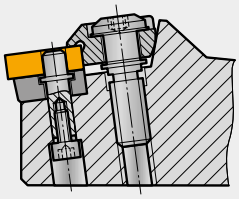
Escolha do porta-ferramentas em relação à técnica de fixação

A oferta PRAMET TOOLS inclui porta-ferramentas, porta-ferramentas ajustáveis, cabeças de torretas e porta-ferramentas ajustáveis para torneamento longitudinal exterior, facejamento, torneamento em cópia e, naturalmente, também torneamento interior. Os porta-ferramentas são classificados de acordo com o sistema de fixação das pastilhas em seis grupos que são ilustrados esquematicamente em seguida..



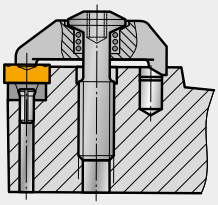
ISO P

Este sistema serve para a fixação de pastilhas negativas com furo cilíndrico, tanto com formador de aparas como / ou sem aparas. A fixação da pastilha é obtida por meio de uma alavanca angular que, depois de apertar o parafuso, pressiona a pastilha contra a base do suporte. Os porta-ferramentas com este sistema de fixação de pastilhas garantem uma fixação confiável e exata de uma pastilha. Eles têm o melhor desempenho e também o uso mais frequente no torneamento exterior, nomeadamente no acabamento e no desbaste. Alternativamente, este tipo de fixação também pode ser usado para suportes destinados ao torneamento interior de furos com diâmetros maiores.



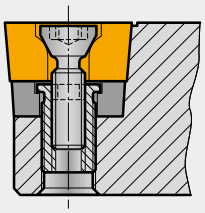
ISO M

Este sistema é usado para a fixação de pastilhas de corte do mesmo tipo do sistema ISO P. Neste caso, uma pastilha é colocada num pino forte o qual é pressionado por uma braçadeira que também está fixando ao mesmo tempo o topo da pastilha. Este sistema de fixação é adequado principalmente para suportes com suposta carga dinâmica aumentada. Esses suportes são usados quase exclusivamente para o torneamento exterior.



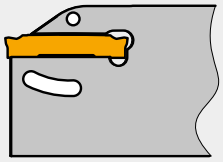
ISO C

Este sistema serve para a fixação de pastilhas negativas e positivas sem furos, nomeadamente com ambos os formadores de aparas (pré-prensados, retificados e prensados lateralmente) e sem eles. A pastilha é fixada na base de um porta-ferramenta por uma braçadeira aparafusada, sob a qual ainda está embutido um formador de aparas prensado lateralmente em alguns tipos de pastilha. Suportes com este sistema de fixação são usados para a maquinação de superfície exterior e interior. Atualmente, o sistema de fixação C perde sua importância. Especialmente em ferramentas para torneamento interior, ele é substituído pelo sistema S com benefício.



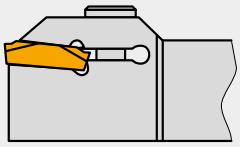
ISO S

Este sistema de fixação é usado principalmente para ferramentas de seção transversal pequena, projetadas para torneamento exterior e interior (furação). Neste caso, um parafuso especial, passando por um furo do cone da pastilha, realiza a fixação. Ao apertar este parafuso, uma pastilha é fixada na base da ferramenta. Esta solução é especialmente conveniente porque não há obstáculo para o fluxo de aparas.



ISO X

Esta marcação identifica ferramentas com o chamado sistema de fixação especial (ou seja, é diferente em fabricantes e fornecedores de ferramentas individuais). No nosso caso, identificamos sob esta marcação porta-ferramentas que usam a resistência de corte para prender uma pastilha na base de travamento automático. Este sistema de fixação é usado para ferramentas destinadas a corte e entalhe.

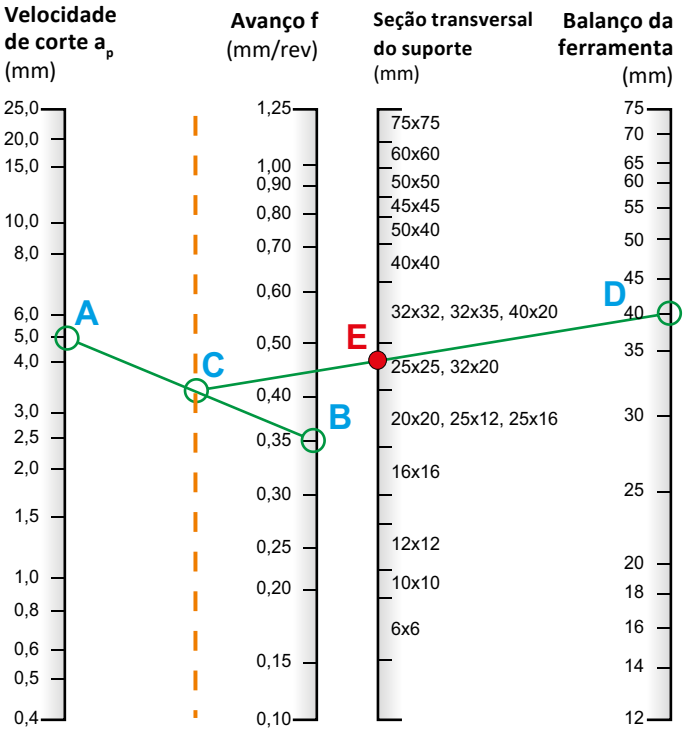


ISO G

Este sistema de fixação é utilizado em ferramentas para torneamento de rebaixo e em ferramentas para torneamento em cópia (sistema CTP). A pastilha é empurrada para a base do suporte por uma braçadeira superior. A superfície de contato no suporte, na braçadeira e também na pastilha é de tal forma que impede a deslocação da pastilha por um componente de alimentação de velocidade de corte.

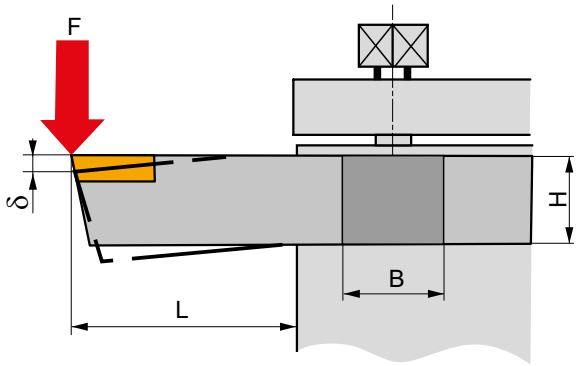
Com referência à ferramenta de corte quadrada

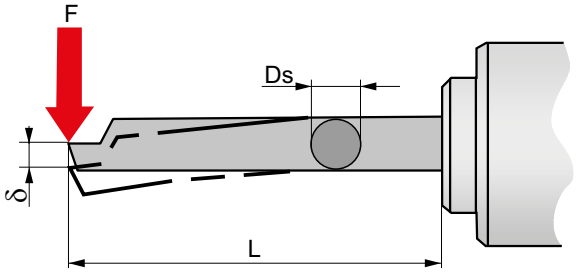
Ferramentas de corte exteriores (seção transversal quadrada)



Infelizmente, não podemos oferecer um diagrama semelhante para escolher o diâmetro da ferramenta de corte interior, pois a situação no torneamento interior é complicada pelas aparas. Devido ao maior balanço, deve-se escolher um suporte com o maior diâmetro possível, mas se o diâmetro do suporte for próximo do diâmetro do furo a ser maquinado, podem ocorrer problemas com o escoamento das aparas. Geralmente fica entre o parede do furo e o corpo do suporte danificando a superfície a ser formada.
Em geral, se usar ferramentas com corpo de aço, o balanço não deve exceder 4XD, e se tiver ferramentas com um corpo de metal duro ou pesado, o balanço máximo deve ser 6XD. Lembre-se de que para os dois tipos de ferramenta, a parte para prender a ferramenta deve ser de pelo menos 3XD.

Use a seção transversal máxima possível com relação às opções de fixação e limitações do processo.





Tensão de flexão

$$\sigma = \frac{6.F.L}{B.H^2} \quad (\text{MPa})$$

Deflexão do porta-ferramenta

$$\delta = \frac{4.F.L^3}{E.B.H^3} \quad (\text{mm})$$

Tensão de flexão

$$\sigma = \frac{32.F.L}{\pi.D_s^3} \quad (\text{MPa})$$

Deflexão do porta-ferramentas

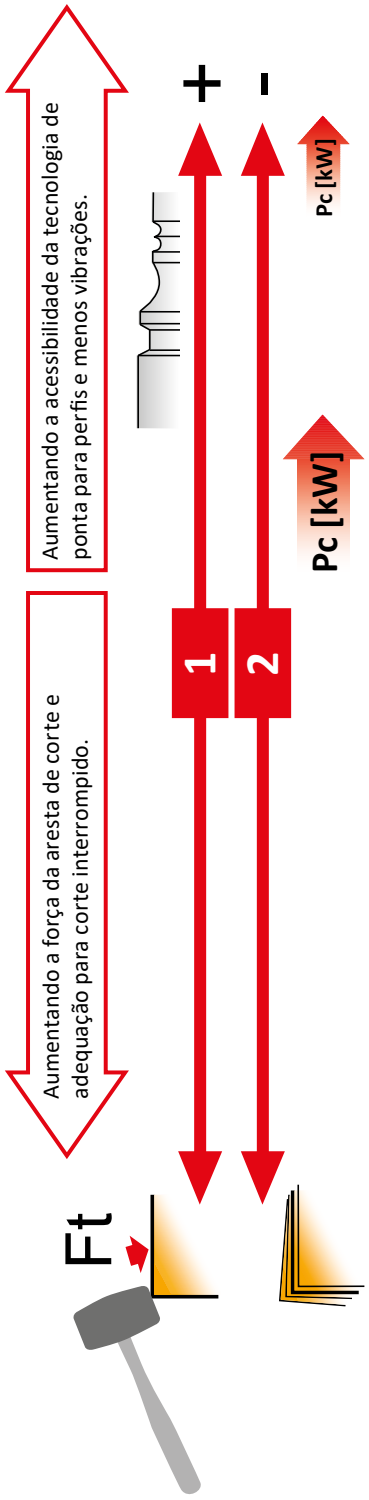
$$\delta = \frac{64.F.L^3}{3.\pi.E.D_s^3} \quad (\text{mm})$$

σ	Tensão de flexão no corpo (MPa)
F	Força de corte (N)
L	Balanço da ferramenta (mm)
B	Largura do corpo (mm)
H	Altura do corpo (mm)
Ds	Diâmetro do corpo (mm)
E	Módulo de elasticidade do material do corpo (MPa)

Material	MPa (N/mm²)	(kgf/mm²)
Aço	210.000	21.000
Carboneto sinterizado	560.000 – 620.00	56.000 – 62.00

A redução de **50%** no balanço reduz a deflexão em **88%.**
O aumento de **1/3** na seção transversal reduz a flexão em **68%.**

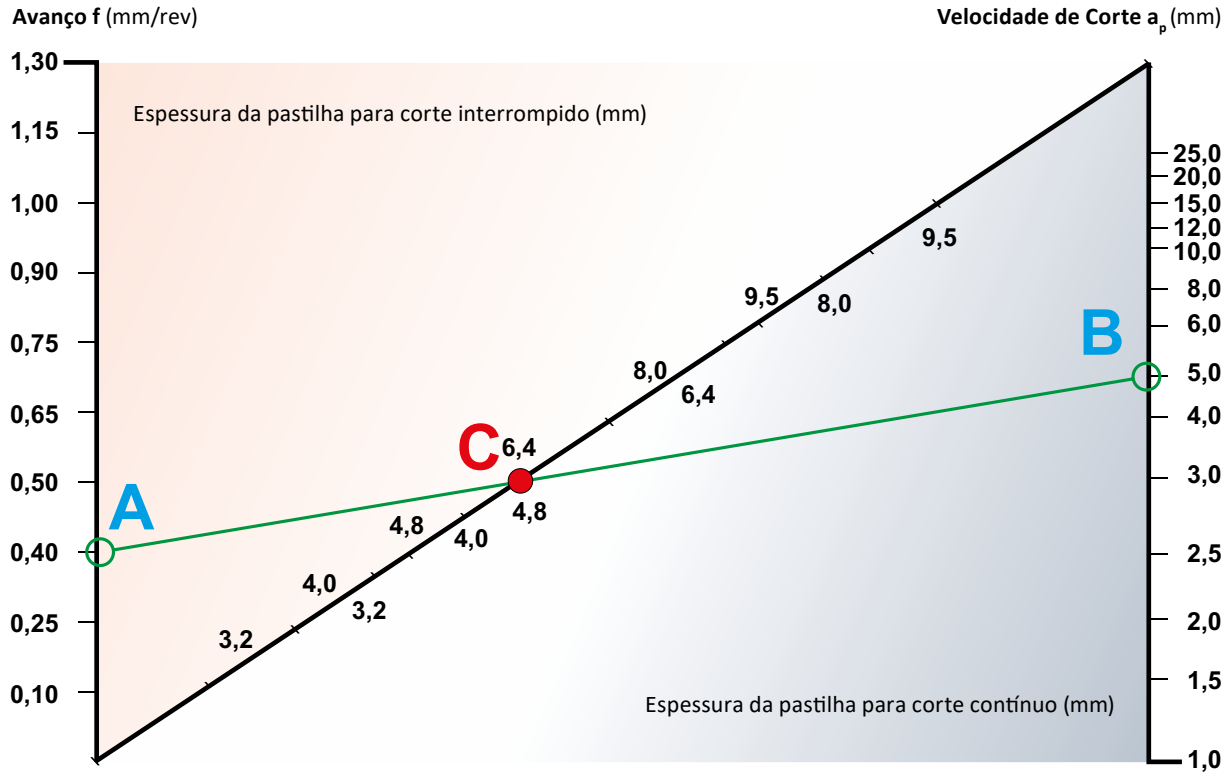
Escolhendo a forma e o tamanho da pastilha



Prioridade de escolha	Forma da pastilha		Ângulo da ponta	Tamanho da pastilha		Comprimento máximo da aresta de corte Limax			Desbaste	Desbaste leve	Acabamento	Torneamento de perfil	Torneamento frontal	Aplicações versáteis	Tendência a vibrar	Material duro	Corte interrompido
				ISO	ANSI		(mm)	(″)									
		V	35°	11	2	0.25L	2.80	.110″									
				13			3.30	.130″			■	■		◪	■		
				16	3		4.20	.165″									
		D	55°	07	2	0.25L	2.00	.078″									
				11	3		2.90	.114″		■	■	■	◪	■	■		
				15	4		3.90	.153″									
		T	60°	11	2	0.33L	3.60	.141″									
				16	3		5.50	.216″									
				22	4		7.30	.287″	◪	■	■	◪	◪	◪	■	◪	
				27	5		9.10	.358″									
		W	80°	06	3	0.50L	3.30	.129″	◪	■	■	◪	■	◪	◪	◪	◪
				08	4		4.40	.173″									
		C	80°	06	2	0.66L	4.20	.165″									
				09	3		6.40	.251″									
				12	4		8.50	.334″									
				16	5		10.60	.417″	■	■	◪	◪	■	■	◪	■	■
				19	6		12.70	.500″									
				25	8		16.50	.649″									
		S	90°	09	3	0.66L	6.30	.248″									
				12	4		8.40	.330″									
				15	5		10.40	.409″	■	◪			■			■	■
				19	6		12.60	.496″									
				25	8		16.80	.661″									
		C	100°	12	4	0.66L	8.50	.334″									
				19	6		12.70	.500″	■				■			■	■
				25	8		16.50	.649″									
		R		06		0.40D	2.40	.094″									
				08			3.20	.125″									
				10			4.00	.157″									
				12			4.80	.188″									
				15			6.00	.236″									
				16			6.40	.251″	■				◪	◪		■	■
				19			7.60	.299″									
				20			8.00	.315″									
				25			10.00	.393″									
				32			12.80	.503″									

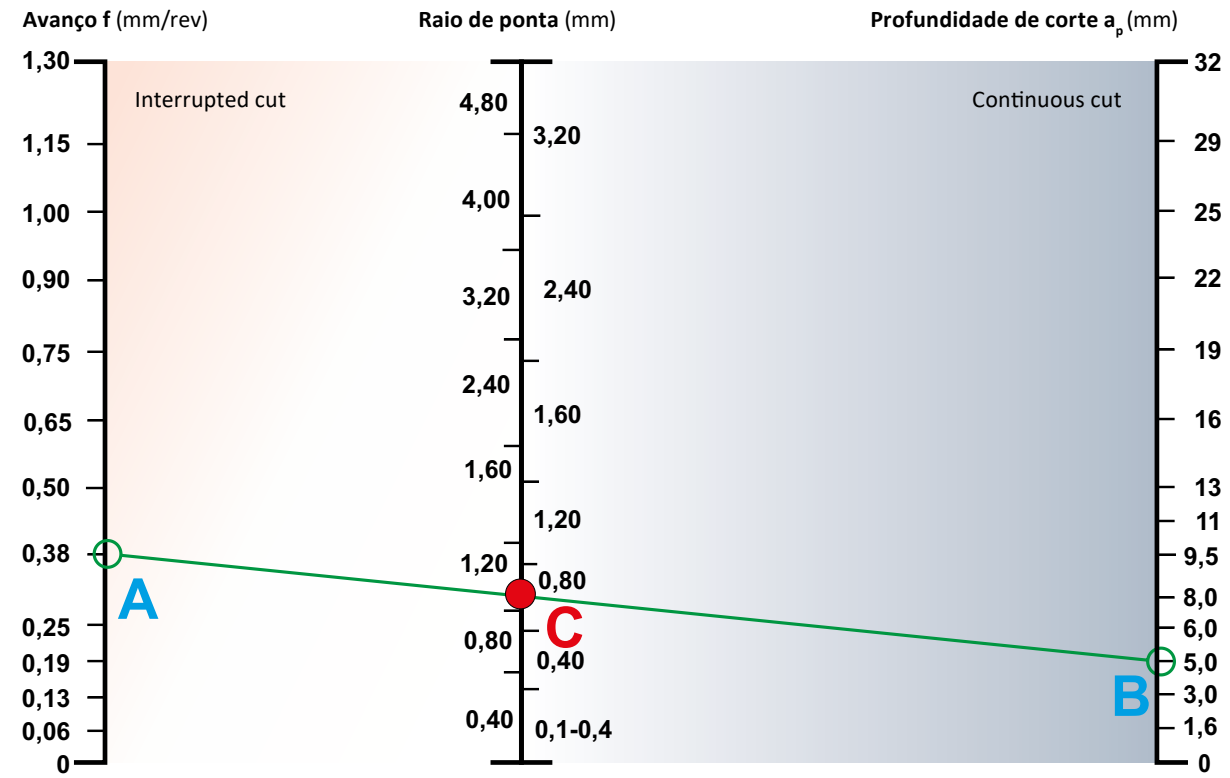
Escolha da espessura ideal da pastilha

Com base na prática, recomendamos fazer isso apenas para corte interrompido e com uma carga máxima de pastilhas.

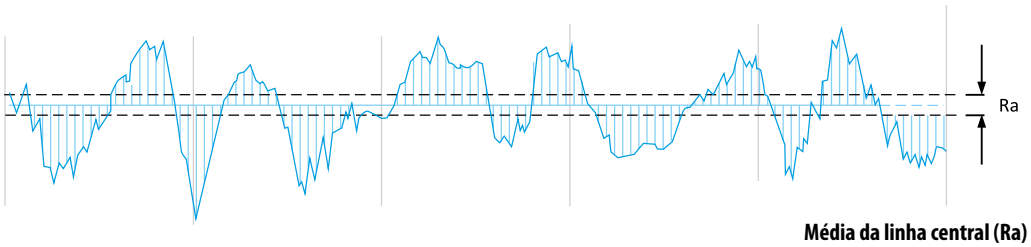


Escolha o raio de ponta da pastilha

Com base na prática, recomendamos fazer isto apenas para corte interrompido e com uma carga máxima de pastilhas.



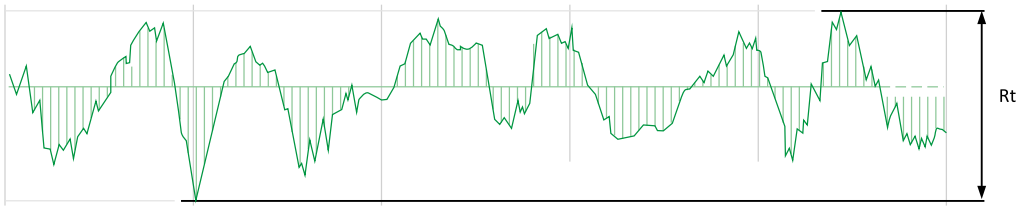
O raio da pastilha, juntamente com o avanço e o menor ângulo da aresta de corte, é um dos principais critérios para determinar a rugosidade da superfície maquinada. Obviamente, as propriedades e o tipo de material a ser maquinado, incluindo o ambiente de corte, têm um impacto significativo.
No início desta seção, indicamos os principais parâmetros de rugosidade mais frequentemente especificados na prática de engenharia.



Média da linha central (Ra)

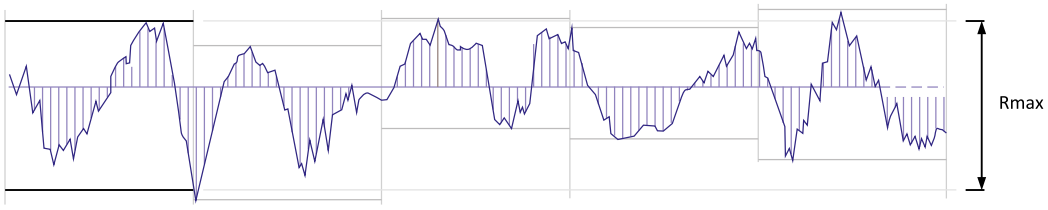
Ra - Rugosidade Média
Ra também é conhecido como Média Aritmética (AA) ou Média da Linha Central (CLA). É a rugosidade média na área entre o perfil de rugosidade e sua linha média. Graficamente, Ra é a área entre o perfil de rugosidade e sua linha central dividida pelo comprimento de avaliação. O comprimento de avaliação é normalmente de cinco comprimentos de amostra, onde cada comprimento de amostra é igual a um comprimento de corte. Conforme mostrado no gráfico.

Ra é de longe o parâmetro de acabamento de superfície mais vulgarmente usado e um bom ponto de partida para quantificar peças, mesmo quando não há nenhuma chamada de parâmetro (acabamento de superfície necessário). No entanto, embora seja comum, Ra não é suficiente para caracterizar completamente a rugosidade de uma superfície. Dependendo da aplicação, superfícies com a mesma rugosidade podem apresentar desempenhos bastante diferentes. Vejamos a mesma rugosidade superficial analisada de 3 outras maneiras:



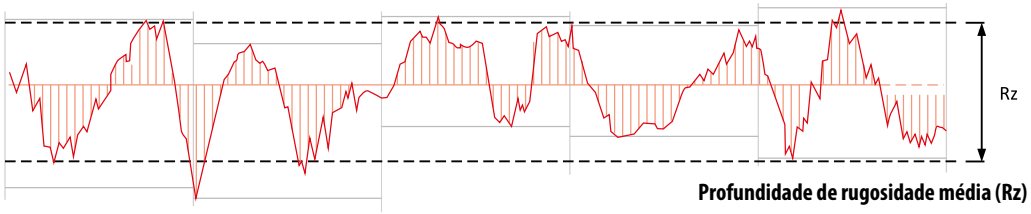
Altura total do perfil de rugosidade (Rt)

Rt - Altura total do perfil de rugosidade
Diferença entre a altura do pico mais alto e a profundidade do vale mais profundo dentro do comprimento de avaliação, como você pode ver no gráfico inferior.



Maior profundidade de rugosidade única (Rmax)

Rmax - distância máxima do pico mais alto ao vale mais baixo - do comprimento total de corte
Ou definindo-o de forma diferente, mas significando que o mesmo Rmax é a maior profundidade de rugosidade única medida dentro de um dos comprimentos de amostra. Rmax é particularmente sensível a anomalias, como arranhões e rebarbas, que podem não ser óbvios em medidas como Ra, que dependem de médias.



Profundidade de rugosidade média (Rz)

Rz – Mean roughness depth
Rz is often preferred to Ra in Europe and particularly Germany. Instead of measuring from center-line like Ra, Rz measures the average of the 5 largest peak to valley differences within five sampling lengths. While Ra is relatively insensitive to a few extremes, Rz is quite sensitive since it is the extremes it is designed to measure.

Graus de rugosidade da superfície: números “N”

Os números N são normalmente usados em desenhos técnicos para descrever a rugosidade do acabamento da superfície. No passado, triângulos eram usados, mas não são tão concretos para explicar o acabamento de superfície correto.

Relationship with Triangle Symbol

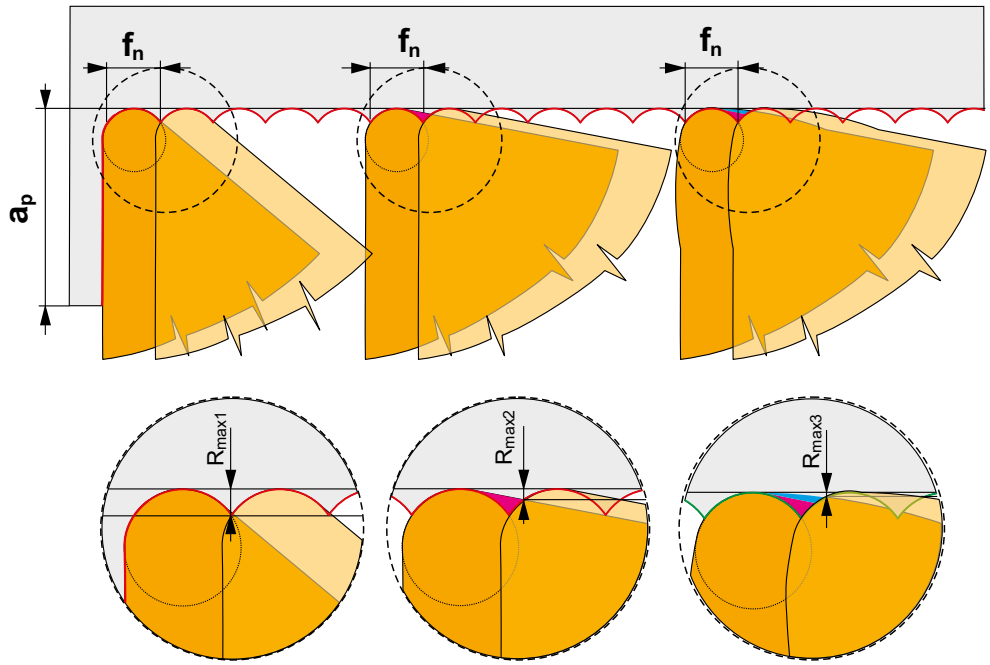
Rugosidade Média Aritmética Ra (µm)	Altura Máxima de Rugosidade Rz (µm)	Dez pontos; rugosidade média RzJIS (µm)	Grau de Rugosidade	Nota: (Relacionamento com Triângulo)
0.025	0.1	0.1	N1	VVVV
0.05	0.2	0.2	N2	
0.1	0.4	0.4	N3	
0.2	0.8	0.8	N4	
0.4	1.6	1.6	N5	VVV
0.8	3.2	3.2	N6	
1.6	6.3	6.3	N7	
3.2	12.5	12.5	N8	VV
6.3	25	25	N9	
12.5	50	50	N10	V
25	100	100	N11	

Nota: O símbolo de acabamento (Triângulo e onda ~) foi removido do padrão JIS na revisão de 1994.

No mercado pode encontrar alguns “Teste de Rugosidade“ onde o acabamento da superfície pode ser verificado visualmente se não houver equipamento eletrónico disponível. Esteja ciente de que é apenas um guia e nenhuma medida



Os valores de rugosidade R_z e R_a especificados nas tabelas a seguir são válidos para torneamento usando pastilhas com ângulos menores de arestas de corte maiores $KAPR$ ‘, ou seja, pastilhas de formatos básicos **T ..., S ..., D ...., K ... , V ...** No torneamento usando pastilhas com formas **C ..., W ...**, e em particular usando pastilhas com a geometria **WIPER** - isto é, ferramentas com ângulos de ajuste $KAPR$ = 90 ° - 95 °, geralmente valores de rugosidade menores Ra são obtidos em comparação com os dados da tabela. Isto é causado pelo baixo valor do ângulo menor de aresta de corte $KAPR$ ‘. Neste caso, as áreas ásperas são cortadas e as áreas teoricamente mais ásperas são reduzidas para $R_{max3} < R_{max2} < R_{max1}$’’, como é evidente a partir da comparação na imagem a seguir.



Qualidade da superfície em torneamento R_{max}

$$R_{max} = \frac{f^2}{8.RE} \cdot 1000$$

f ⇨	*RE* Raio																		
	0.1	0.2	0.4	0.5	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.5	3.0	3.2	3.5	4.0	5.0	6.0	8.0
	Superfície R_{max} (µm)																		
0.05	3.13	1.56	0.78	0.63	0.39	0.31	0.26	0.21	0.20	0.16	0.13	0.13	0.10	0.10	0.09	0.08	0.06	0.05	0.04
0.07	6.1	3.06	1.53	1.23	0.77	0.61	0.51	0.41	0.38	0.31	0.26	0.25	0.20	0.19	0.18	0.15	0.12	0.10	0.08
0.08	8.0	4.0	2.00	1.60	1.00	0.80	0.67	0.53	0.50	0.40	0.33	0.32	0.27	0.25	0.23	0.20	0.16	0.13	0.10
0.10		6.3	3.13	2.50	1.56	1.25	1.04	0.83	0.78	0.63	0.52	0.50	0.42	0.39	0.36	0.31	0.25	0.21	0.16
0.12		9.0	4.50	3.60	2.25	1.80	1.50	1.20	1.13	0.90	0.75	0.72	0.60	0.56	0.51	0.45	0.36	0.30	0.23
0.15		14	7.0	5.6	3.52	2.81	2.34	1.88	1.76	1.41	1.17	1.13	0.94	0.88	0.80	0.70	0.56	0.47	0.35
0.16		16	8.0	6.4	4.00	3.20	2.67	2.13	2.00	1.60	1.33	1.28	1.07	1.00	0.91	0.80	0.64	0.53	0.40
0.18		20	10.1	8.1	5.1	4.05	3.38	2.70	2.53	2.03	1.69	1.62	1.35	1.27	1.16	1.01	0.81	0.68	0.51
0.20			13	10.0	6.3	5.0	4.17	3.33	3.13	2.50	2.08	2.00	1.67	1.56	1.43	1.25	1.00	0.83	0.63
0.22			15	12.1	7.6	6.1	5.0	4.03	3.78	3.03	2.52	2.42	2.02	1.89	1.73	1.51	1.21	1.01	0.76
0.25			20	16	9.8	7.8	6.5	5.2	4.88	3.91	3.26	3.13	2.60	2.44	2.23	1.95	1.56	1.30	0.98
0.27			23	18	11.4	9.1	7.6	6.1	5.7	4.56	3.80	3.65	3.04	2.85	2.60	2.28	1.82	1.52	1.14
0.30			28	23	14	11.3	9.4	7.5	7.0	5.6	4.69	4.50	3.75	3.52	3.21	2.81	2.25	1.88	1.41
0.32			32	26	16	13	10.7	8.5	8.0	6.4	5.3	5.1	4.27	4.00	3.66	3.20	2.56	2.13	1.60
0.35			38	31	19	15	13	10.2	9.6	7.7	6.4	6.1	5.1	4.79	4.38	3.83	3.06	2.55	1.91
0.37			43	34	21	17	14	11.4	10.7	8.6	7.1	6.8	5.7	5.3	4.89	4.28	3.42	2.85	2.14
0.40				40	25	20	17	13	13	10.0	8.3	8.0	6.7	6.3	5.7	5.0	4.00	3.33	2.50
0.45				51	32	25	21	17	16	13	10.5	10.1	8.4	7.9	7.2	6.3	5.1	4.22	3.16
0.50					39	31	26	21	20	16	13	13	10.4	9.8	8.9	7.8	6.3	5.2	3.91
0.55					47	38	32	25	24	19	16	15	13	11.8	10.8	9.5	7.6	6.3	4.73
0.60					56	45	38	30	28	23	19	18	15	14	13	11.3	9.0	7.5	5.6
0.65					66	53	44	35	33	26	22	21	18	17	15	13	10.6	8.8	6.6
0.70					77	61	51	41	38	31	26	25	20	19	18	15	12.3	10.2	7.7
0.75					88	70	59	47	44	35	29	28	23	22	20	18	14	11.7	8.8
0.80						80	67	53	50	40	33	32	27	25	23	20	16	13	10.0
0.85						90	75	60	56	45	38	36	30	28	26	23	18	15	11.3
0.90						101	84	68	63	51	42	41	34	32	29	25	20	17	13
0.95						113	94	75	71	56	47	45	38	35	32	28	23	19	14
1.00							104	83	78	63	52	50	42	39	36	31	25	21	16
1.20								120	113	90	75	72	60	56	51	45	36	30	23
1.30								141	132	106	88	85	70	66	60	53	42	35	26
1.40								163	153	123	102	98	82	77	70	61	49	41	31
1.50									176	141	117	113	94	88	80	70	56	47	35
1.60										160	133	128	107	100	91	80	64	53	40
1.70										181	151	145	120	113	103	90	72	60	45
1.80										203	169	162	135	127	116	101	81	68	51
1.90										226	188	181	150	141	129	113	90	75	56
2.00											208	200	167	156	143	125	100	83	63
2.20											252	242	202	189	173	151	121	101	76
2.50													260	244	223	195	156	130	98

Perigo de rutura de aparas

Qualidade da superfície em torneamento R_a

$$R_a = 43{,}9\,\frac{f^{1{,}88}}{RE^{0{,}97}}$$

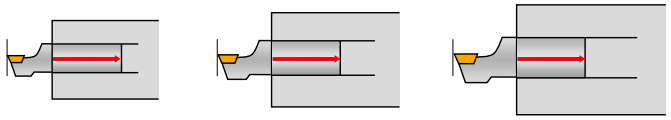
f ⇨	RE Raio																		
	0.1	0.2	0.4	0.5	0.8	1.0	1.2	1.5	1.6	2.0	2.4	2.5	3.0	3.2	3.5	4.0	5.0	6.0	8.0
	Superfície R_a (µm)																		
0.05	1.47	0.75	0.38	0.31	0.20	0.16	0.13	0.11	0.10	0.08	0.07	0.06	0.05	0.05	0.05	0.04	0.03	0.03	0.02
0.07	2.76	1.41	0.72	0.58	0.37	0.30	0.25	0.20	0.19	0.15	0.13	0.12	0.10	0.10	0.09	0.08	0.06	0.05	0.04
0.08	3.55	1.81	0.93	0.75	0.47	0.38	0.32	0.26	0.24	0.19	0.16	0.16	0.13	0.12	0.11	0.10	0.08	0.07	0.05
0.10		2.76	1.41	1.13	0.72	0.58	0.48	0.39	0.37	0.30	0.25	0.24	0.20	0.19	0.17	0.15	0.12	0.10	0.08
0.12		3.88	1.98	1.60	1.01	0.82	0.68	0.55	0.52	0.42	0.35	0.34	0.28	0.26	0.24	0.21	0.17	0.14	0.11
0.15		5.9	3.02	2.43	1.54	1.24	1.04	0.84	0.79	0.63	0.53	0.51	0.43	0.40	0.37	0.32	0.26	0.22	0.17
0.16		6.7	3.41	2.74	1.74	1.40	1.17	0.94	0.89	0.71	0.60	0.58	0.48	0.45	0.42	0.36	0.29	0.25	0.19
0.18		8.3	4.25	3.42	2.17	1.75	1.46	1.18	1.11	0.89	0.75	0.72	0.60	0.57	0.52	0.46	0.37	0.31	0.23
0.20			5.2	4.17	2.64	2.13	1.78	1.44	1.35	1.09	0.91	0.88	0.73	0.69	0.63	0.56	0.45	0.37	0.28
0.22			6.2	4.99	3.16	2.55	2.14	1.72	1.62	1.30	1.09	1.05	0.88	0.82	0.76	0.66	0.53	0.45	0.34
0.25			7.9	6.3	4.02	3.24	2.72	2.19	2.05	1.65	1.39	1.33	1.12	1.05	0.96	0.84	0.68	0.57	0.43
0.27			9.1	7.3	4.65	3.74	3.14	2.53	2.37	1.91	1.60	1.54	1.29	1.21	1.11	0.98	0.79	0.66	0.50
0.30			11.1	8.9	5.7	4.57	3.83	3.08	2.89	2.33	1.95	1.88	1.57	1.48	1.35	1.19	0.96	0.80	0.61
0.32			13	10.1	6.4	5.2	4.32	3.48	3.27	2.63	2.20	2.12	1.78	1.67	1.53	1.34	1.08	0.91	0.69
0.35			15	11.9	7.6	6.1	5.1	4.12	3.87	3.11	2.61	2.51	2.10	1.97	1.81	1.59	1.28	1.07	0.81
0.37			16	13	8.4	6.8	5.7	4.57	4.29	3.46	2.90	2.78	2.33	2.19	2.01	1.76	1.42	1.19	0.90
0.40				15	9.7	7.8	6.6	5.3	4.97	4.00	3.35	3.22	2.70	2.54	2.33	2.04	1.65	1.38	1.04
0.45				19	12.1	9.8	8.2	6.6	6.2	4.99	4.19	4.02	3.37	3.17	2.90	2.55	2.05	1.72	1.30
0.50					15	11.9	10.0	8.0	7.6	6.1	5.1	4.90	4.11	3.86	3.54	3.11	2.50	2.10	1.59
0.55					18	14	12.0	9.6	9.0	7.3	6.1	5.9	4.92	4.62	4.23	3.72	2.99	2.51	1.90
0.60					21	17	14	11.3	10.7	8.6	7.2	6.9	5.8	5.4	4.98	4.38	3.53	2.96	2.24
0.65					24	20	16	13	12.4	10.0	8.4	8.0	6.7	6.3	5.8	5.1	4.10	3.44	2.60
0.70					28	22	19	15	14	11.5	9.6	9.2	7.7	7.3	6.7	5.9	4.71	3.95	2.99
0.75					32	26	21	17	16	13	10.9	10.5	8.8	8.3	7.6	6.7	5.4	4.50	3.40
0.80						29	24	19	18	15	12.3	11.9	9.9	9.3	8.6	7.5	6.1	5.1	3.84
0.85						32	27	22	21	17	14	13	11.1	10.5	9.6	8.4	6.8	5.7	4.30
0.90						36	30	24	23	18	15	15	12.4	11.7	10.7	9.4	7.6	6.3	4.79
0.95						40	33	27	25	20	17	16	14	13	11.8	10.4	8.4	7.0	5.3
1.00							37	30	28	22	19	18	15	14	13	11.4	9.2	7.7	5.8
1.20								42	39	32	26	25	21	20	18	16	13	10.9	8.2
1.30								49	46	37	31	30	25	23	21	19	15	13	9.6
1.40								56	52	42	35	34	28	27	25	22	17	15	11.0
1.50									60	48	40	39	32	30	28	25	20	17	13
1.60										54	45	44	37	34	32	28	22	19	14
1.70										61	51	49	41	39	35	31	25	21	16
1.80										68	57	54	46	43	39	35	28	23	18
1.90										75	63	60	51	47	44	38	31	26	20
2.00											69	66	56	52	48	42	34	28	21
2.20											83	79	67	63	57	50	41	34	26
2.50													85	80	73	64	52	43	33

Perigo de rutura de aparas

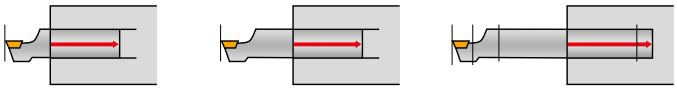




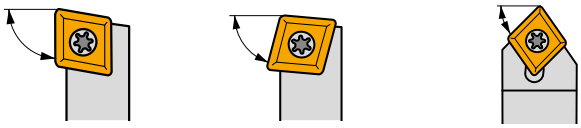
Dureza de formação de aparas - é muito importante dar atenção à formação adequada de aparas (a apara deve ser facilmente transportável do ponto de corte e, ao mesmo tempo, deve ter a menor deformação plástica possível, ou seja, as menores forças de corte possíveis).



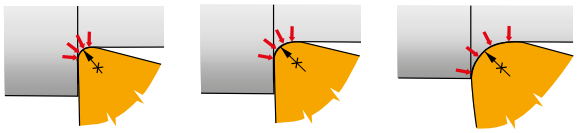
Seção transversal do corpo da ferramenta (rigidez de fixação) - a rigidez da fixação em si é importante. Portanto, recomendamos o uso de ferramentas de corte com a maior seção transversal possível do corpo que possa ser fixada. Também preferimos usar monoblocos (PSC).



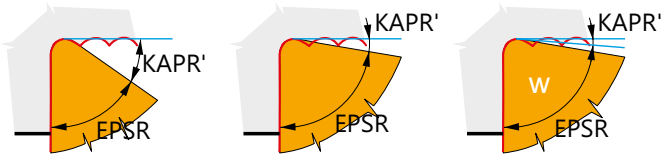
Balanço (rigidez de fixação) - o balanço da ferramenta, ou a rigidez da própria fixação, também é de grande importância. Portanto, recomendamos minimizar o balanço.



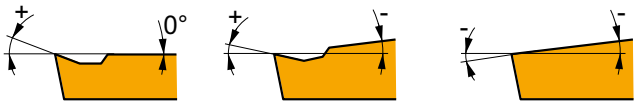
Ângulo da aresta de corte principal - idealmente, o ângulo de ajuste da ferramenta deve ser próximo a 90 °, ou seja, as forças devem ser direcionadas tanto quanto possível para eixo do fuso da máquina.



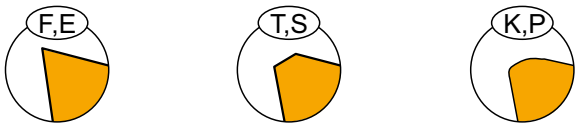
Raio da pastilha - se houver risco de vibração, recomendamos selecionar uma pastilha com o menor raio de ponta possível.



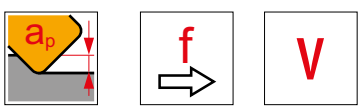
Ângulo de canto e ângulo da aresta de corte menor - neste caso, é recomendado escolher uma pastilha com o menor ângulo de ponta possível, ou seja, V (35 °), D ou K (55 °), ou T (60 °) .C ou W formas ou pastilhas com geometria WIPER não são recomendadas. Note que isto nem sempre se aplica (se as vibrações de torção também ocorrerem, a aplicação dessas pastilhas pode ser benéfica).



Geometria - ao tornear peças de paredes finas e estreitas, é recomendado optar por pastilhas positivas com geometria positiva, depois pastilhas negativas com geometria positiva, e somente se não houver outra escolha, então devem ser escolhidas as pastilhas negativas com geometria neutra a negativa.



Micro geometria (desenho de aresta de corte) - para reduzir o risco de vibração, é necessário selecionar pastilhas com a geometria de aresta de corte o mais afiada possível. Se usar pastilhas com faceta em T, elas devem ser o mais estreitas e positivas possível. É muito importante que a ferramenta gere o mínimo possível de resistência ao corte.



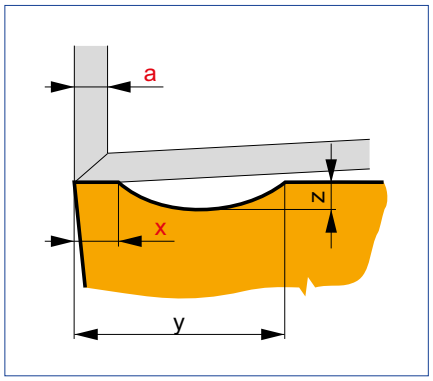
Condições de corte:
1) Ao escolher a profundidade de corte, certifique-se sempre de que a profundidade de corte seja maior que o raio da pastilha.
2) Ao escolher o avanço, tenha em consideração que a resistência de corte específica aumenta com a diminuição da espessura da apara, ou seja, não use avanços extremamente baixos (abaixo de 0,1 mm).
3) Se houver vibrações, a alteração da velocidade de corte (+/-) também pode ajudar - isto está relacionado com a frequência inerente da máquina.
NOTA: Frequentemente, é vantajoso reduzir a profundidade de corte (não abaixo do raio) e aumentar o avanço.



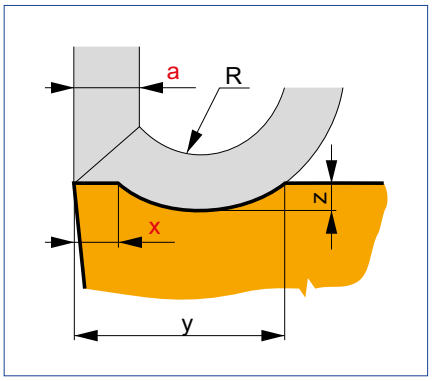
Não use pastilhas desgastadas - a abrasão do flanco causa um aumento nas forças de corte e, portanto, o risco de vibração.
Se a fixação da ferramenta permitir, mova a aresta de corte acima do eixo (em torneamento exterior) em aprox. 2% do diâmetro.

Escolha do quebra aparas

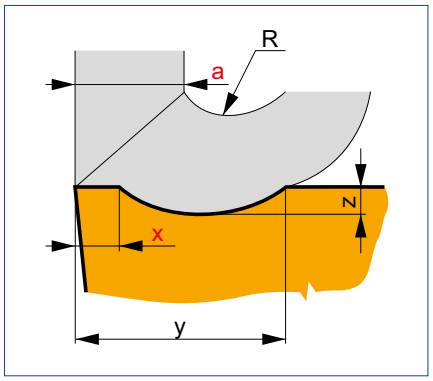
A forma da apara depende de vários fatores - as propriedades da peça maquinada, resistência do material, tenacidade e microestrutura, propriedades da qualidade da pastilha, especialmente as propriedades de fricção (na face de ataque), geometria da aresta de corte, condições de corte e tipo de quebra aparas, também propriedades estáticas e dinâmicas da máquina.
Praticamente todos estes fatores no processo de corte trabalham para combinar e determinar a forma da apara (ação de cisalhamento, fluxo das aparas ou aparas onduladas - que pode acumular e obstruir a área de maquinação). Cada quebra aparas trabalha numa faixa definida de avanço e profundidade de corte.
O avanço mínimo no qual o quebra aparas funciona depende da largura da faceta T „**x**“ e do seu ângulo. O avanço máximo depende da distância da aresta de corte até o final do quebra aparas **y** e da profundidade do quebra aparas **z**.



Se a espessura da camada „***a***“ cortada (no ângulo de ajuste ***KAPR*** = 90 °, igual ao avanço) é significativamente menor do que a faceta T „***x***“, o apara está apenas em contato com o chanfro. Não pode entrar no quebra aparas e, portanto, não pode ser quebrado (veja a imagem).

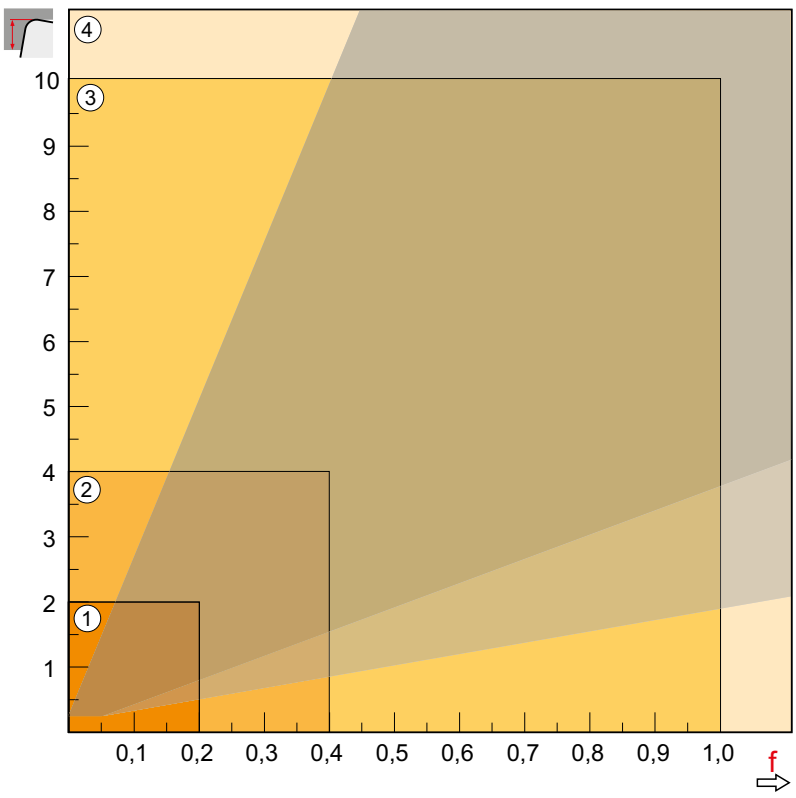


Se o avanço „***f***“ for maior (espessura maior que a profundidade de „***a***“ e ***x*** <***a*** (***f***), a apara entra no quebra aparas e é curvado em valores específicos do raio ***R*** (veja a imagem).

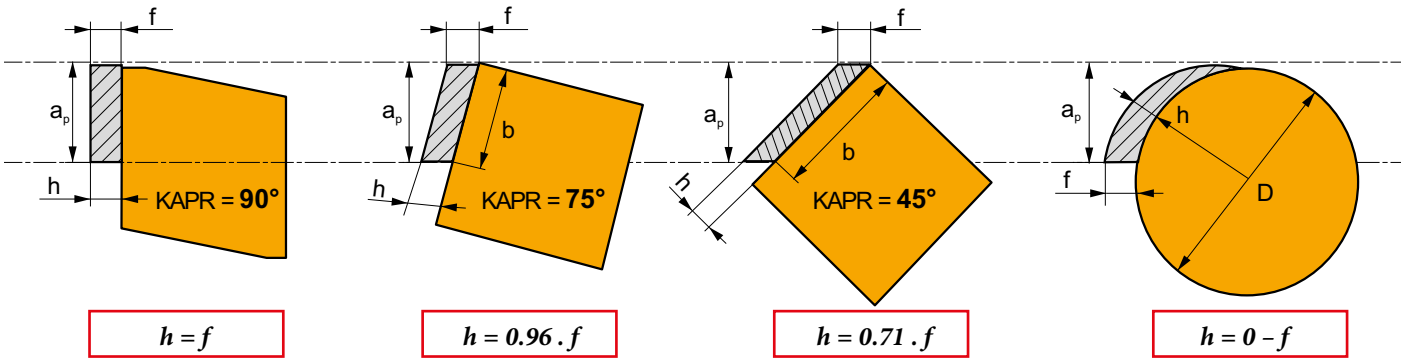


Se ***x*** << ***a*** (ver imagem), a apara está excessivamente deformada (a apara está esmagada). Se a apara perder o quebra aparas, não será quebrado.

Todos os quebra aparas trabalham numa faixa definida de condições de corte. É por isso que a área de quebra aparas é exibida como uma faixa contínua para definir as combinações de profundidade de corte e avanço mais vulgarmente usadas (veja a figura a seguir). As faixas de aplicação do quebra aparas também se sobrepõem.



		f	a_p
1	FF F	0.05 – 0.2	0.05 – 2
2	M	0.2 – 0.4	2 – 4
3	R	0.4 – 1.0	4 – 10
4	HR	> 1.0	> 10



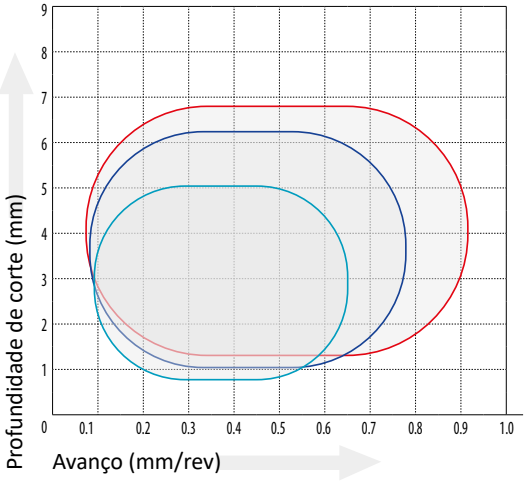
A combinação ideal de profundidade de corte e avanço varia para cada material. A tabela a seguir mostra as faixas das relações ótimas b (largura da apara) para h (espessura da apara). Para ângulos de ajuste próximos a 90 °, esta é essencialmente a relação entre a profundidade de corte e o avanço. Ver foto.

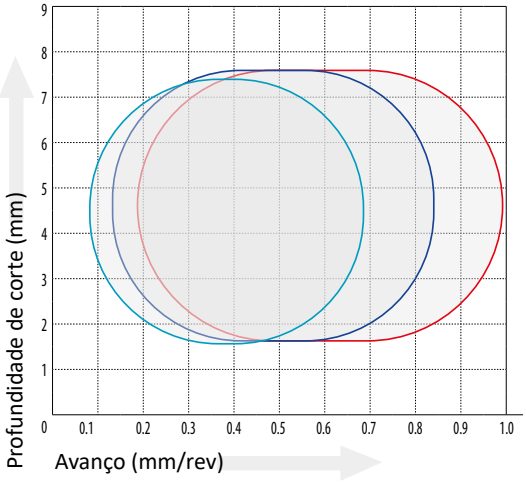
Material		min b/h	max b/h	
P		5	15	
M		8	12	
K		3	30	
N		9	11	
S	Apara quadrada b=h	8	12	Apara de fita b/ h > 30
H		5	20	

Como segue a partir da tabela, ao escolher as condições de corte, deve evitar a chamada apara quadrada, ou seja, valores em que a largura é próxima da espessura da apara e, por outro lado, a apara de fita, ou seja, altas profundidades de corte em combinação com baixo avanço.

A tabela acima mostra que a formação de aparas mais problemática diz respeito a ligas de metais não ferrosos, em particular ligas de alumínio com ou sem baixo teor de silício. Isto é seguido por superligas e aços inoxidáveis (especialmente aços austeníticos e duplex). Em seguida, vêm os aços, e a melhor situação é com materiais endurecidos e ferros fundidos.

Além disso, tenha em mente que o diagrama de formação de aparas se move ligeiramente em direção a profundidades de corte maiores (para cima), com o aumento do comprimento da aresta de corte (tamanho da pastilha), e em direção a avanços maiores (à direita), com o aumento do raio.



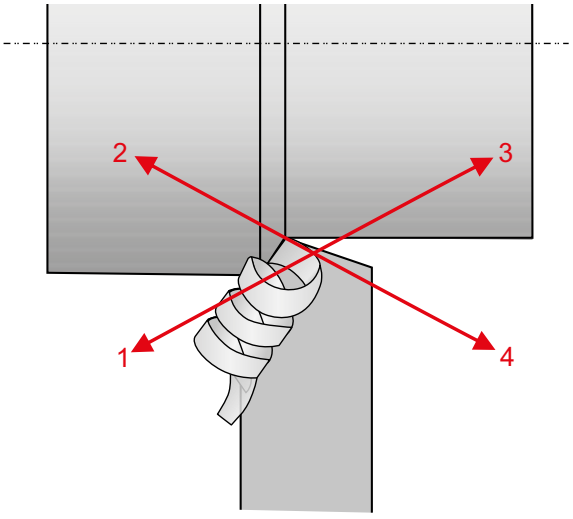


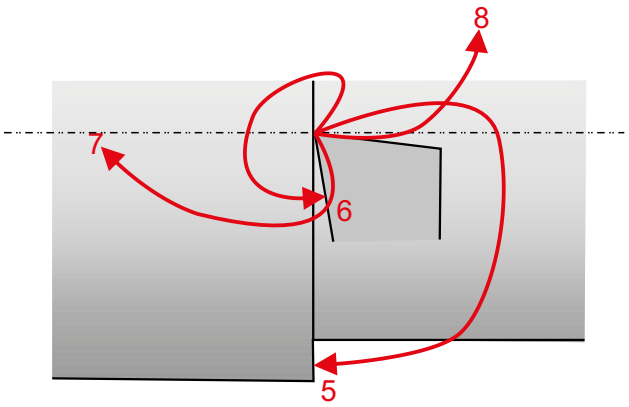
- Uma pastilha com o diâmetro de um círculo inscrito IC = 19,050 (mm)
- Uma pastilha com o diâmetro de um círculo inscrito IC = 15,875 (mm)
- Uma pastilha com o diâmetro de um círculo inscrito IC = 12,700 (mm)
- Uma pastilha com o raio da ponta RE = 1,6 (mm)
- Uma pastilha com o raio da ponta RE = 1,2 (mm)
- Uma pastilha com raio de ponta RE = 0,8 (mm)

Além do formato da apara, a direção do seu escoamento também é muito importante. A figura a seguir mostra as direções básicas de evacuação de aparas:

1 - da peça de trabalho na direção do avanço,
2 - para a peça de trabalho na direção do avanço,
3 - para a peça de trabalho contra o avanço,
4 - da peça de trabalho contra o avanço,
5 - quebrado contra a superfície da área de corte,
6 - quebrado contra a lateral da ferramenta,
7 - quebrado contra a superfície a ser maquinada,
8 - quebrado contra a superfície maquinada,

Obviamente, direções que podem causar danos ou arranhões na superfície maquinada são indesejáveis.





A secção a seguir especifica claramente todas as geometrias que oferecemos em grupos estruturados. Essas tabelas devem fornecer uma escolha ideal e mais precisa.

VISÃO GERAL DAS GEOMETRIAS DE PASTILHAS DE TORNEAMENTO

PASTILHAS POSITIVAS DESIGNAÇÃO DE FIXAÇÃO ISO S	
371 (RCMT)	565
372 (RCMT)	565
...W	565
AL	565
DR4 (SCMT)	566
FF	566
FF2	566
FM	566
FM (RCMT)	567
FM2	567
NF1	567
NF2	567
OR (SCMT)	568
RF	568
RM	568
RM3	568
SF2	569
SF3	569
SI	569
SR (SCMT)	569
UR (RCMT)	570
UR	570
W-FM	570
W-UR	570
46	571
47	571
48	571
61	571
.PUN	572

PASTILHAS POSITIVAS DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D	
31 (RCMX)	573
321 (RCMX)	573
331 (RCMX)	573
361 (RCMX)	573
RF1 (RCMX)	574
RM1 (RCMX)	574
RM2 (RCM.)	574
RR2 (RCM.)	574

PASTILHAS NEGATIVAS DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D	
000 (LNUX)	575
002 (LNUX)	575
003 (LNUX)	575
08 (RNMG)	575
81 (RNMG)	576
432 (LNMX)	576
923	576
...A	576
DR	577
FF	577
FM	577
HR	577
HR2	578
KR	578
M	578
NF	578
NM	579
NMR	579
NR	579
NRM	579
NR2	580
OR	580
OR1	580
R	580
RM	581
SF	581
SI	581
SM	581
SR	582
W–MR	582
W–F	582
W–M	582
W-NM	583

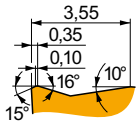
PASTILHAS NEGATIVAS DESIGNAÇÃO DE FIXAÇÃO ISO C	
22	584
32	584
72	584
73	584
74	585

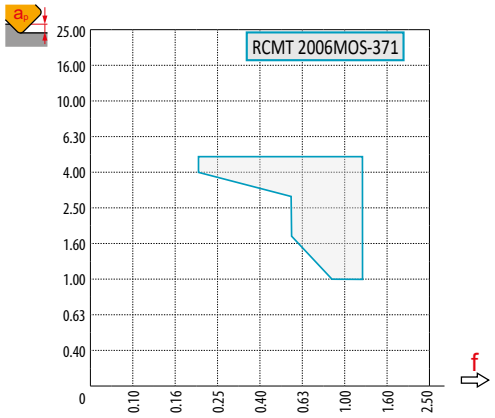
GEOMETRIA DE CORTE PASTILHAS DE RANHURA DESIGNAÇÃO DE FIXAÇÃO ISO X E G	
GM (GL.D)	586
MM (GL.D)	586
PM (GL. D)	586
PR (GL. D)	586
13 CM (LCMF)	587
13 F (LCM.)	587
13 MP (LCM.)	587
16 CM (LCM.)	587
16 F (LCM.)	588
16 M (LCM.)	588
16 MP (LCM.)	588
20 F1 (LCMF)	588
20 M2 (LCMF)	589
30 F (LCM.)	589
F1 (LFMX)	589
F2 (LFMX)	589
M2 (LFMX)	590
LFUX	590
TN. EXT	591
TN. INT	591
X61	591
X61 R	591

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

371 (RCMT)







P	M	K	N	S	H
■		■			

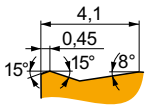
f ⇨ 0.20 – 1.20

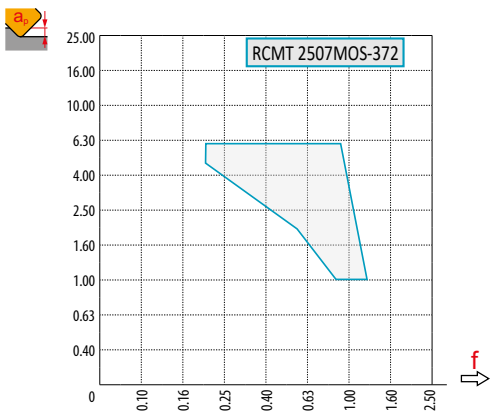
a_p 1.0 – 5.0

RCMT

372 (RCMT)







P	M	K	N	S	H
■		■			

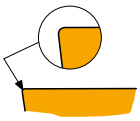
f ⇨ 0.20 – 1.20

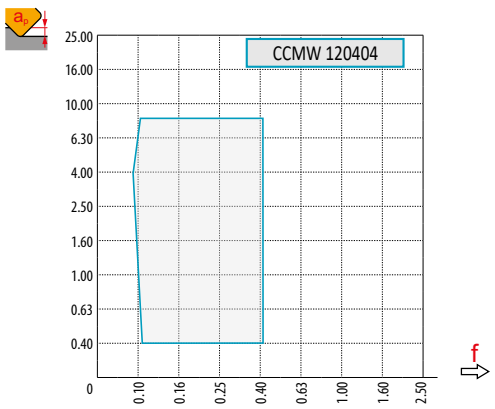
a_p 1.0 – 6.0

RCMT

...W







P	M	K	N	S	H
		■			◪

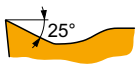
f ⇨ 0.05 – 0.60

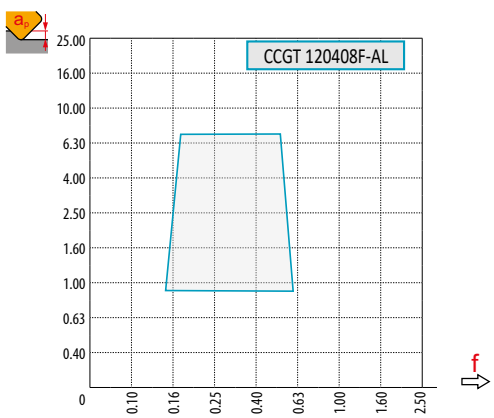
a_p 0.4 – 8.4

CCMW, DCMW, SCMW, RCMW, TCMW, VCMW

AL







P	M	K	N	S	H
			■	◪	

f ⇨ 0.05 – 0.60

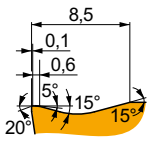
a_p 0.2 – 7.0

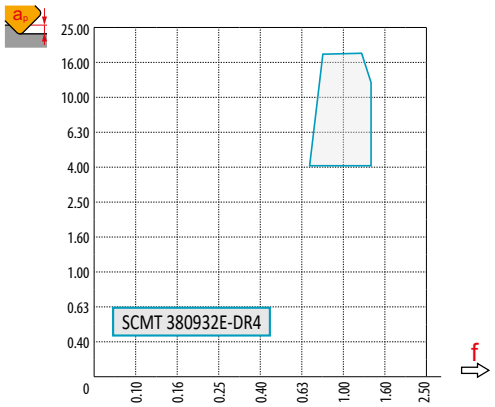
CCGT, DCGT, SCGT, RCGT, TCGT, VCGT, WCGT

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

DR4 (SCMT)



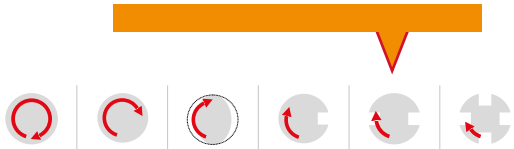




P	M	K	N	S	H
■	◪	■			

f ⇨ 0.70 – 1.40

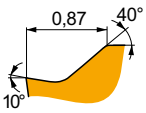
a_p 4.0 – 18.0

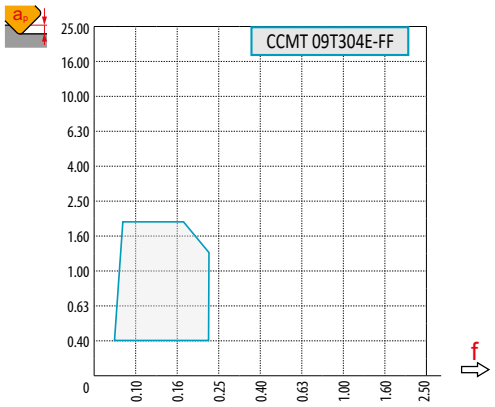


SCMT

FF



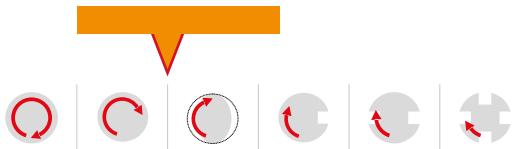




P	M	K	N	S	H
■	◪				

f ⇨ 0.05 – 0.23

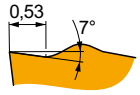
a_p 0.2 – 2.0

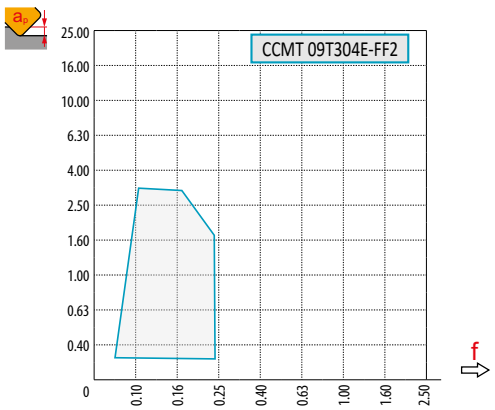


CCMT, DCMT

FF2







P	M	K	N	S	H
■		■			

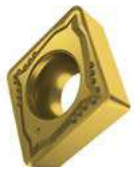
f ⇨ 0.02 – 0.28

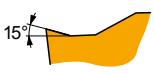
a_p 0.20 – 3.0

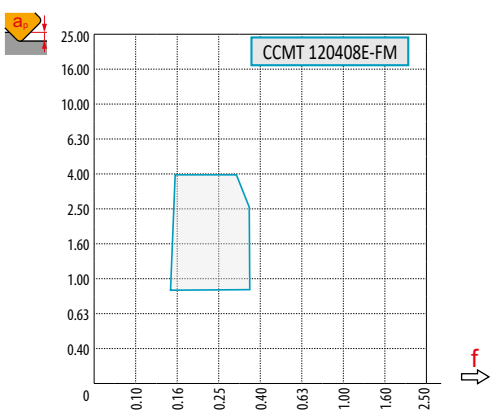


CCMT, CCGT, DCGT, DCMT, SCMT, TCGT, TCMT, VBMT, VCGT, VCGX, WCGT

FM



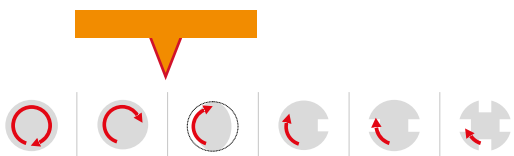




P	M	K	N	S	H
■	■	◪	◪		

f ⇨ 0.05 – 0.45

a_p 0.2 – 4.0

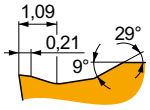


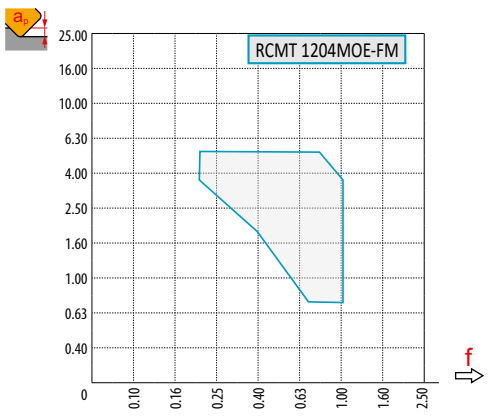
CCMT, DCMT, SCMT, TCMT, VBMT, WCMT

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

FM (RCMT)







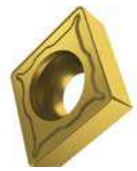
P	M	K	N	S	H
■	■	◪	◪		

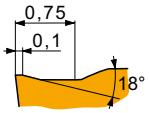
f ⇨ 0.10 – 1.0

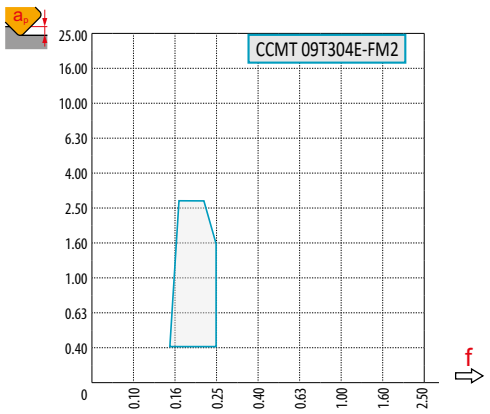
a_p 0.3 – 5.0

RCMT

FM2







P	M	K	N	S	H
■	◪	■			

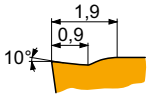
f ⇨ 0.04 – 0.4

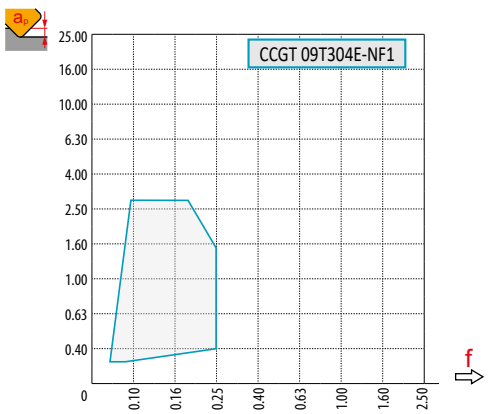
a_p 0.2 – 4.0

CCMT, DCMT, ECMT, SCMT, TCMT, VBMT, VCGT

NF1







P	M	K	N	S	H
■	■		◪	■	◪

f ⇨ 0.04 – 0.35

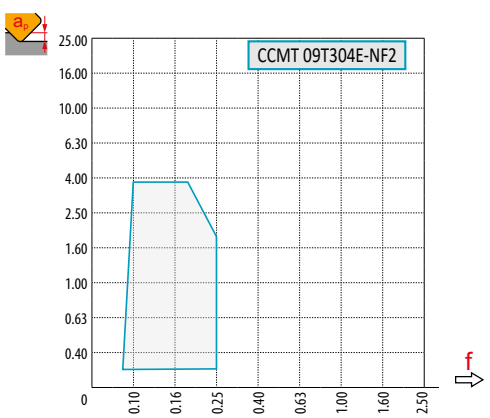
a_p 0.3 – 3.5

CCGT, DCGT, SCGT, TCGT

NF2







P	M	K	N	S	H
◪	■	◪	◪	■	

f ⇨ 0.05 – 0.45

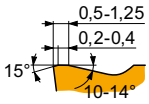
a_p 0.2 – 4.0

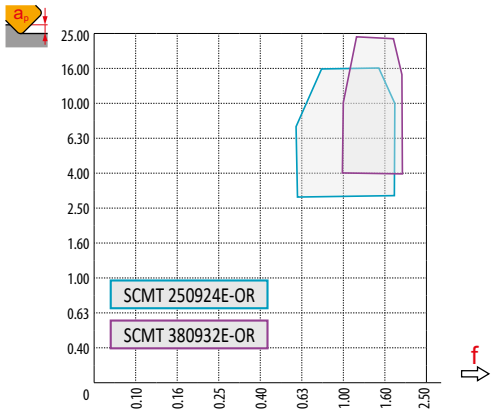
CCMT, EPMT, SCMT, TCMT, VCGT

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

OR (SCMT)







P	M	K	N	S	H
■	■	■		◪	

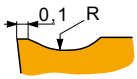
f ⇨ 0.60 – 2.00

a_p 3.0 – 24.0

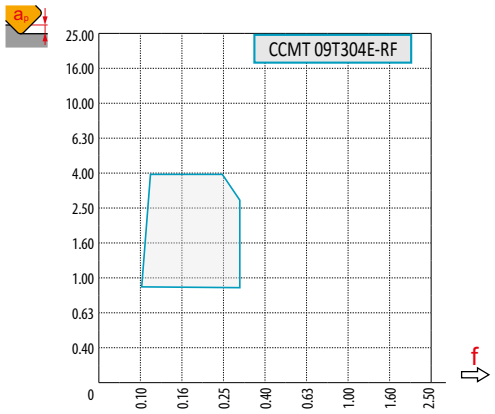
SCMT

RF





I.C.	R
6,35	1,0
9,525	1,5
12,7	2,5



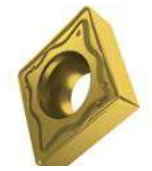
P	M	K	N	S	H
■	◪	■			◪

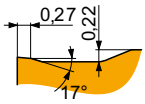
f ⇨ 0.10 – 0.60

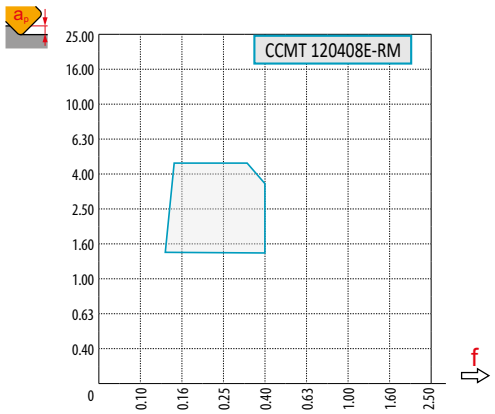
a_p 0.8 – 8.0

CCMT, DCMT, SCMT, TCMT, WCMT

RM







P	M	K	N	S	H
■	■	■		◪	◪

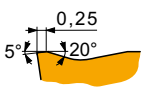
f ⇨ 0.10 – 0.50

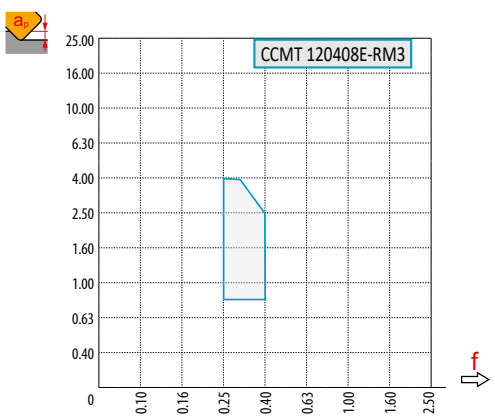
a_p 0.8 – 4.5

CCMT, DCMT, SCMT, TCMT, VBMT

RM3







P	M	K	N	S	H
■	◪	■			◪

f ⇨ 0.15 – 0.90

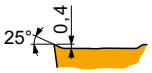
a_p 0.4 – 6.00

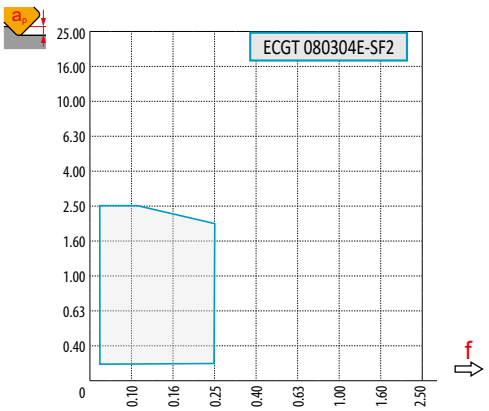
CCMT, SCMT, TCMT, RCMT

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

SF2







P	M	K	N	S	H
◪	■		◪	■	

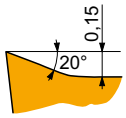
f ⇨ 0.02 – 0.28

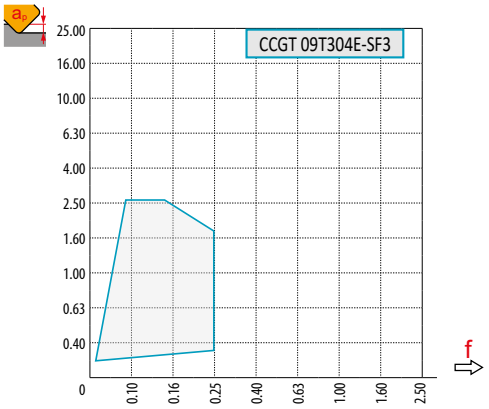
a_p 0.1 – 2.5

ECGT, VCGT

SF3







P	M	K	N	S	H
◪	■	◪	■	■	◪

f ⇨ 0.02 – 0.35

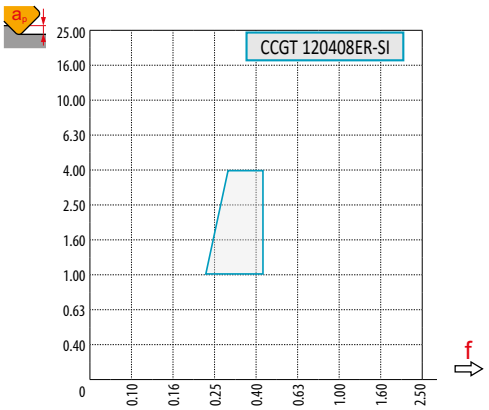
a_p 0.2 – 4.00

CCGT, DCGT, ECGT, SCGT, TCGT, VCGT

SI







P	M	K	N	S	H
■	■	◪		■	

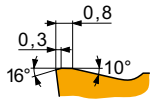
f ⇨ 0.08 – 0.45

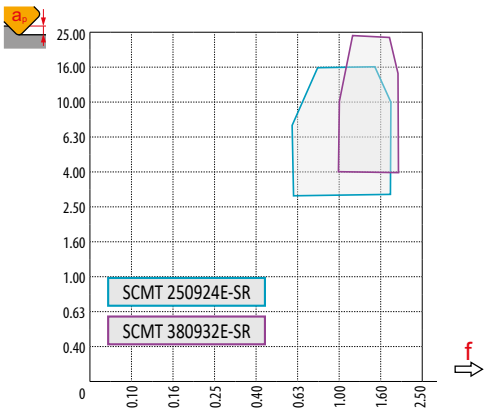
a_p 0.4 – 4.0

CCGT, TCGT

SR (SCMT)







P	M	K	N	S	H
■	■	■			

f ⇨ 0.60 – 2.0

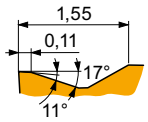
a_p 3.0 – 24.0

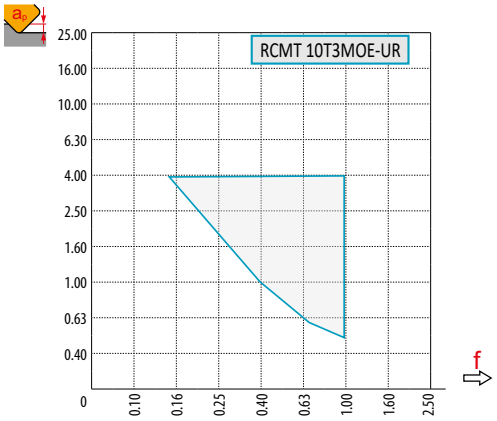
SCMT

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

UR (RCMT)



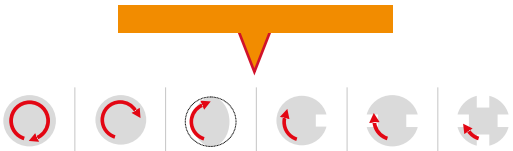




P	M	K	N	S	H
■	◪	■			

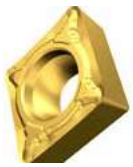
f ⇨ 0.15 – 1.00

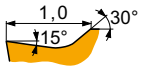
a_p 0.5 – 5.0

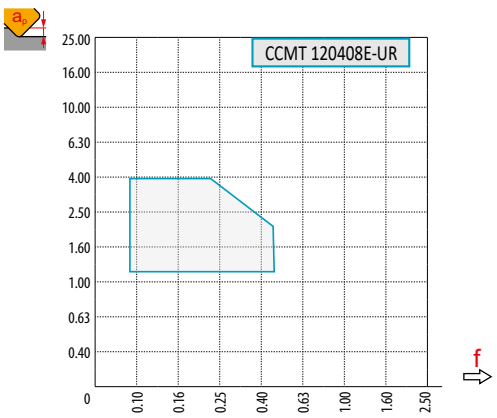


RCMT

UR



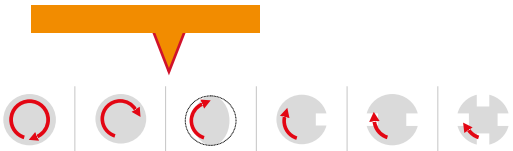




P	M	K	N	S	H
■	◪	■			

f ⇨ 0.10 – 0.40

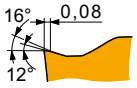
a_p 1.0 – 4.0

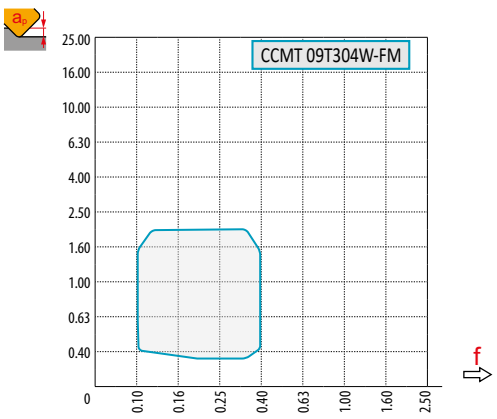


CCMT, DCMT, RCMT, SCMT, TCMT, VCMT, VBMT, WCMT

W-FM







P	M	K	N	S	H
■	■	■			

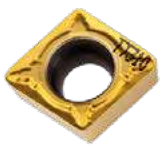
f ⇨ 0.1 – 0.4

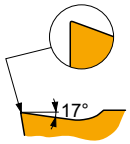
a_p 0.3 – 3.0

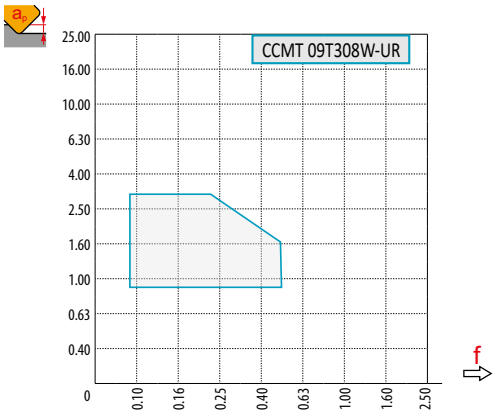


CCMT, DCMX

W-UR



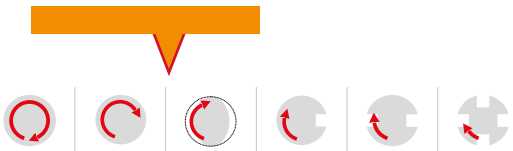




P	M	K	N	S	H
■	◪	■			

f ⇨ 0.08 – 0.5

a_p 0.4 – 3.0

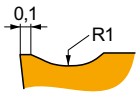


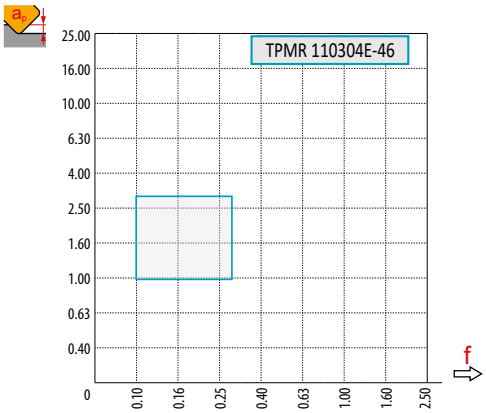
CCMT

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO C

46







P	M	K	N	S	H
■	◪	■			

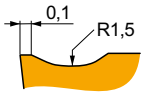
f ⇨ 0.10 – 0.30

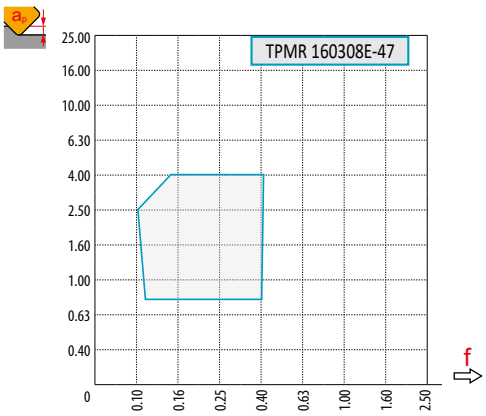
a_p 1.0 – 3.0

SPMR, TPMR

47







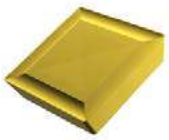
P	M	K	N	S	H
■	◪	■			

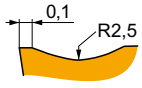
f ⇨ 0.10 – 0.40

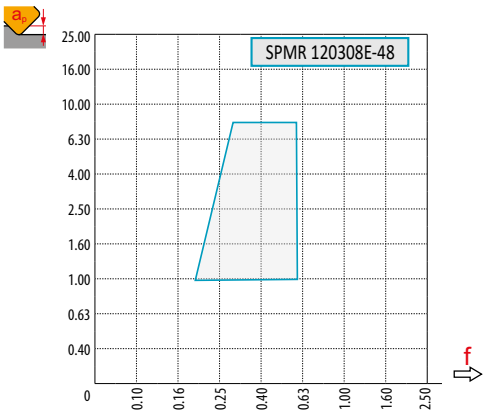
a_p 0.8 – 4.0

TPMR

48







P	M	K	N	S	H
■	◪	■			

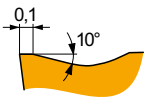
f ⇨ 0.20 – 0.60

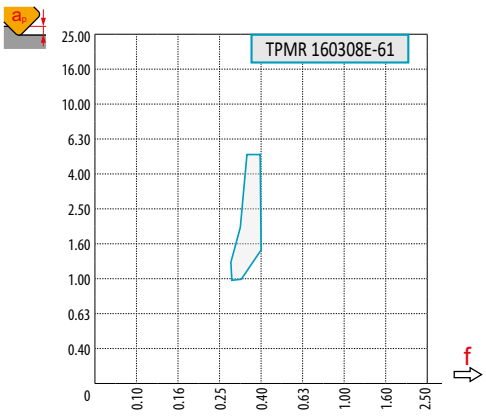
a_p 1.0 – 8.0

SPMR

61







P	M	K	N	S	H
■	◪	■			

f ⇨ 0.30 – 0.40

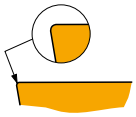
a_p 1.0 – 5.3

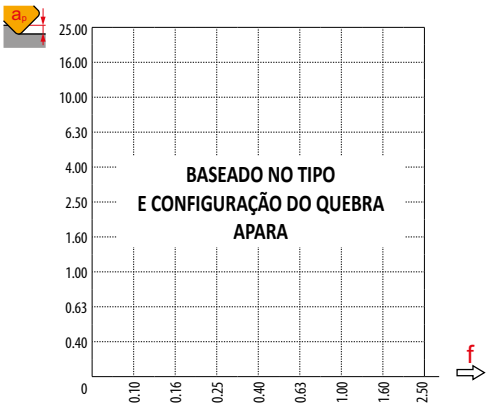
TPMR

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO C

.PUN







P	M	K	N	S	H
◪		■			◪

f ⇨	0.10 – 0.60
a_p	0.4 – 17.5

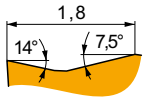


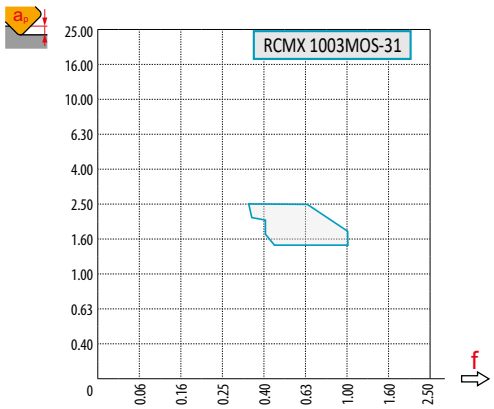
?	TPUN, SPUN

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

31 (RCMX)







P	M	K	N	S	H
■	◪	■			

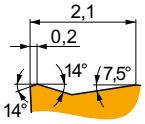
f ⇨ 0.40 – 1.00

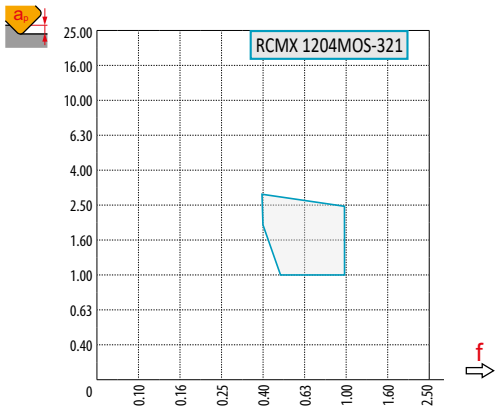
a_p 1.5 – 2.5

RCMX

321 (RCMX)







P	M	K	N	S	H
■		■			

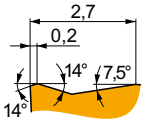
f ⇨ 0.40 – 1.00

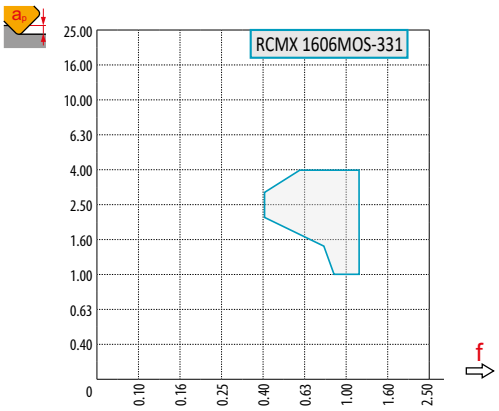
a_p 1.0 – 3.0

RCMX

331 (RCMX)







P	M	K	N	S	H
■		■			

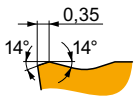
f ⇨ 0.40 – 1.20

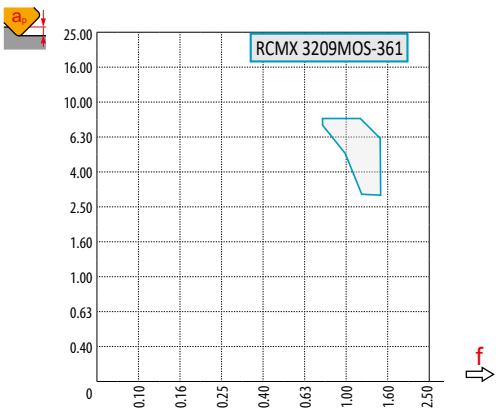
a_p 1.0 – 4.0

RCMX

361 (RCMX)







P	M	K	N	S	H
■		■			

f ⇨ 0.80 – 1.50

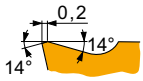
a_p 3.0 – 8.0

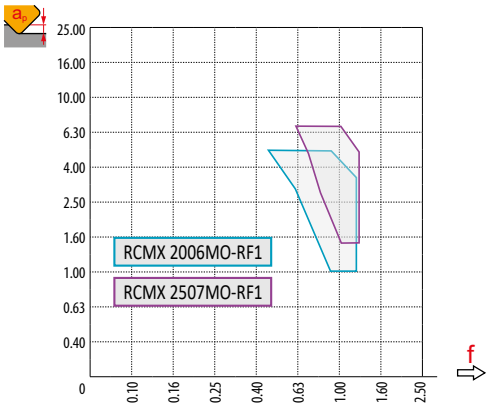
RCMX

GEOMETRIA DE PASTILHAS DE CORTE POSITIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

RF1 (RCMX)







P	M	K	N	S	H
■		◪			

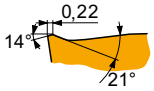
f 0.45 (0.60) – 1.20 (1.25)

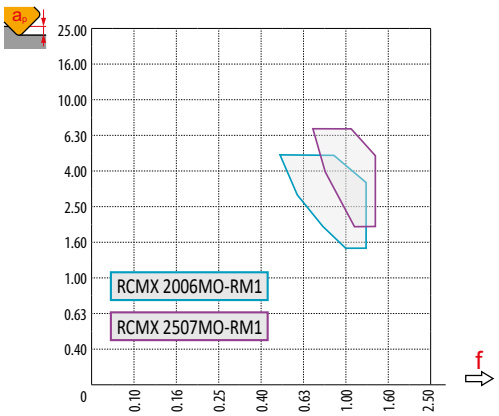
a_p 1.0 (1.5) – 5.0 (7.0)

RCMX 20, RCMX 25

RM1 (RCMX)







P	M	K	N	S	H
■		◪			

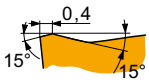
f 0.50 (0.70) – 1.30 (1.40)

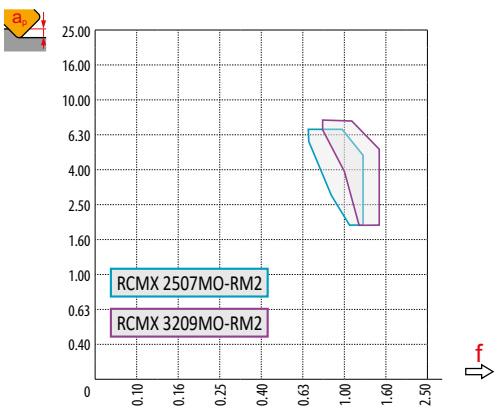
a_p 1.5 (2.0) – 5.0 (8.0)

RCMX 20, RCMX 25

RM2 (RCM.)







P	M	K	N	S	H
■		◪			

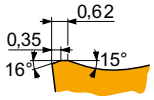
f 0.70 (0.80) – 1.30 (1.50)

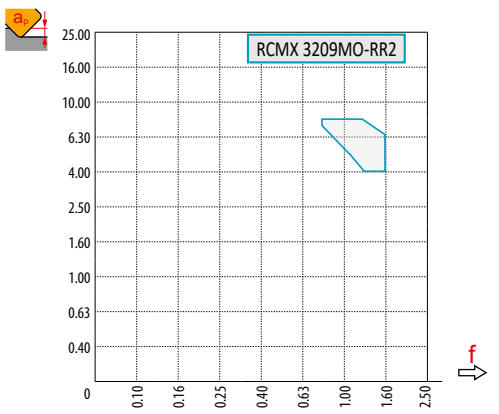
a_p 2.0 – 7.0 (8.0)

RCMX 25, RCMX 32

RR2 (RCM.)







P	M	K	N	S	H
■		■			◪

f 0.80 – 1.60

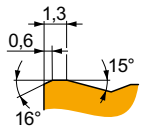
a_p 4.0 – 8.0

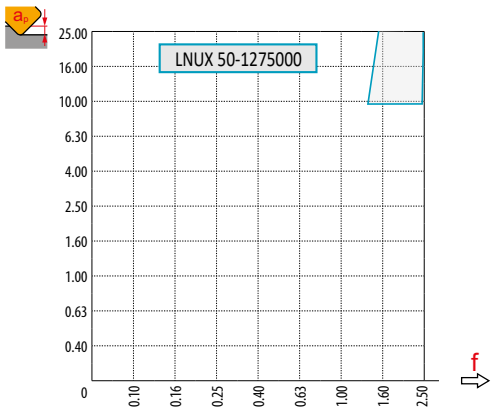
RCMX 32

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

000 (LNUX)







P	M	K	N	S	H
■		■			

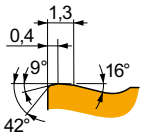
f 1.20 – 2.50

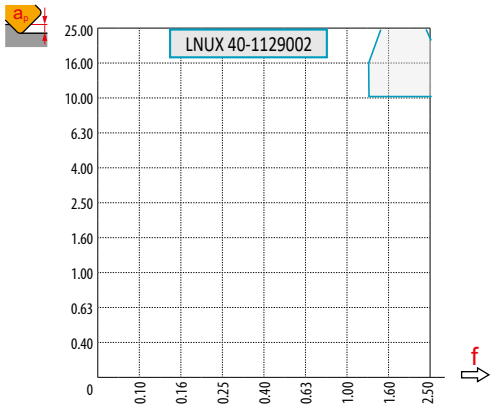
a_p 10.0 – 36.0

LNUX 50

002 (LNUX)







P	M	K	N	S	H
■		■			

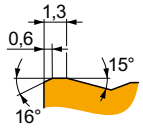
f 1.30 – 2.60

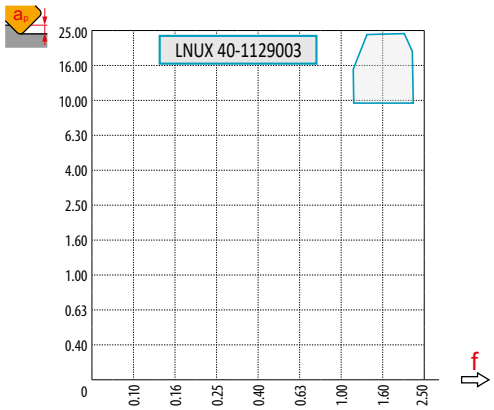
a_p 10.0 – 27.0

LNUX 40

003 (LNUX)







P	M	K	N	S	H
■		■			

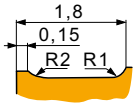
f 1.20 – 2.50

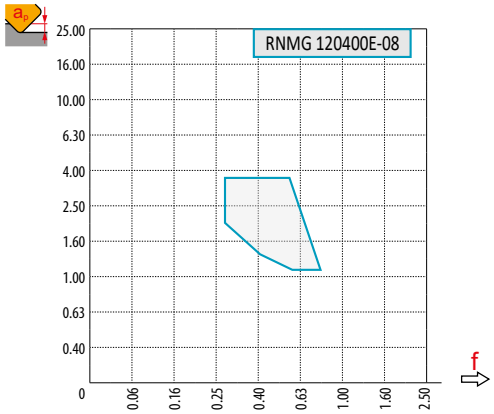
a_p 10.0 – 27.0

LNUX 40

08 (RNMG)







P	M	K	N	S	H
◪		◪			◪

f 0.30 – 0.80

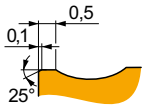
a_p 1.0 – 4.0

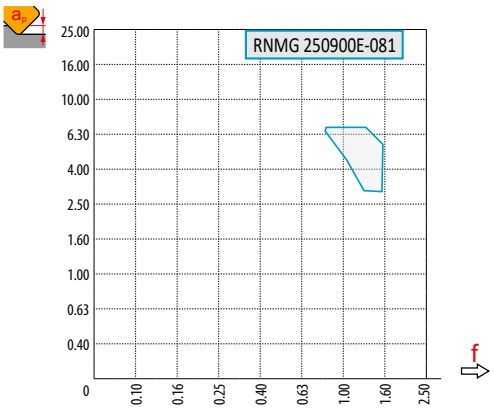
RNMG

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

81 (RNMG)







P	M	K	N	S	H
◪		◪			◪

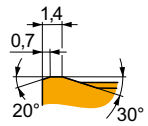
f ⇨ 0.80 – 1.20

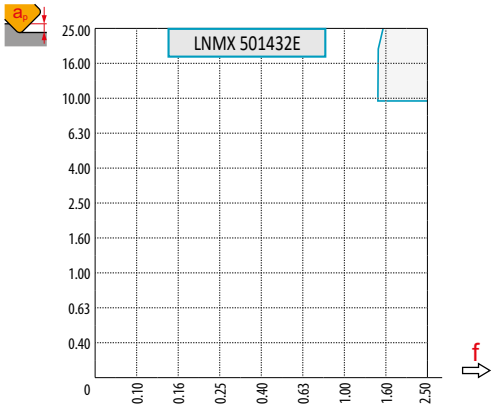
a_p 3.0 – 7.0

RNMG

432 (LNMX)







P	M	K	N	S	H
■		■			

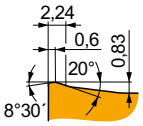
f ⇨ 1.50 – 2.60

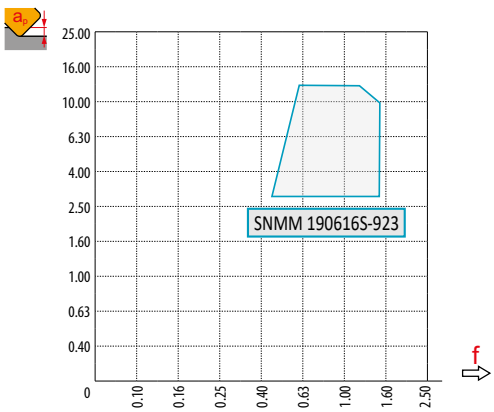
a_p 10.0 – 35.0

LNMX 50

923







P	M	K	N	S	H
■	■	◪		◪	

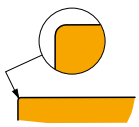
f ⇨ 0.45 – 1.50

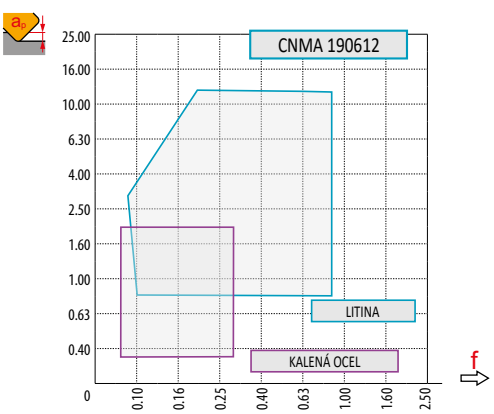
a_p 3.0 – 16.0

CNMM, SNMM

...A







P	M	K	N	S	H
		■			◪

f ⇨ 0.10 – 1.10

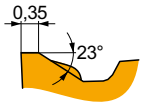
a_p 0.8 – 12.7

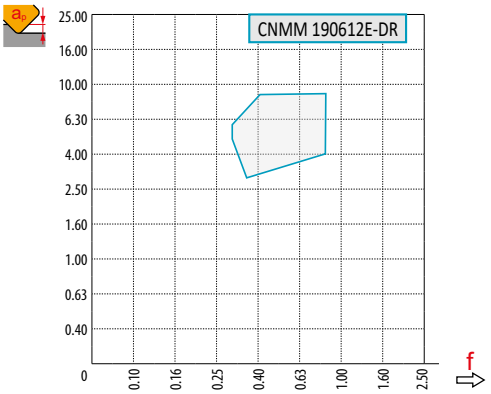
CNMA, DNMA, SNMA, TNMA, WNMA

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

DR



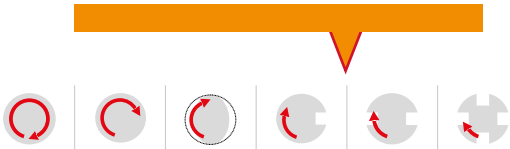




P	M	K	N	S	H
■	◪	◪			

f ⇨ 0.30 – 0.85

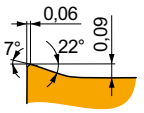
a_p 2.5 – 9.0

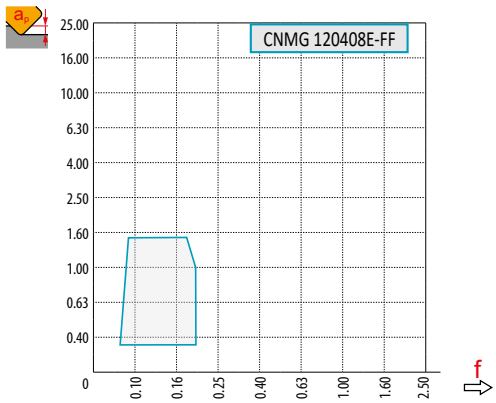


? CNMM, DNMM, SNMM, TNMM, WNMM

FF



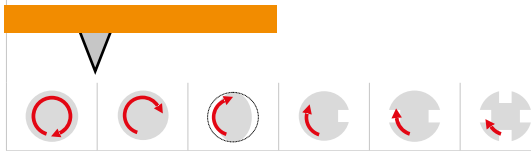




P	M	K	N	S	H
■	■	◪			

f ⇨ 0.06 – 0.25

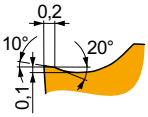
a_p 0.2 – 1.6

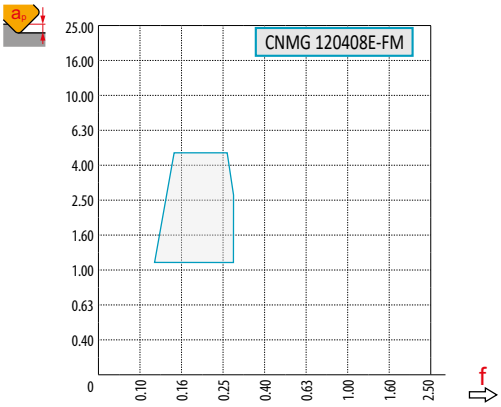


? CNMG, DNMG, TNMG, VNMG, WNMG

FM



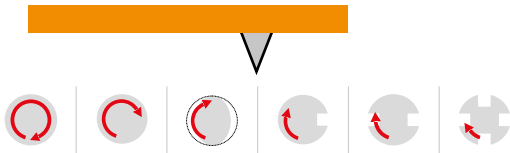




P	M	K	N	S	H
■	◪	■		◪	

f ⇨ 0.1 – 0.5

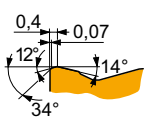
a_p 0.4 – 5.0

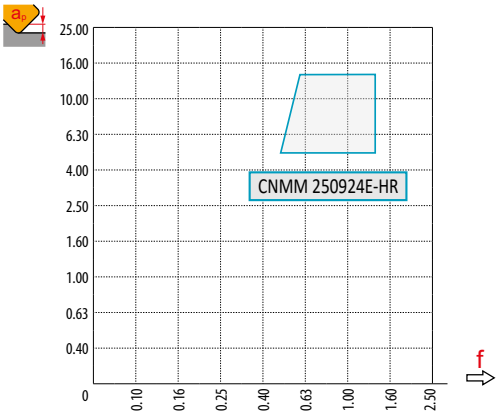


? CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

HR



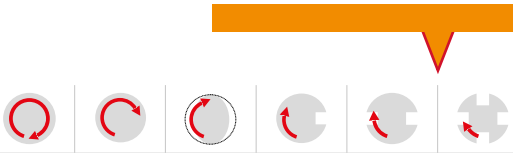




P	M	K	N	S	H
■	◪	■			

f ⇨ 0.50 – 1.40

a_p 5.0 – 14.0

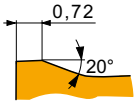


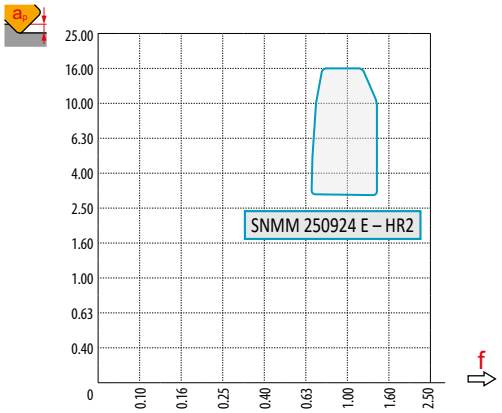
? CNMM, SNMM, TNMM

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

HR2







P	M	K	N	S	H
■	◪	■			

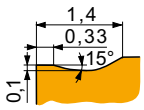
f ⇨ 0.5 – 1.4

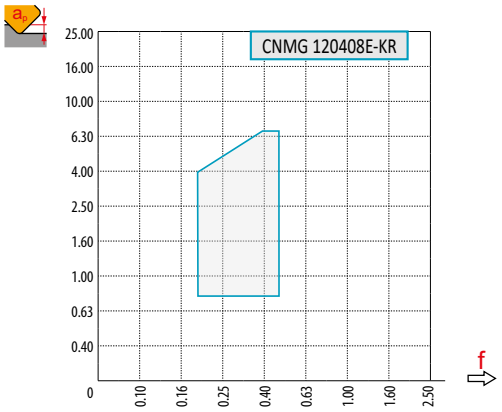
a_p 3.0 – 16.0

CNMM, SNMM

KR







P	M	K	N	S	H
■		■			◪

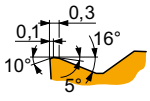
f ⇨ 0.2 – 0.7

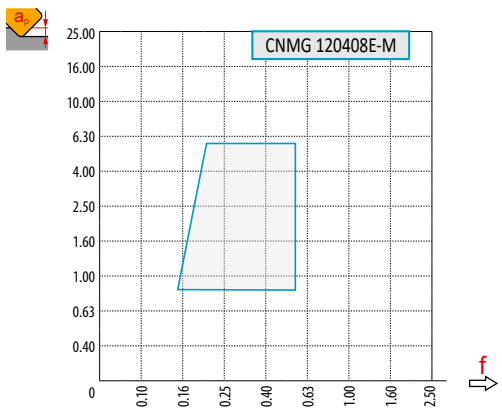
a_p 0.4 – 7

CNMG, SNMG, TNMG, WNMG

M







P	M	K	N	S	H
■		■			◪

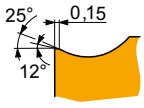
f ⇨ 0.17 – 0.80

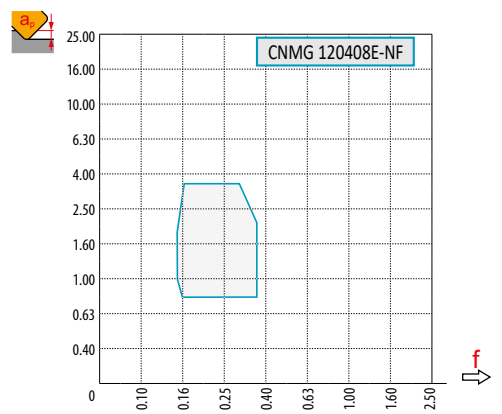
a_p 0.8 – 8.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

NF







P	M	K	N	S	H
■	■	◪	◪	◪	

f ⇨ 0.1 – 0.35

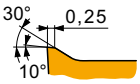
a_p 0.4 – 4.0

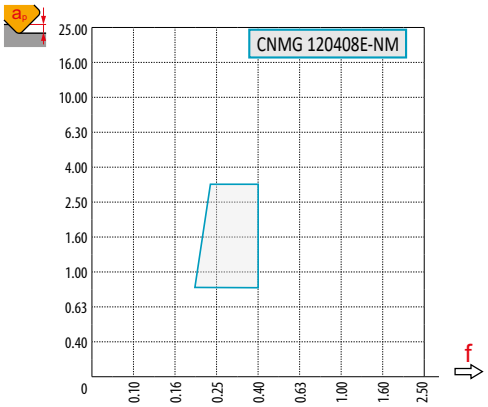
CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

NM







P	M	K	N	S	H
■	■		◪	■	

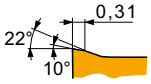
f ⇨ 0.15 – 0.55

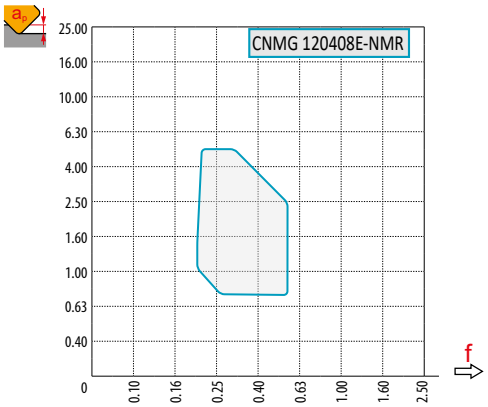
a_p 0.5 – 8.0

CNMG, DNMG, TNMG, VNMG, WNMG

NMR







P	M	K	N	S	H
■	■			■	

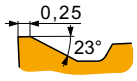
f ⇨ 0.18 – 0.70

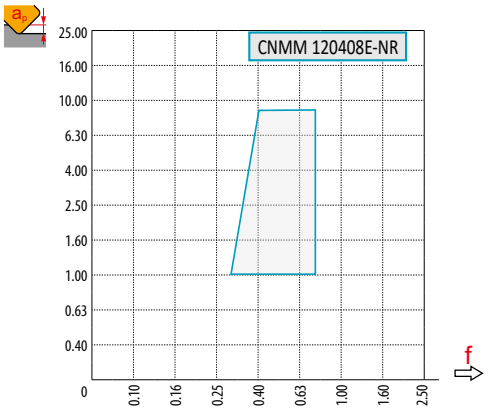
a_p 0.4 – 8.0

CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

NR







P	M	K	N	S	H
■	■	◪		◪	

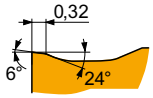
f ⇨ 0.25 – 0.80

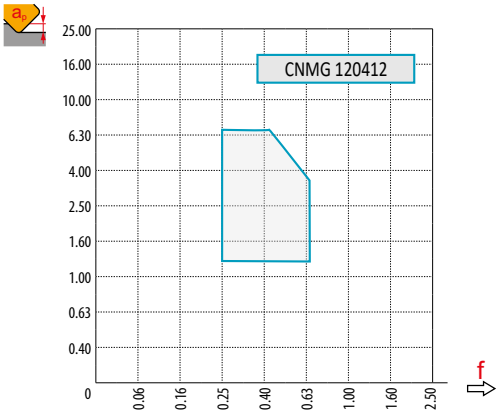
a_p 1.0 – 9.0

CNMM, DNMM, SNMM, TNMM, WNMM

NRM







P	M	K	N	S	H
■	■			■	

f ⇨ 0.23 – 1.0

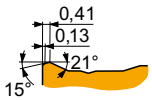
a_p 0.8 – 16.0

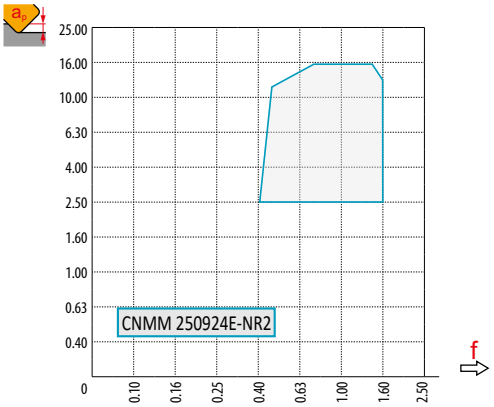
CNMG, CNMM, SNMG, SNMM

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

NR2



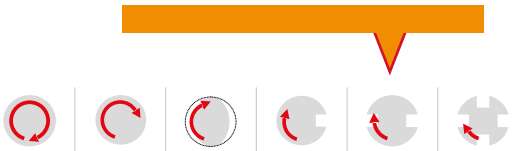




P	M	K	N	S	H
■	■	◪		◪	

f ⇨ 0.2 – 1.6

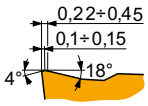
a_p 1.0 – 16.0

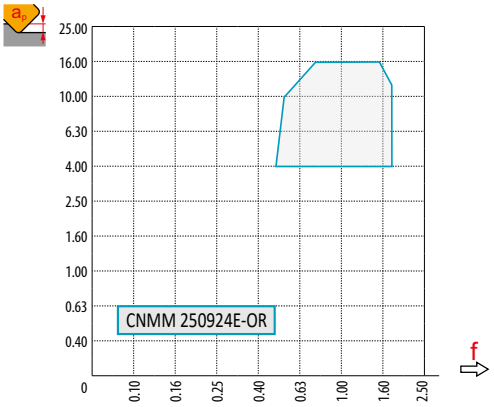


CNMM, DNMM, SNMM, TNMM, WNMM

OR



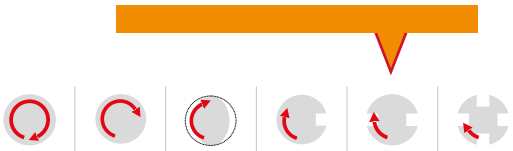




P	M	K	N	S	H
■	◪	■		◪	

f ⇨ 0.25 – 1.70

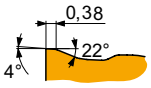
a_p 2.0 – 16.0

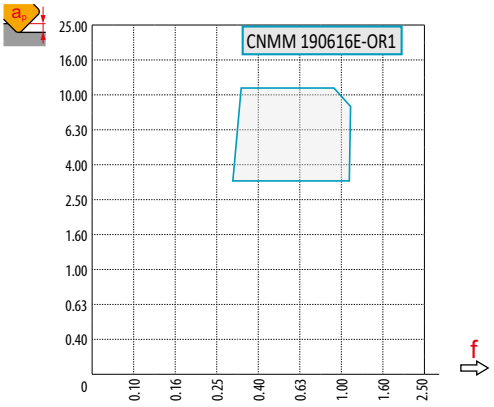


CNMM, DNMM, SNMM, TNMM, WNMM, SCMT

OR1



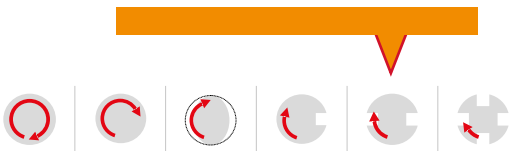




P	M	K	N	S	H
■	◪	◪		◪	

f ⇨ 0.3 – 1.0

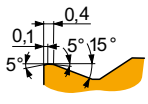
a_p 3.0 – 11.0

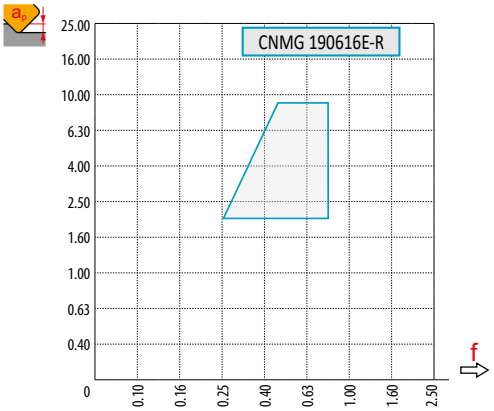


CNMM, SNMM

R



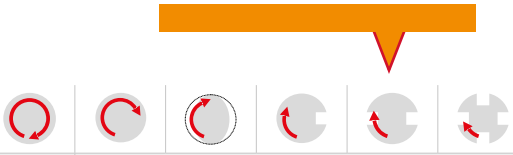




P	M	K	N	S	H
■		■			◪

f ⇨ 0.25 – 0.80

a_p 2.0 – 9.0

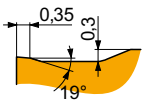


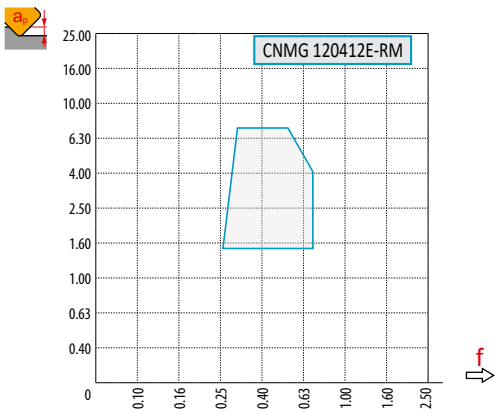
CNMG, DNMG, SNMG, TNMG, WNMG

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

RM







P	M	K	N	S	H
■	◪	◪			

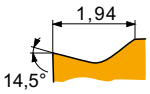
f ⇨ 0.20 – 1.20

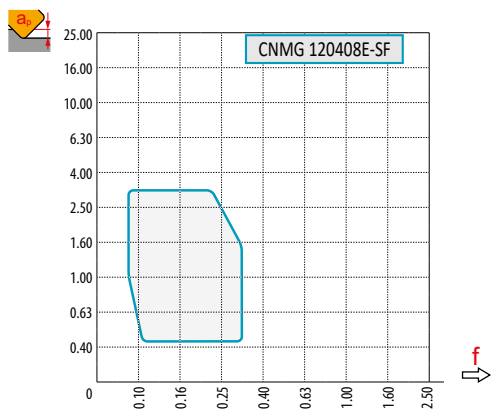
a_p 1.0 – 15.0

CNMG. DNMG, SNMG, TNMG, WNMG

SF







P	M	K	N	S	H
■	■	■	◪	■	■

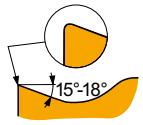
f ⇨ 0.08 – 0.35

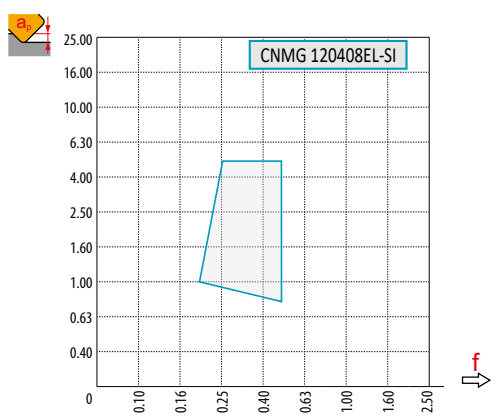
a_p 0.2 – 3.5

CNGG, CNMG, DNMG,
SNMG, TNMG, VNMG, WNMG

SI







P	M	K	N	S	H
■	■		◪	◪	

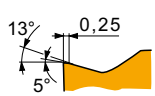
f ⇨ 0.20 – 0.50

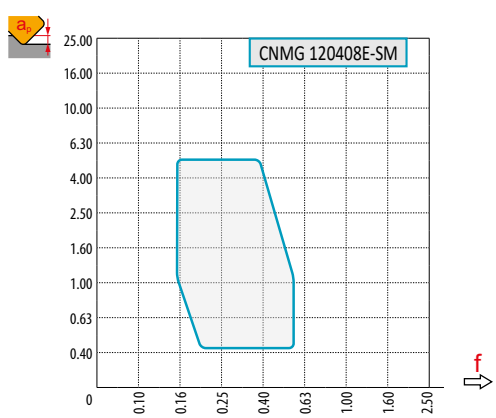
a_p 0.4 – 5.0

CNMG, DNMG, TNMG, WNMG

SM







P	M	K	N	S	H
■	■	■	◪	■	◪

f ⇨ 0.15 – 0.55

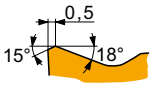
a_p 0.4 – 6.0

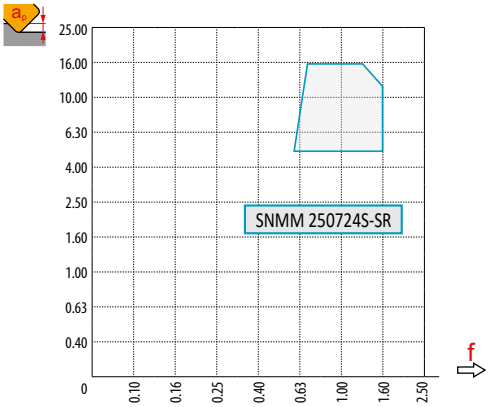
CNMG, DNMG, SNMG, TNMG, VNMG, WNMG

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

SR





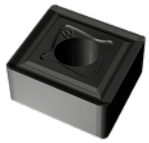


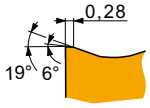
P	M	K	N	S	H
■	◪	■			
f ⇨	0.70 – 1.60				
a_p	5.0 – 16.0				

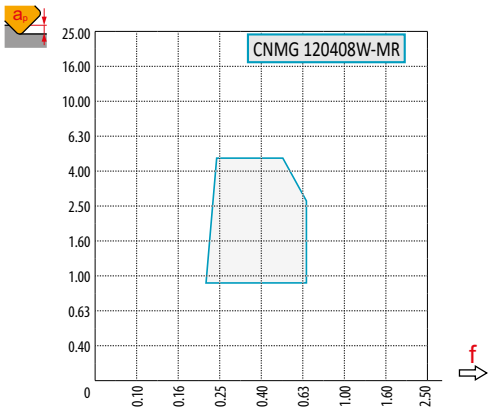


?	SNMM, SNMX

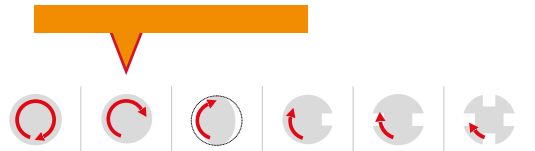
W–MR







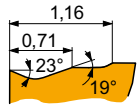
P	M	K	N	S	H
■	◪	◪			
f ⇨	0.2 – 0.75				
a_p	0.5 – 5.0				

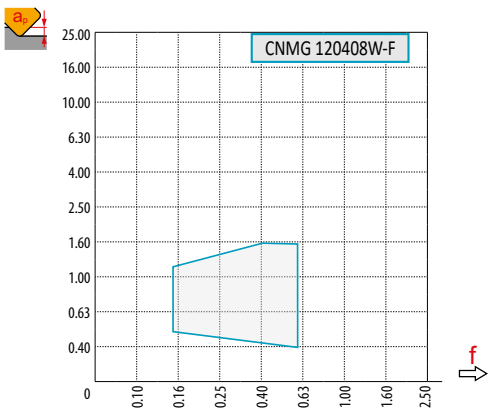


?	CNMG, WNMG, DNMG

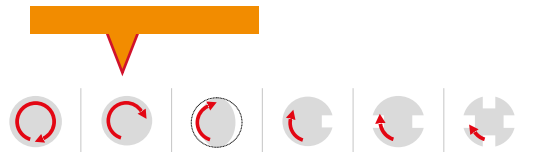
W–F







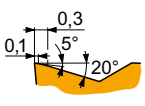
P	M	K	N	S	H
■		■			
f ⇨	0.10 – 0.60				
a_p	0.4 – 1.6				

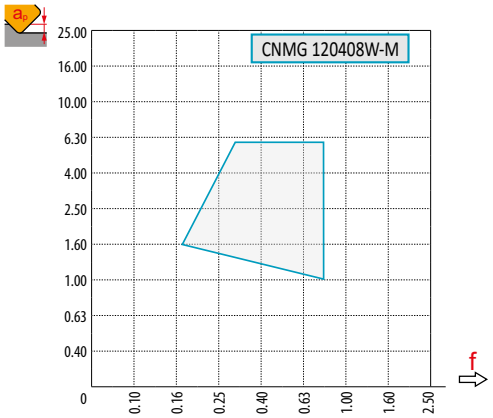


?	CNMG, WNMG

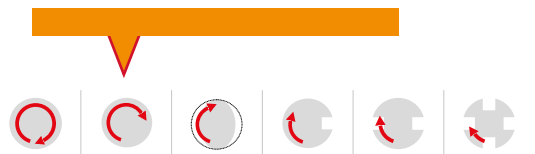
W–M







P	M	K	N	S	H
■		◪			
f ⇨	0.15 – 1.00				
a_p	0.8 – 4.0				

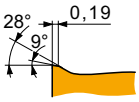


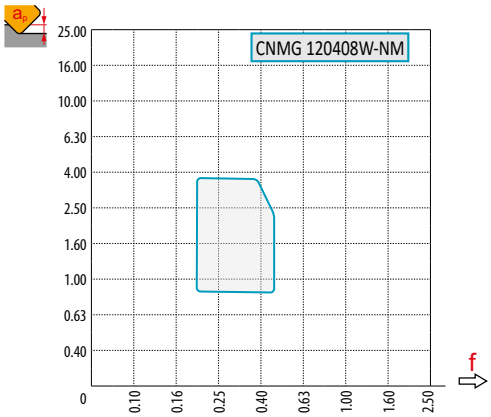
?	CNMG, WNMG

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO P, M, D

W-NM

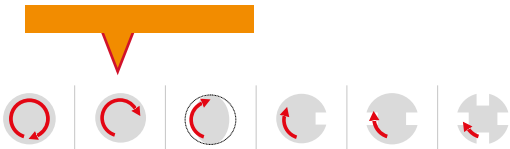






P	M	K	N	S	H
■	◪	◪		◪	

f	0.15 – 0.55
a_p	0.5 – 3.5

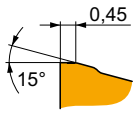


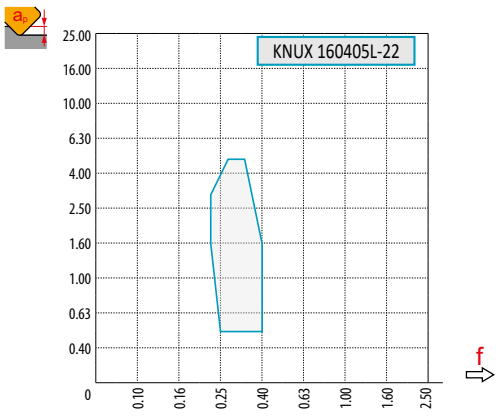
CNMG, DNMX, WNMG

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO C

22



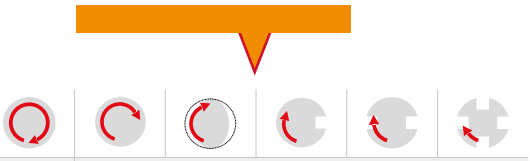


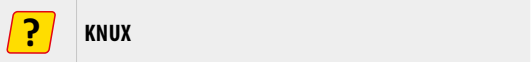


P	M	K	N	S	H
■	◪	◪			

f ⇨ 0.23 – 0.55

a_p 0.50 – 4.80

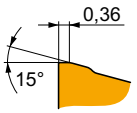


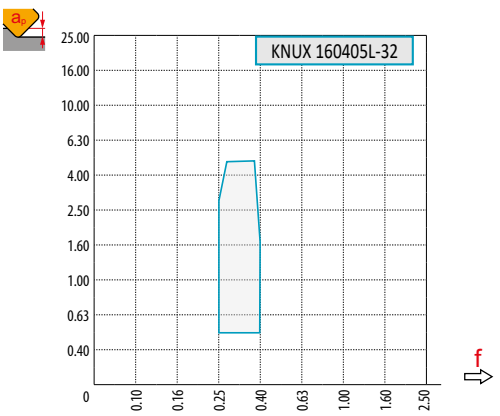


? **KNUX**

32



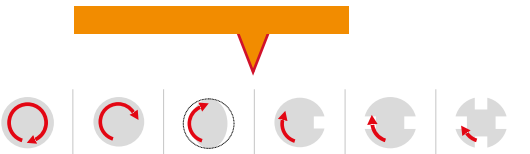


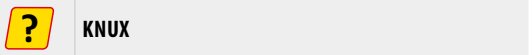


P	M	K	N	S	H
■	◪	◪			

f ⇨ 0.25 – 0.6

a_p 0.50 – 4.80

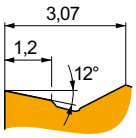


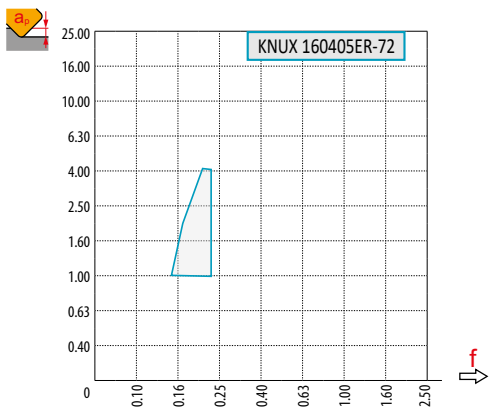


? **KNUX**

72



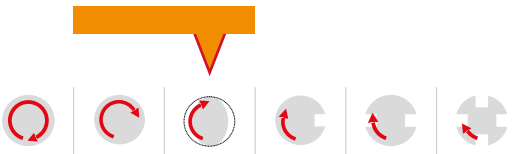


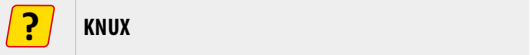


P	M	K	N	S	H
■	◪	■		◪	

f ⇨ 0.15 – 0.23

a_p 1.0 – 4.0

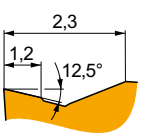


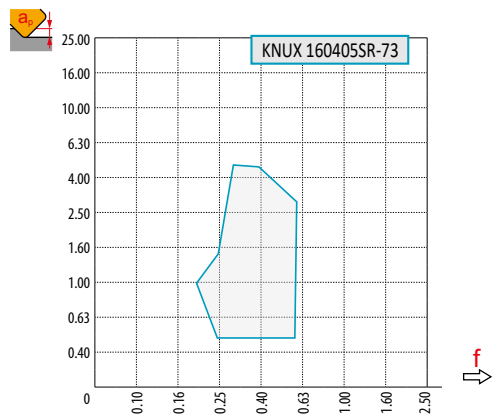


? **KNUX**

73





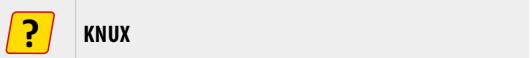


P	M	K	N	S	H
■	◪	■		◪	

f ⇨ 0.20 – 0.60

a_p 0.5 – 4.8



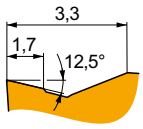


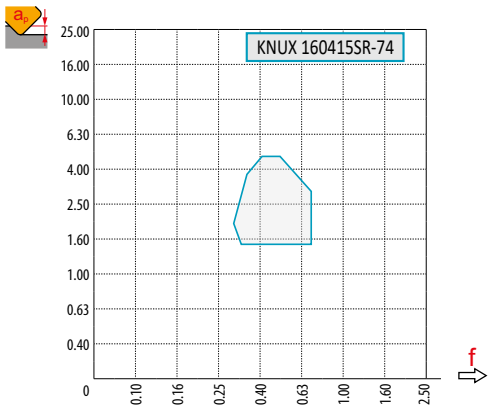
? **KNUX**

GEOMETRIA DE PASTILHAS DE CORTE NEGATIVAS - DESIGNAÇÃO DE FIXAÇÃO ISO C

74

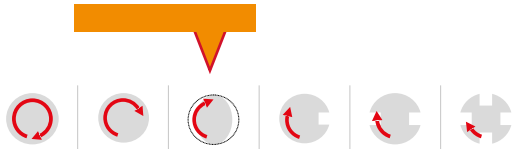






P	M	K	N	S	H
■	◪	■		◪	

f	0.30 – 0.7
a_p	1.5 – 4.8



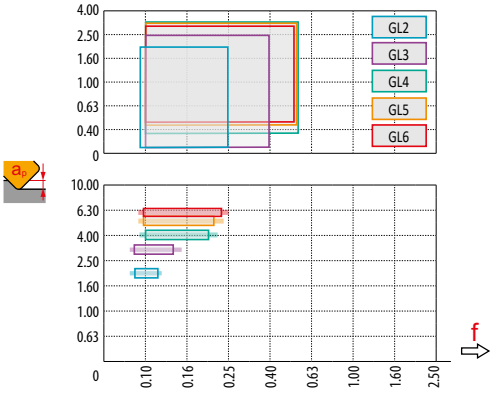
?	KNUX

GEOMETRIA DE PASTILHAS DE CORTE PARA RANHURAS - DESIGNAÇÃO DE FIXAÇÃO ISO X E G

GM (GL.D) NEW

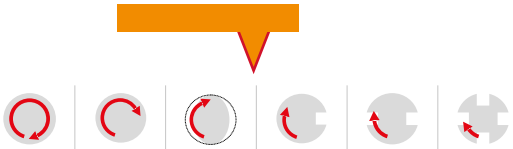






P	M	K	N	S	H
■	■	◪		◪	

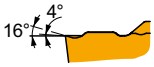
f, a_p — Consultar Diagrama

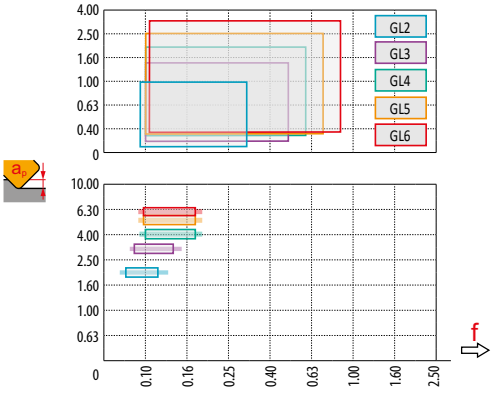


? — GL. D

MM (GL.D) NEW

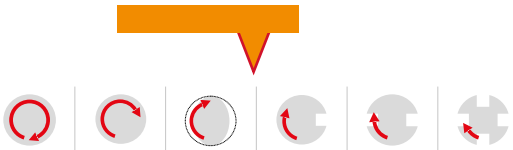






P	M	K	N	S	H
■	■	■		◪	

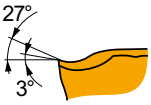
f, a_p — Consultar Diagrama

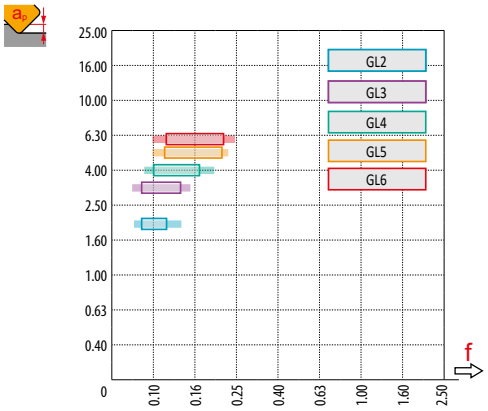


? — GL. D

PM (GL. D) NEW

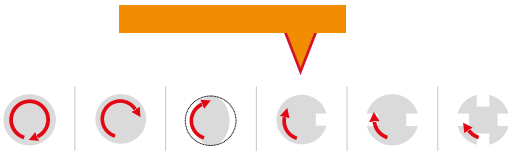






P	M	K	N	S	H
■	■	◪		◪	

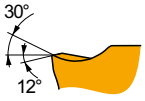
f, a_p — Consultar Diagrama

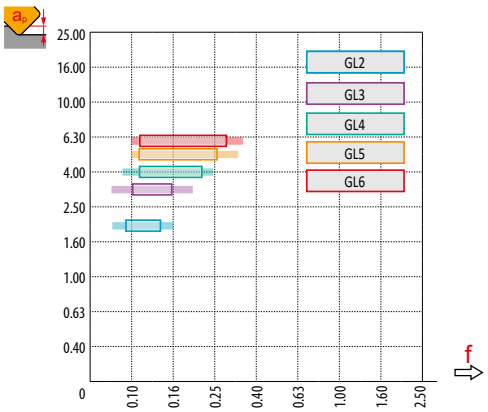


? — GL. D

PR (GL. D) NEW

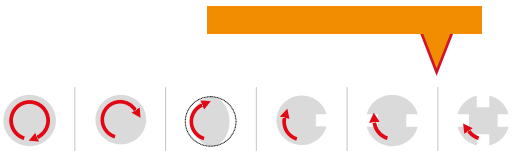






P	M	K	N	S	H
■	◪	■			

f, a_p — Consultar Diagrama

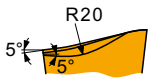


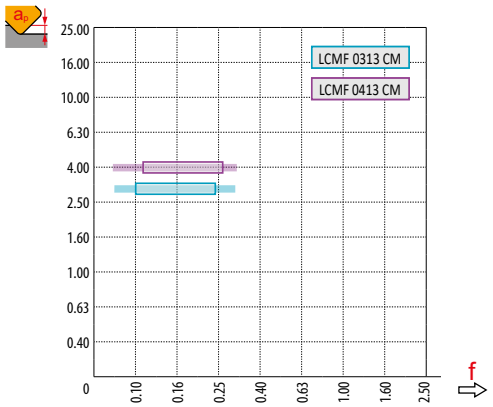
? — GL. D

GEOMETRIA DE PASTILHAS DE CORTE PARA RANHURAS - DESIGNAÇÃO DE FIXAÇÃO ISO X E G

13 CM (LCMF)







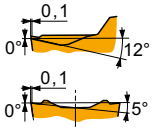
P	M	K	N	S	H
■		◪			

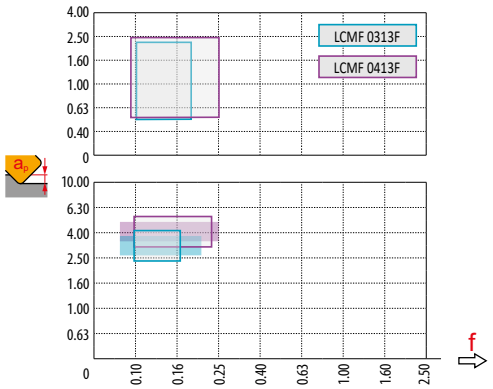
Consultar Diagrama

LCMF 13 CM

13 F (LCM.)







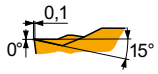
P	M	K	N	S	H
■		◪			

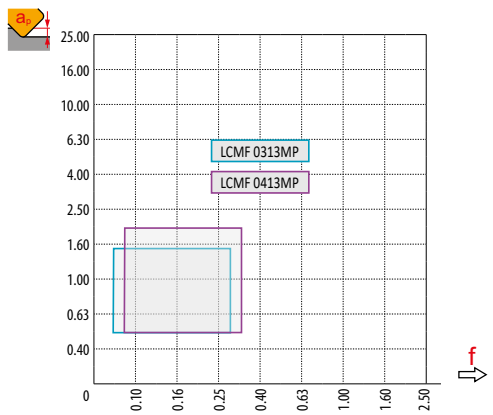
Consultar Diagrama

LCMF 13 F, LCMR 13 F

13 MP (LCM.)







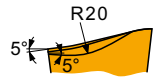
P	M	K	N	S	H
■		■			

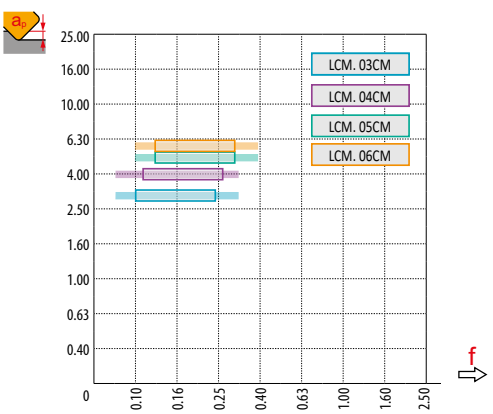
See diagram

LCMF 13 MP, LCMR 13 MP

16 CM (LCM.)







P	M	K	N	S	H
■		◪			

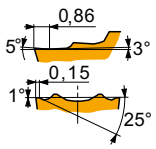
See diagram

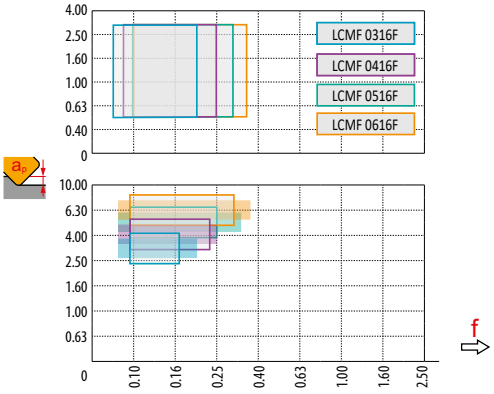
LCMF 16 CM, LCMR 16 CM

GEOMETRIA DE PASTILHAS DE CORTE PARA RANHURAS - DESIGNAÇÃO DE FIXAÇÃO ISO X E G

16 F (LCM.)







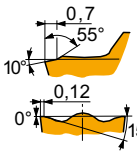
P	M	K	N	S	H
■		◪			

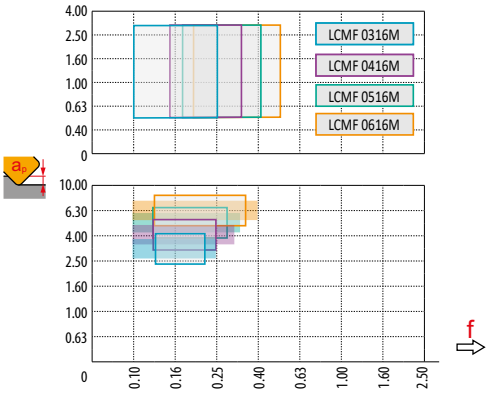
f
a_p
Consultar Diagrama

LCMF 16 F, LCMR 16 F

16 M (LCM.)







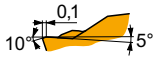
P	M	K	N	S	H
■		■			◪

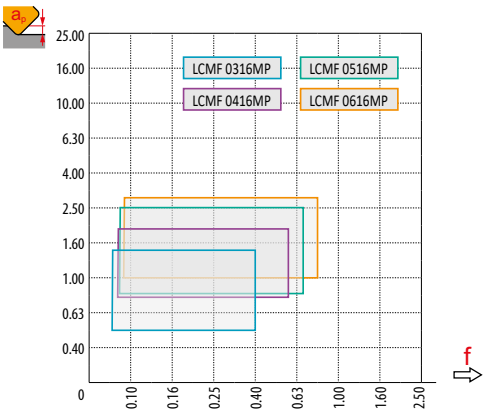
f
a_p
Consultar Diagrama

LCMF 16 M, LCMR 16 M

16 MP (LCM.)







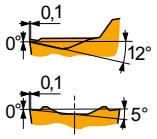
P	M	K	N	S	H
■		■			

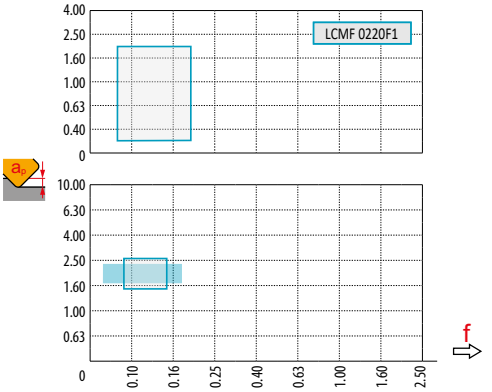
f
a_p
Consultar Diagrama

LCMF 16 MP, LCMR 16 MP

20 F1 (LCMF)







P	M	K	N	S	H
■	◪	◪			

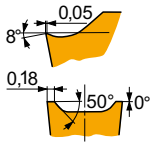
f
a_p
See diagram

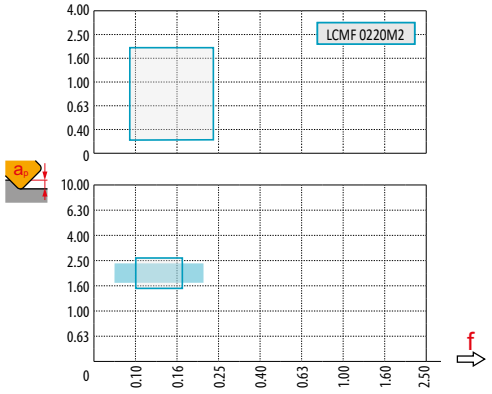
LCMF

GEOMETRIA DE PASTILHAS DE CORTE PARA RANHURAS - DESIGNAÇÃO DE FIXAÇÃO ISO X E G

20 M2 (LCMF)



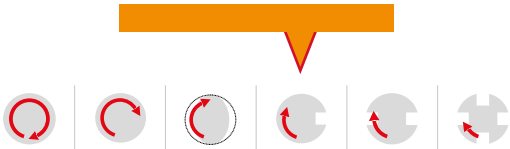




P	M	K	N	S	H
■	◪	◪			

f ⇨ 0.09 – 0.23

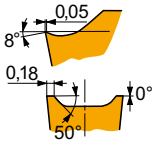
a_p 0.3 – 1.5

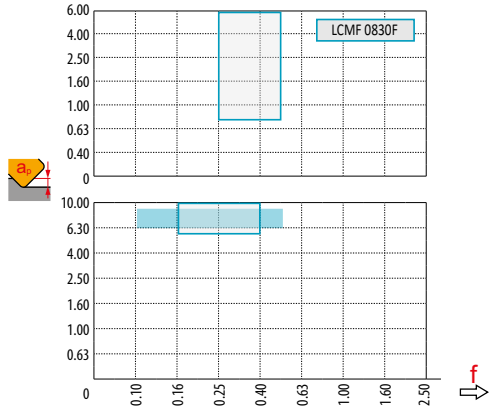


? **LCMF**

30 F (LCM.)



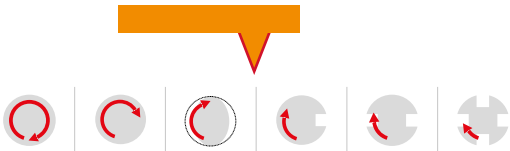




P	M	K	N	S	H
■		◪			

f ⇨ 0.1 – 0.5

a_p 0.8 – 6.0

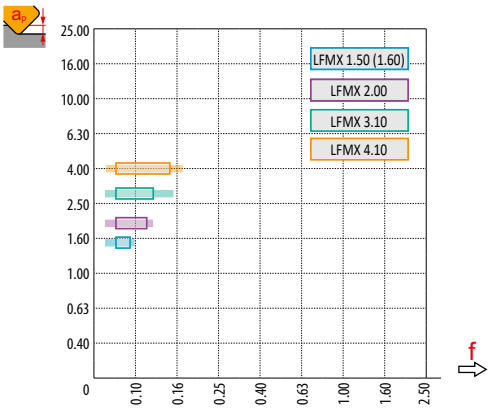


? **LCMF 30 F, LCMR 30 F**

F1 (LFMX)

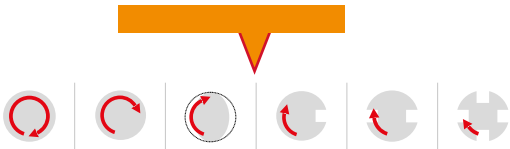






P	M	K	N	S	H
■	◪	■			

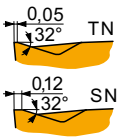
f ⇨ Consultar Diagrama

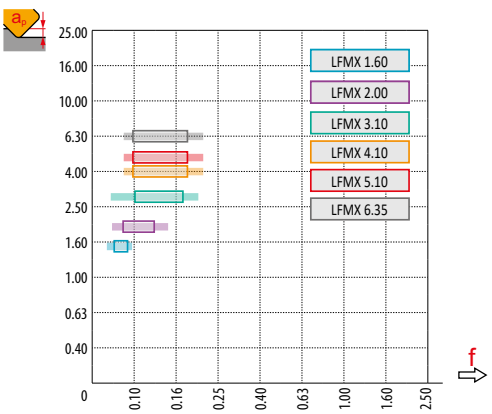


? **LFMX**

F2 (LFMX)

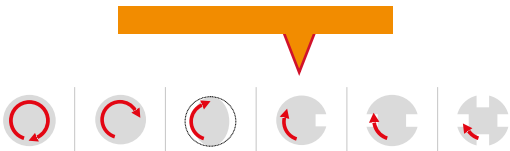






P	M	K	N	S	H
■	◪	■			

f ⇨ Consultar Diagrama

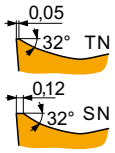


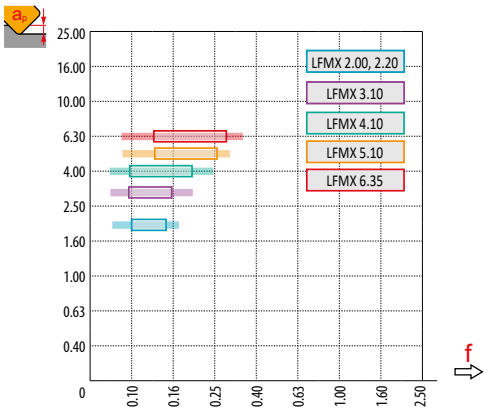
? **LFMX**

GEOMETRIA DE PASTILHAS DE CORTE PARA RANHURAS - DESIGNAÇÃO DE FIXAÇÃO ISO X E G

M2 (LFMX)

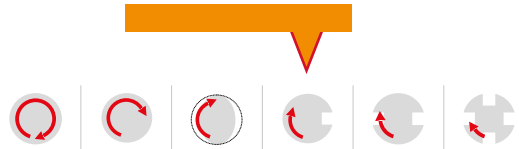






P	M	K	N	S	H
■	◪	◪			

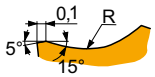
f / a_p — Consultar Diagrama

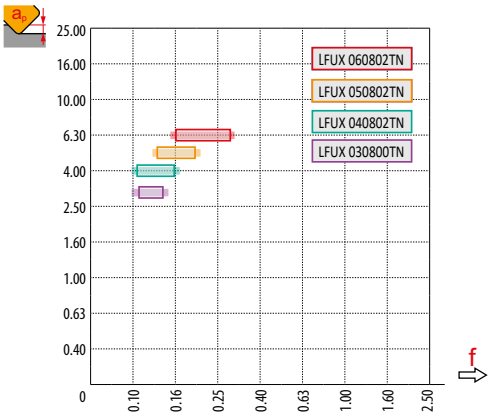


LFMX

LFUX

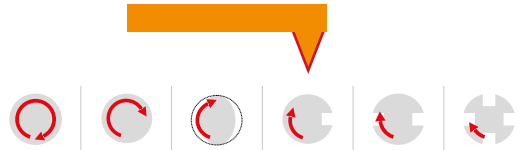






P	M	K	N	S	H
■		■			

f / a_p — Consultar Diagrama

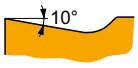


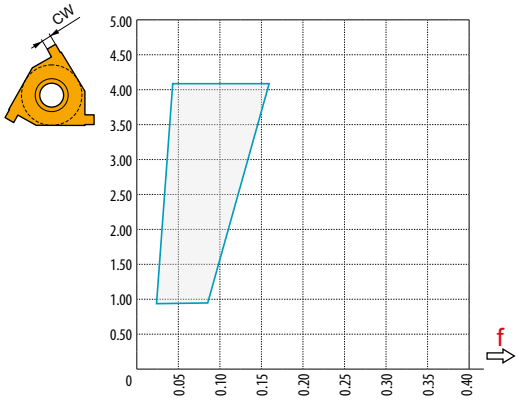
LFUX

GEOMETRIA DE PASTILHAS DE CORTE PARA RANHURAS - DESIGNAÇÃO DE FIXAÇÃO ISO S

TN. EXT

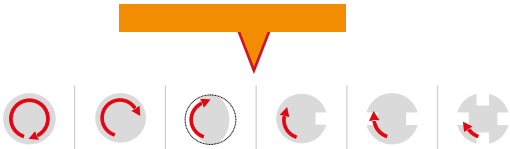






P	M	K	N	S	H
■	◪	◪			

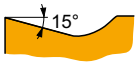
f ⇨ CW — Consultar Diagrama

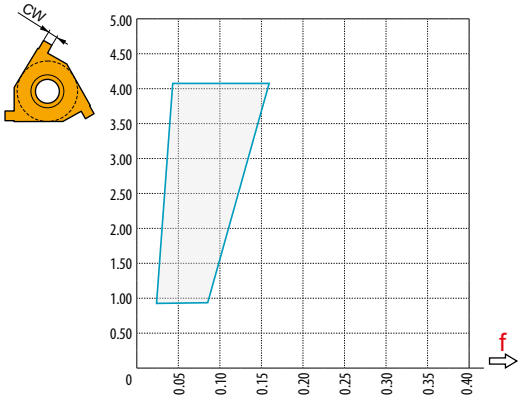


? **TN R EXT; TN ZZ EXT**

TN. INT

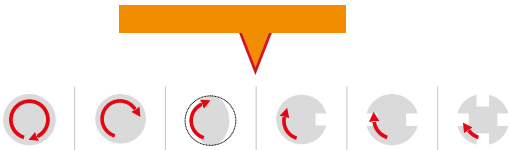






P	M	K	N	S	H
■	◪	◪			

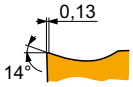
f ⇨ CW — Consultar Diagrama

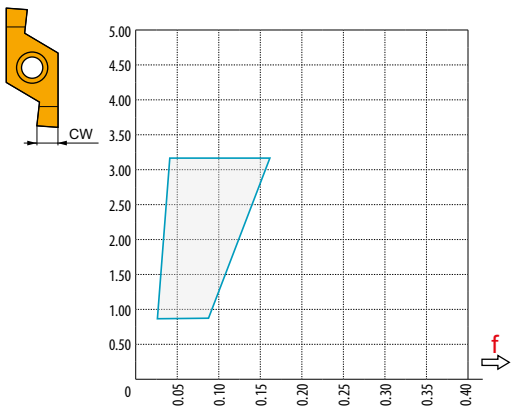


? **TN R INT; TN ZZ INT**

X61 NEW

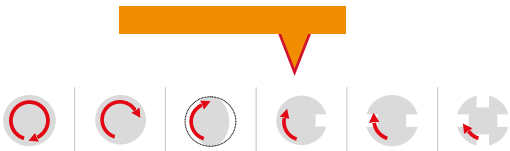






P	M	K	N	S	H
■	◪	◪			

f ⇨ CW — Consultar Diagrama

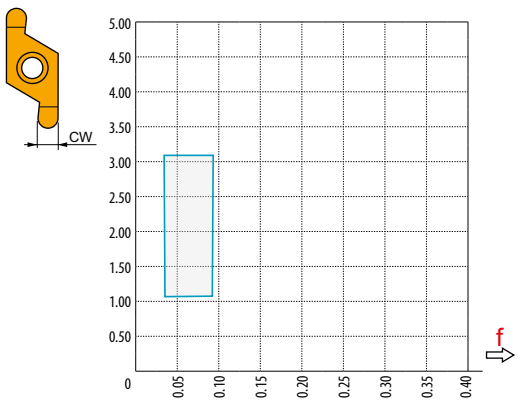


? **X61; X61-1**

X61 R NEW

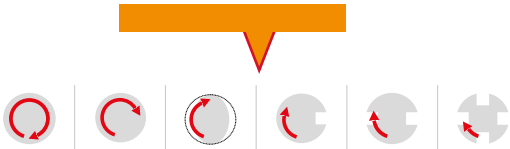






P	M	K	N	S	H
■	◪	◪			

f ⇨ CW — See diagram



? **X61 R; X61 R-1**

T	9	3	1	5
Operação	Revestimento/Substrato	Geração	Gama ISO	

D	Furação
M	Fresagem
T	Torneamento
G	Ranhurar e Sangrar

0 PVD 1 CVD	Aplicação especial
2 PVD 3 CVD	Livre
4 PVD 5 CVD	Grupos K, H
6 PVD 7 CVD	Grupos M, S
8 PVD 9 CVD	Universal
B	CBN
C	Cerâmica
D	PCD
T	Cermet

1 – 9

	01 – 50
	**01 – 05**
	**05 – 10**
	**10 – 20**
	**20 – 30**
	**30 – 40**
	**40 – 50**

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do refrigerante	Descrição da Qualidade
T9226	P15 - P35 M10 - M30 K15 - K35 S15 - S25	■ ■ ◪ □				MT-CVD		FGM	+ + +	Qualidade projetada para aplicações de desbaste pesado. Uma qualidade versátil com alta resistência a danos mecânicos e com ótima resistência ao desgaste. Utilizável em velocidades de corte mais baixas.
T9310	P01 - P15 K05 - K20 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	Qualidade com alta resistência à abrasão que pode ser utilizada para cortes ligeiramente interrompidos. Será utilizado para operações de acabamento ou semi desbaste. Este material também pode ser usado para operações de desbaste, desde que a configuração da máquina-ferramenta-peça seja suficientemente rígida.
T9315	P05 - P25 K05 - K25 H10 - H20	■ ◪ ◪				MT-CVD		FGM	+ +	Uma qualidade versátil com excelentes propriedades de resistência ao desgaste, mesmo sob condições de corte intensas. Também pode ser usado para operações com cortes interrompidos. Com as suas propriedades bem equilibradas, esta qualidade pode ser a primeira escolha para uma ampla gama de operações de torneamento. Não adequado para velocidades de corte baixas.
T9316	P10 - P20 M05 - M15 K10 - K30 H15 - H25	■ ◪ ■ ◪				MT-CVD		FGM	+ + +	Qualidade projetada para aplicações ferroviárias. Uma qualidade versátil com excelentes propriedades de resistência ao desgaste. Utilizável em velocidades de corte altas e baixas.
T9325	P15 - P35 M10 - M30 K15 - K35 S10 - S20	■ ■ ◪ ◪				MT-CVD		FGM	+ +	Do ponto de vista tecnológico, esta é uma qualidade extremamente versátil com alta resistência a danos mecânicos em condições de corte adversas e mantém excelente resistência ao desgaste. A aplicação correta deste material requer velocidades de corte elevadas.
T9335	P20 - P45 M15 - M40 S15 - S25	■ ■ ◪				MT-CVD		FGM	+ + +	Uma das qualidades mais difíceis, especialmente adequada para condições de corte adversa com taxas de avanço de médias a altas e velocidades de corte médias. Comparado com seus predecessores, M15 - M40 não é apenas mais resistente, mas também mais resistente à abrasão o que será útil ao usar condições de corte intensivas.
T7325	P15 - P35 M10 - M25 S10 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Uma das qualidades de torneamento mais universais. Especialmente projetada para a maquinação de aço inoxidável. Equilíbrio ideal entre resistência ao desgaste e confiabilidade de desempenho. Adequado para uma ampla variedade de aplicações em operações de torneamento.
T7335	P20 - P40 M20 - M40 S15 - S25	◪ ■ ■				MT-CVD		FGM	+ + +	Qualidade com substrato graduado funcionalmente, apresentando elevadíssima confiabilidade operacional e ótima resistência ao desgaste. É mais adequado para a maquinação de materiais M20 - M40 muito resistentes.
T5305	P05 - P15 K01 - K15 H05 - H15	◪ ■ ◪				MT-CVD		H	+	Qualidade com altíssima resistência ao desgaste químico; adequada para operações de acabamento com velocidades de corte altas. Com sua elevada resistência à abrasão, também é adequado para K01 - K15 produtivos, maquinação de materiais endurecidos e tratados.
T5315	P10 - P25 K10 - K25 H15 - H25	◪ ■ ◪				MT-CVD		H	+	Qualidade destinada principalmente à maquinação produtiva que possui alta resistência à abrasão e boa confiabilidade operacional. Devido às suas propriedades, este material é particularmente adequado para operações de desbaste e acabamento para condições de corte boas ou ligeiramente adversas.
6640	P20 - P40 M20 - M35 K25 - K40	■ ■ ■				MT-CVD		H	+ + +	Um dos materiais de torneamento mais resistentes que pode ser usado especialmente em operações de desbaste, ou onde a confiabilidade operacional sob condições de corte adversas é uma prioridade. Outra escolha ideal para máquinas que trabalham com velocidades de corte baixas a médias e taxas de avanço médias a altas.

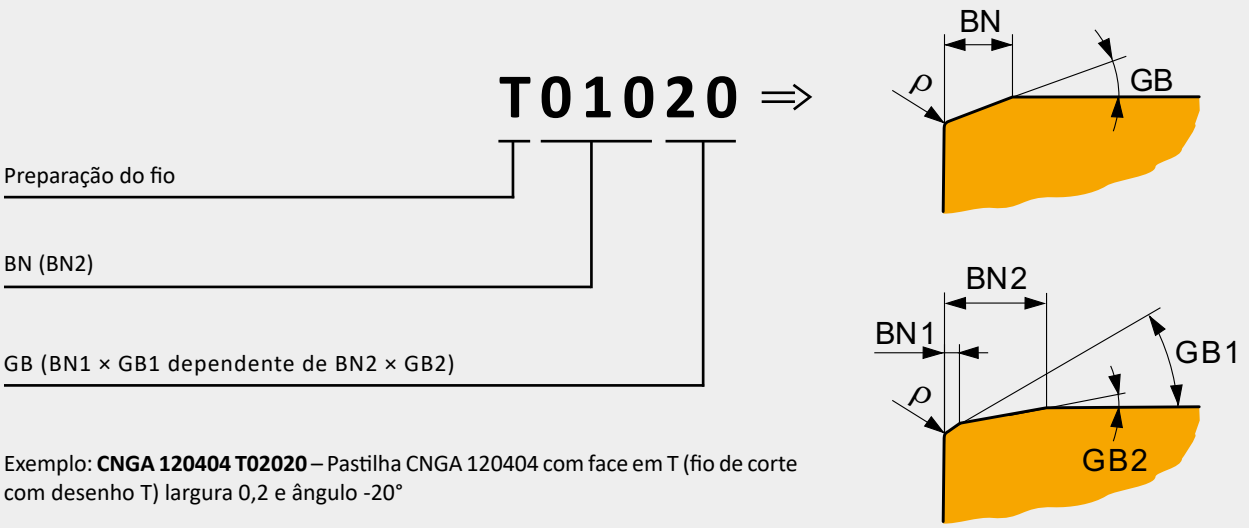
Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do refrigerante	Descrição da Qualidade
G8330	P25 - P40 M20 - M35 K20 - K40 S15 - S25	■ ■ ■ ◪	▰▰▰▰	▰▱▱▱	▰▰▰▰	PVD		submicron H	+ + +	Qualidade de corte universal para aplicações de sangrar e ranhurar. Esta classe é caracterizada pela sua confiabilidade e versatilidade excepcionais. Desenvolvida para se adequar às condições de maquinação para a maioria dos materiais da peça.
T0315	N05 - N20	■	▰▰▱▱	▰▰▱▱	▰▰▰▱	PVD		submicron H	+ +	Qualidade submícron para torneamento de metais não ferrosos e suas ligas com um equilíbrio de resistência ao desgaste e tenacidade. É fornecida com um revestimento exclusivo com excelentes propriedades de fricção.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■	▰▰▰▱	▰▰▰▱	▰▰▰▱	PVD		ultra submicron H	+ + +	Qualidade de torneamento de alta resistência ao desgaste com revestimento de topo PVD. Adequada para operações de acabamento e aplicações, onde a aresta de corte afiada em conjunto com alta resistência ao desgaste de flanco é de grande importância
T8010	P05 - P15 M05 - M15 K10 - K20 S10 - S15	■ ■ ■ ◪	▰▰▰▱	▰▰▰▱	▰▰▰▱	PVD		submicron H	+ + +	Esta qualidade é adequada para torneamento contínuo de alta precisão de aços, aço inoxidável, ferro fundido e superligas. Oferecendo excelente resistência ao desgaste, garantindo a confiabilidade operacional
T8030	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25	■ ■ ■ ◪ ◪	▰▰▰▰	▰▱▱▱	▰▰▰▰	PVD		submicron H	+ + +	Sem dúvida, a qualidade mais versátil, é adequada para maquinar todos os tipos de materiais e pode ser aplicada em quase todas as operações de torneamento. Os seus principais benefícios são alta confiabilidade operacional e excelentes propriedades de fricção; portanto, é adequado para aplicações em velocidades de corte médias a baixas.
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■	▰▰▰▱	▰▰▰▱	▰▰▰▱	PVD		submicron H	+ +	Qualidade com excelente resistência à abrasão, mantendo a confiabilidade operacional acima da média, é adequada para maquinar com velocidades de corte médias a altas em materiais mais duros de aparas curtas.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪	▰▰▰▰	▰▱▱▱	▰▰▰▰	PVD		submicron H	+ + +	Sem dúvida, o material de corte mais versátil, é útil para a maquinação de todos os tipos de materiais maquinados e é praticamente aplicável em quase todos os tipos de operações de torneamento. Os seus principais benefícios são a sua alta confiabilidade operacional e muito boas propriedades de fricção; portanto, é adequado para aplicações em velocidades de corte médias e baixas.
T8430 NEW	P20 - P40 M20 - M35 K25 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ◪ ◪ ◪ ◪	▰▰▰▰	▰▱▱▱	▰▰▰▰	PVD		submicron H	+ + +	Sem dúvida, o material de corte mais versátil, é útil para a maquinação de todos os tipos de materiais maquinados e é praticamente aplicável em quase todos os tipos de operações de torneamento. Os seus principais benefícios são a sua alta confiabilidade operacional e muito boas propriedades de fricção; portanto, é adequado para aplicações em velocidades de corte médias e baixas.
T8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ◪ ◪ ◪	▰▰▰▰	▰▱▱▱	▰▰▰▰+	PVD		submicron H	+ + +	Esta é a qualidade de torneamento mais resistente, destinada principalmente para maquinar nas piores condições de corte e em aplicações com os mais altos requisitos de confiabilidade operacional. Devido a estas propriedades, este material é recomendado para velocidades de corte mais baixas.
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■	▰▰▰▰	▰▱▱▱	▰▰▰▱	×		submicron H	+ +	Qualidade não revestida projetada principalmente para a maquinação de metais não ferrosos; mas também pode ser usada para outros materiais maquinados (exceto aço). Este material pode ser usado em torneamento, fresagem e até mandrilagem.

Identificação da Qualidade	Área de Aplicação	Aplicação	Avanço	Velocidade de corte	Resistência a Condições de Trabalho adversas	Revestimento	Cor	Substrato	Benefício do refrigerante	Descrição da Qualidade
H07	M05 - M15 K10 - K25 N10 - N30 S01 - S20	◪ ■ ■ ■	▰▰▰▱	▰▰▰▱	▰▰▰▱	×		submicron H	+ +	Qualidade de torneamento sem revestimento adequada para aplicações de maquinação onde a resistência à oxidação não é o critério dominante de tempo de vida útil da ferramenta. Projetado para a maquinação de ligas à base de Titânio. A classe exibe alta resistência da aresta de corte em conjunto com boa resistência ao desgaste.
TT310	P10 - P25 M15 - M25	■ ◪	▰▱▱▱	▰▰▱▱	▰▱▱▱	PVD		cermet	+ / -	Cermet revestido usado para torneamento fino e de acabamento de aços carbono e liga (incluindo inoxidável). As suas excelentes propriedades de fricção são ainda melhoradas pelo revestimento aplicado usando a técnica PVD.
TT010	P01 - P10 M01 - M10	■ ◪	▰▱▱▱	▰▰▱▱	▰▱▱▱	×		cermet	+ / -	Cermet não revestido, que é adequado para a maquinação fina de todos os tipos de aço (incluindo aço inoxidável) com taxas de avanço muito baixas. A sua principal vantagem é o raio mínimo da aresta de corte e sua alta resistência aos mecanismos de desgaste físico e químico.
TC100	K01 - K15	■	▰▰▱▱	▰▰▱▱+	▰▱▱▱	×		ceramics	- -	Qualidade de cerâmica para a maquinação de ferro fundido. Adequado para maquinar com alta velocidade de corte em condições estáveis.
TB310	K01 - K10 S05 - S10 H01 - H10	■ ◪ ◪	▰▰▱▱	▰▰▱▱+	▰▱▱▱	×		CBN	- -	Qualidade de CBN para maquinar materiais endurecidos. Adequada para maquinar com velocidade de corte alta e avanços baixos em condições estáveis.
PD1	N05 - N25	■	▰▰▱▱	▰▰▱▱+	▰▱▱▱	×		PCD	-	Qualidade PKD para torneamento de materiais não ferrosos. Escolha ideal para trabalhar com alta velocidade de corte e avanços pequenos em condições estáveis.
333TN	P45 - P50 M35 - M40 K35 - K40	■ ◪ ◪	▰▰▰▰	▰▰▱▱	▰▰▰▰+	PVD		HSS	+ + +	Qualidade especial composta de substrato HSS e revestimento PVD duro fino. A qualidade de corte mais resistente do portfólio. As pastilhas com esta qualidade são usados apenas para ranhuras de chaveta.

Substrato	
H	Substrato com base WC-Co
submicron H	Substrato com base WC-Co de grão fino (< 1 µm)
ultra submicron H	Substrato com base WC-Co de grão muito fino (< 0,5 µm)
FGM	Substrato de grau funcional
Cermet	Carboneto de tungsténio sem WC
ceramics	Cerâmica
PCD	Diamante policristalino
CBN	Nitreto de boro cúbico
HSS	Aço Rápido

Revestimento	
MT-CVD	Método de revestimento químico a temperatura média
PVD	Método de revestimento físico a baixa temperatura
×	Sem revestimento

Benefícios do refrigerante de corte	
+ + +	O uso de refrigerante é essencial
+ +	Altamente recomendado
+	Recomendado
+ / –	Opcional
– -	Não usar refrigerante
–	Refrigerante não recomendado

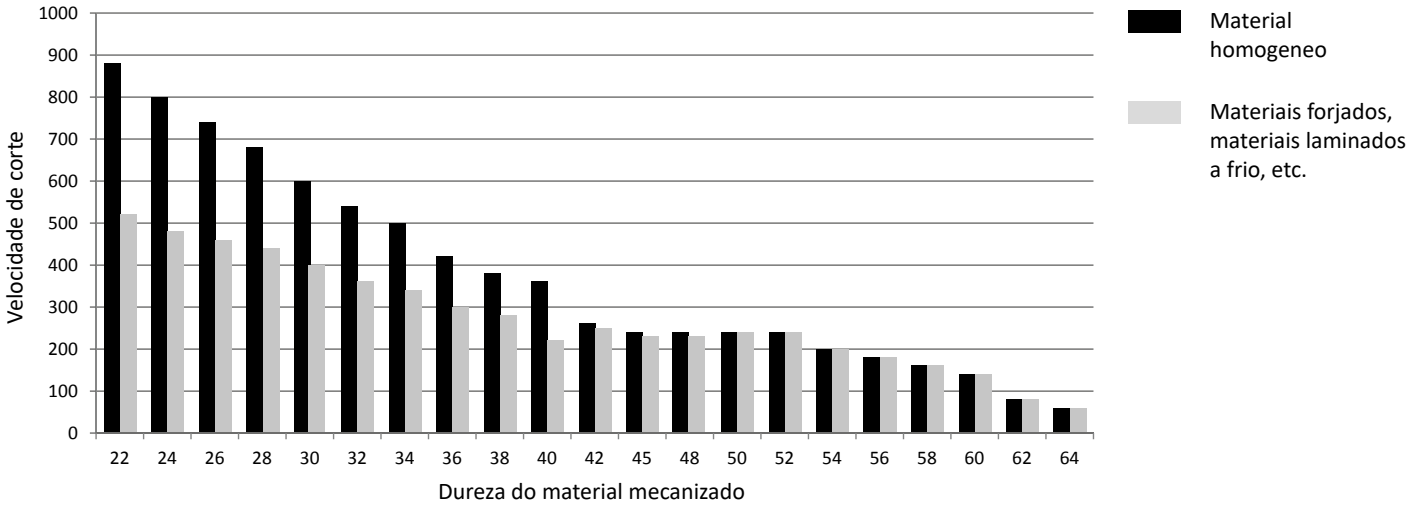


Exemplo: **CNGA 120404 T02020** – Pastilha CNGA 120404 com face em T (fio de corte com desenho T) largura 0,2 e ângulo -20°

As cerâmicas de corte são materiais com limites de estabilidade térmica dos mais elevados.
No entanto, durante a sua utilização efetiva é necessário reduzir a velocidade de corte segundo a dureza e outras características do material maquinado.

Para efeitos de ilustração, facilitamos um exemplo concreto de uma pastilha redonda que se utiliza em torneamento de acabamento.

Velocidade de corte para RNGN (a_p = 1.5 mm)



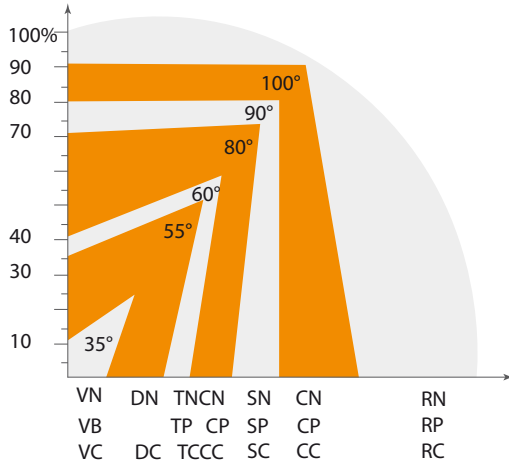
A tabela seguinte indica outros parâmetros que se devem ter em consideração quando se seleciona a velocidade de corte.

Raio de canto RE [mm]	**0.4**	**0.8**	**1.2**	**1.6**	**2.4**	**3**
Redução v_c by	20 %	16 %	12 %	10 %	5 %	2 %
Ângulo da aresta de corte principal	**90°**	**75°**	**60°**	**45°**	**30°**	**< 15°**
Redução v_c by	0 %	5 %	8 %	12 %	15 %	18 %
Forma da Pastilha	**V**	**D**	**T**	**C, W**	**S**	**R**
Ângulo de canto	35°	55°	60°	80°	90°	–
Redução v_c by	17 %	12 %	10 %	6 %	4 %	0 %
Profundidade de corte a_p [mm]	**<1.4**	**3**	**6**	**10**	**13**	**20**
Redução v_c by	5 %	8 %	13 %	16 %	18 %	20 %

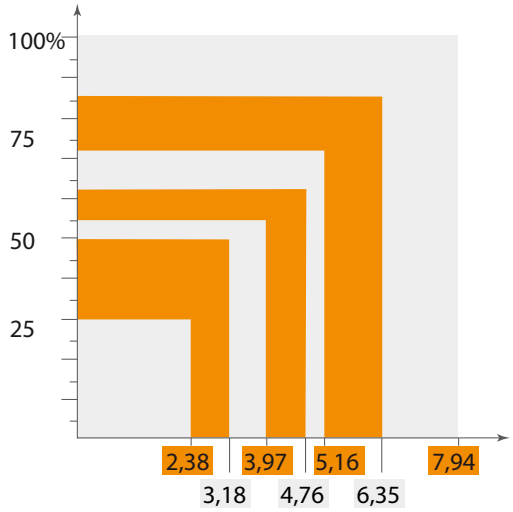
Como mencionado anteriormente, as cerâmicas de corte são materiais com uma resistência muito elevada à abrasão, mas simultâneamente, têm uma das durezas mais baixas.

Portanto, com respeito à rigidez, é necessário ter em conta outros critérios limitadores no momento de selecionar a pastilha adequada.

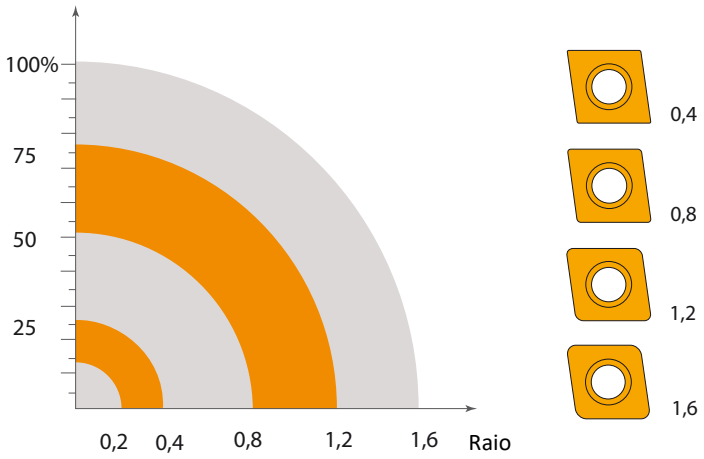
Rigidez em relação à forma da pastilha



Rigidez em relação à espessura da pastilha

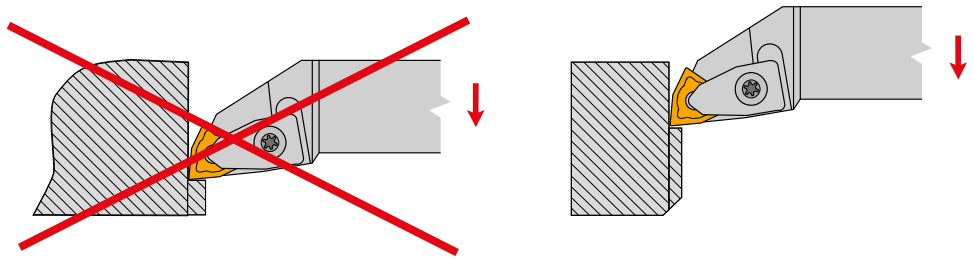


Rigidez em relação ao raio da pastilha

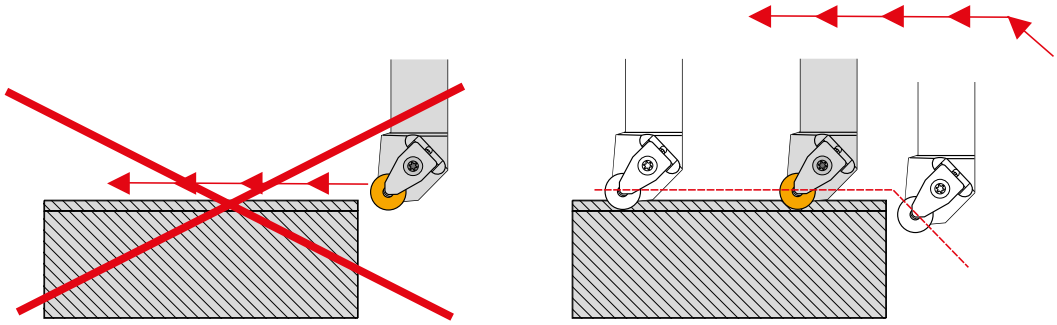


Finalmente, gostaríamos de fazer algumas recomendações de aplicação prática:

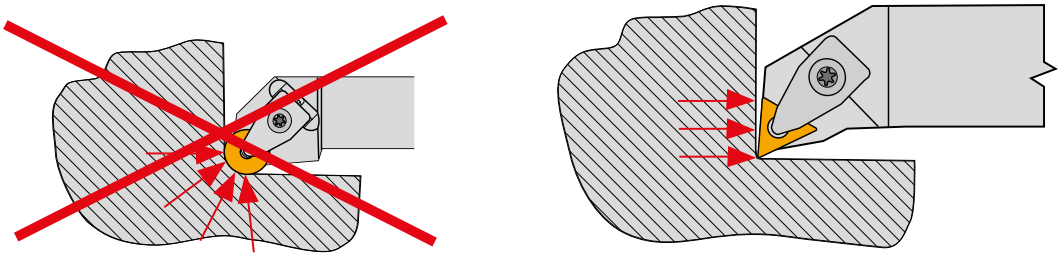
1) As rebarbas na saída da ferramenta podem provocar a rutura do fio de corte e a destruição completa da pastilha. Assim, é necessário primeiramente biselar o fio para eliminar a rebarba.



2) Recomenda-se modificar o programa standard (introduzindo o material); desta forma abranda-se a criação de rebarbas no fio, prolongando a duração do tempo de vida do fio. Assim também se elimina a operação de chanfrar a peça

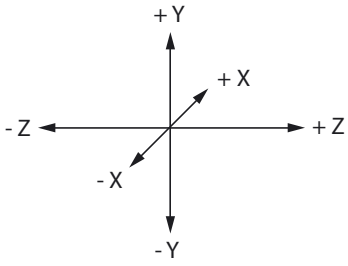


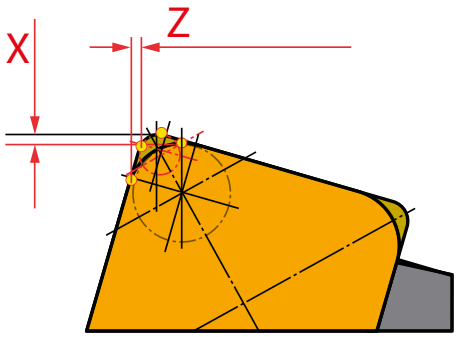
3) Se existe risco de problemas devido à vibração da ferramenta, devem utilizar-se pastilhas com um raio mais pequeno para eliminar as forças radiais.

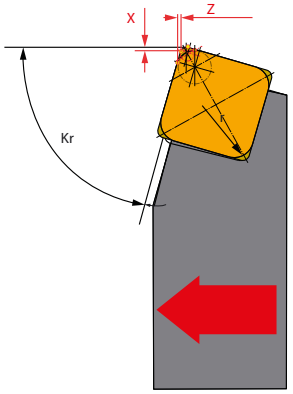


CORREÇÃO DAS COORDENADAS X E Z SEGUNDO O RAIO E O PORTA FERRAMENTAS

Correção das coordenadas X e Z segundo o raio e o porta ferramentas:







ATENÇÃO – os dados são válidos para o porta ferramentas do lado direito orientado conforme a figura. Para os porta ferramentas interiores, é necessária orientação para o lado esquerdo ou de outro tipo para fazer a correção das marcas +/– (para substituir os valores X/Z)

Porta ferramentas		Coordenadas	Raio 0,5	Raio 1,0	Raio 1,5				
Porta ferramentas exterior	CKJNR/L	x	0.443	0.000	-0.433				
		z	-0.050	0.000	0.050				

Porta ferramentas		Coordenadas	Raio 02	Raio 04	Raio 08	Raio 12	Raio 16	Raio 24	Raio 32
Porta ferramentas exterior	DCLNR/L	x	0.060	0.040	0.000	-0.040	-0.080	-0.160	-0.240
		z	-0.062	-0.042	0.000	0.042	0.083	0.166	0.249
	DDJNR/L	x	0.516	0.347	0.000	-0.329	-0.667	-1.343	-2.019
		z	-0.056	-0.041	0.000	0.022	0.054	0.117	0.180
	DSBNR/L	x	0.252	0.170	0.000	-0.158	-0.322	-0.649	-0.977
		z	0.422	0.280	0.000	-0.285	-0.568	-1.134	-1.700
	DSDNN	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	0.247	0.165	0.000	-0.165	-0.33	-0.659	-0.989
	DSKNR/L	x	0.134	0.089	0.000	-0.089	-0.178	-0.358	-0.537
		z	-0.167	-0.111	0.000	0.111	0.222	0.444	0.667
	DSSNR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	0.245	0.162	0.000	-0.167	-0.322	-0.662	-0.992
	DTFNR/L	x	0.426	0.284	0.000	-0.284	-0.569	-1.137	-1.705
		z	0.029	0.019	0.000	-0.019	-0.04	-0.078	-0.117
	DTGNR/L	x	0.437	0.294	0.000	-0.277	-0.562	-1.133	-1.703
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	DVJNR/L	x	0.063	0.042	0.000	-0.042	-0.084	-0.169	-0.253
		z	1.234	0.823	0.000	-0.823	-1.646	-3.291	-4.937
	DVPNR/L	x	0.79	0.527	0.000	-0.527	-1.054	-2.108	-3.161
		z	0.834	0.554	0.000	-0.554	-1.109	-2.217	-3.326
	DWLNR/L	x	0.061	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206

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Porta ferramentas		Coordenadas	Raio 02	Raio 04	Raio 08	Raio 12	Raio 16	Raio 24	Raio 32
Porta ferramentas interior	DCLNR/L	x	-0.053	-0.035	0.000	0.035	0.070	0.140	0.210
		z	-0.060	-0.040	0.000	0.040	0.080	0.159	0.239
	DDUNR/L	x	-0.512	-0.341	0.000	0.0341	0.683	1.365	2.047
		z	-0.073	-0.049	0.000	0.049	0.097	0.195	0.292
	DTFNR/L	x	-0.425	-0.289	0.000	0.254	0.526	1.069	1.613
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	DVUNR/L	x	1.254	-0.836	0.000	0.836	1.671	3.343	5.014
		z	-0.129	-0.086	0.000	0.086	0.172	0.344	0.516
	DWLNR/L	x	-0.053	-0.035	0.000	0.035	0.07	0.14	0.21
		z	-0.06	-0.04	0.000	0.04	0.08	0.159	0.239
Porta ferramentas exterior	MTJNR/L	x	0.437	0.294	0.000	-0.277	-0.562	-1.133	-1.703
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	MVJNR/L	x	1.263	0.847	0.000	-0.819	-1.651	-3.317	-4.982
		z	-0.075	-0.055	0.000	0.025	0.065	0.146	0.226
	MWLNR/L	x	0.609	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206
	PCBNR/L	x	0.045	0.033	0.000	-0.016	-0.040	-0.088	-0.137
		z	0.128	0.083	0.000	-0.096	-0.185	-0.364	-0.543
	PCKNR/L	x	0.171	0.115	0.000	-0.110	-0.223	-0.448	-0.672
		z	0.685	0.457	0.000	-0.457	-0.914	-1.827	-2.741
	PCLNR/L	x	0.061	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206
	PDJNR/L	x	0.516	0.347	0.000	-0.329	-0.667	-1.343	-2.019
		z	-0.056	-0.041	0.000	0.022	0.054	0.117	0.180
	PDNNR/L	x	0.699	0.469	0.000	-0.453	-0.915	-1.837	-2.759
		z	0.524	0.348	0.000	-0.357	-0.710	-1.415	-2.120
	PDXNR/L	x	0.453	0.305	0.000	-0.288	-0.584	-1.177	-1.770
		z	-0.156	-0.107	0.000	0.088	0.185	0.380	0.575
	PLBNR/L	x	0.137	0.094	0.000	-0.078	-0.163	-0.335	-0.507
		z	0.153	0.100	0.000	-0.110	-0.220	-0.433	-0.646
	PSBNR/L	x	0.137	0.094	0.000	-0.078	-0.163	-0.335	-0.507
		z	0.153	0.100	0.000	-0.110	-0.220	-0.433	-0.646
	PSDNN	x	0.252	0.170	0.000	-0.158	-0.322	-0.649	-0.977
		z	0.422	0.280	0.000	-0.285	-0.568	-1.134	-1.699
	PSKNR/L	x	0.140	0.094	0.000	-0.090	-0.152	-0.366	-0.550
		z	0.574	0.383	0.000	-0.384	-0.767	-1.533	-2.300
	PSSNR/L	x	0.246	0.164	0.000	-0.164	-0.328	-0.656	-0.983
		z	0.424	0.283	0.000	-0.283	-0.566	-1.131	-1.697
	PTFNR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.411	-0.243	0.000	0.429	0.765	1.437	2.110
	PTGNR/L	x	0.437	0.294	0.000	-0.277	-0.562	-1.133	-1.703
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	PTTNR/L	x	0.601	0.403	0.000	-0.389	-0.784	-1.575	-2.367
		z	0.519	0.345	0.000	-0.354	-0.703	-1.401	-2.099
	PWLNR/L	x	0.609	0.044	0.000	-0.026	-0.061	-0.131	-0.200
		z	-0.063	-0.045	0.000	0.027	0.062	0.134	0.206
Porta ferramentas interior	PCLNR/L	x	-0.061	-0.046	0.000	0.012	0.040	0.098	0.156
		z	-0.062	-0.047	0.000	0.015	0.046	0.160	0.169
	PDUNR/L	x	-0.500	-0.339	0.000	0.305	0.627	1.271	1.915
		z	-0.052	-0.040	0.000	0.006	0.029	0.076	0.122
	PSKNR/L	x	-0.153	-0.097	0.000	0.063	0.143	0.303	0.463
		z	0.137	0.098	0.000	-0.124	-0.234	-0.456	-0.677
	PTFNR/L	x	-0.425	-0.289	0.000	0.254	0.526	1.069	1.613
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	PWLNR/L	x	-0.060	-0.046	0.000	0.012	0.043	0.098	0.156
		z	-0.065	-0.049	0.000	0.012	0.040	0.105	0.166

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Porta ferramentas		Coordenadas	Raio 02	Raio 04	Raio 08	Raio 12	Raio 16	Raio 24	Raio 32
Porta ferramentas exterior	SCACR/L	x	0.115	0.077	0.000	-0.077	-0.153	-0.307	-0.460
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SCBCR/L	x	0.042	0.028	0.000	-0.028	-0.055	-0.111	-0.166
		z	0.130	0.087	0.000	-0.087	-0.174	-0.347	-0.521
	SCDCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.279	-0.186	0.000	0.186	0.372	0.745	1.117
	SCFCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.124	-0.083	0.000	0.083	0.166	0.331	0.497
	SCLCR/L	x	0.060	0.040	0.000	-0.040	-0.080	-0.160	-0.240
		z	-0.062	-0.042	0.000	0.042	0.083	0.166	0.249
	SDJCR/L	x	0.520	0.346	0.000	-0.346	-0.693	-1.386	-2.078
		z	-0.060	-0.040	0.000	0.040	0.080	0.161	0.241
	SDNCN	x	0.699	0.466	0.000	-0.466	-0.933	-1.865	-2.798
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SEGCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-0.182	-0.121	0.000	0.121	0.243	0.485	0.728
	SSBCR/L	x	0.135	0.090	0.000	-0.090	-0.180	-0.360	-0.539
		z	0.155	0.104	0.000	-0.104	-0.207	-0.414	-0.621
	SSDCN	x	0.249	0.166	0.000	-0.166	-0.331	-0.663	-0.994
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SSKCR/L	x	-0.376	-0.517	0.000	-1.083	-1.366	-1.931	-2.497
		z	-0.135	-0.090	0.000	0.090	0.180	0.360	0.539
	STCFR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	–	–	0.000	–	–	–	–
	STJCR/L	x	0.406	0.271	0.000	-0.271	-0.542	-1.084	-1.626
		z	-0.054	-0.036	0.000	0.036	0.071	0.143	-0.214
	SVACR/L	x	00 / 0	01 / – 0.107	–	–	–	–	–
		z	00 / 0	01 / – 0.107	–	–	–	–	–
	SVGCR/L	x	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		z	-1.303	-0.869	0.000	0.869	1.737	3.475	5.212
	SVHBR/L	x	1.034	0.690	0.000	-0.690	-1.379	-2.759	-4.138
		z	-0.544	-0.363	0.000	0.363	0.726	1.452	2.178
	SVHCR/L	x	1.034	0.690	0.000	-0.690	-1.379	-2.759	-4.138
		z	-0.544	-0.363	0.000	0.363	0.726	1.452	2.178
	SVJBR/L	x	1.269	0.846	0.000	-0.846	-1.692	-3.384	-5.076
		z	-0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVJCR/L	x	1.269	0.846	0.000	-0.846	-1.692	-3.384	-5.076
		z	-0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVPBR/L	x	0.811	0.541	0.000	-0.541	-1.081	-2.162	-3.244
		z	-0.811	-0.541	0.000	0.541	1.081	2.162	3.244
	SVPCR/L	x	0.811	0.541	0.000	-0.541	-1.081	-2.162	-3.244
		z	-0.811	-0.541	0.000	0.541	1.081	2.162	3.244
	SVVBN	x	1.395	0.930	0.000	-0.930	-1.860	-3.721	-5.581
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SVVCN	x	1.395	0.930	0.000	-0.930	-1.860	-3.721	-5.581
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SVXBR/L	x	1.201	0.801	0.000	-0.080	-1.601	-3.202	-4.804
		z	-0.259	-0.173	0.000	0.173	0.345	0.691	1.036
	SVXCR/L	x	1.201	0.801	0.000	-0.080	-1.601	-3.202	-4.804
		z	-0.259	-0.173	0.000	0.173	0.345	0.691	1.036
	SWLCR/L	x	0.060	0.040	0.000	-0.040	-0.080	-0.160	-0.240
		z	-0.060	-0.040	0.000	0.040	0.080	0.160	0.240

MUDANÇA DE TAMANHO (CORREÇÃO) SEGUNDO O RAIO UTILIZADO

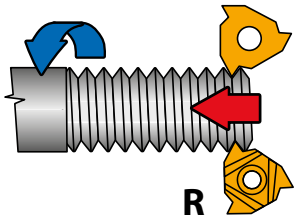
Porta ferramentas		Coordenadas	Raio 02	Raio 04	Raio 08	Raio 12	Raio 16	Raio 24	Raio 32
Porta ferramentas interior	SCFCR/L	x	-0.420	-0.280	0.000	0.280	0.560	1.121	1.681
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SCKCR/L	x	-0.040	-0.027	0.000	0.027	0.054	0.108	0.161
		z	0.130	0.087	0.000	-0.087	-0.174	-0.348	0.521
	SCLCR/L	x	-0.058	-0.039	0.000	0.039	0.078	0.155	0.233
		z	-0.062	-0.042	0.000	0.042	0.083	0.166	0.249
	SCXCR/L	x	-0.178	-0.119	0.000	0.119	0.237	0.474	0.711
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SDQCR/L	x	-0.309	-0.194	0.000	0.206	0.412	0.825	1.237
		z	-0.310	-0.206	0.000	0.268	0.499	0.961	1.423
	SDUCR/L	x	-0.504	-0.336	0.000	0.336	0.672	1.344	2.016
		z	-0.059	-0.039	0.000	0.041	0.082	0.162	0.242
	SDZCR/L	x	-0.520	-0.346	0.000	0.346	0.693	0.139	2.078
		z	0.059	0.039	0.000	-0.041	-0.082	-0.162	-0.242
	SELPR/L	x	-0.126	-0.084	0.000	0.084	0.168	0.337	0.051
		z	-0.066	-0.044	0.000	0.044	0.088	0.176	0.264
	SEUCR/L	x	-0.149	-0.099	0.000	0.099	0.199	0.397	0.596
		z	-0.041	-0.027	0.000	0.027	0.053	0.107	0.160
	SEUPR/L	x	-0.148	-0.099	0.000	0.099	0.198	0.396	0.593
		z	-0.040	-0.027	0.000	0.027	0.053	0.107	0.160
	SEXPR/L	x	-0.384	-0.256	0.000	0.256	0.512	1.024	1.537
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SSSCR/L	x	-0.249	-0.166	0.000	0.166	0.331	0.663	0.994
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	STFCR/L	x	-0.433	-0.289	0.000	0.289	0.577	1.154	1.731
		z	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	SVLCR/L	x	-1.243	-0.828	0.000	0.828	1.657	3.314	4.971
		z	0.239	0.692	0.000	-0.108	-0.215	-0.430	-0.645
	SVQBR/L	x	-1.027	-0.684	0.000	0.690	1.369	2.738	4.106
		z	-0.545	-0.363	0.000	0.363	0.726	1.452	2.178
	SVQCR/L	x	-1.027	-0.684	0.000	0.690	1.369	2.738	4.106
		z	-0.545	-0.363	0.000	0.363	0.726	1.452	2.178
	SVUBR/L	x	-1.259	-0.840	0.000	0.840	1.679	3.358	5.037
		z	0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVUCR/L	x	-1.259	-0.840	0.000	0.840	1.679	3.358	5.037
		z	0.099	-0.066	0.000	0.066	0.132	0.263	0.395
	SVXCR/L	x	-0.917	-0.611	0.000	0.611	1.222	2.445	3.667
		z	-0.696	-0.464	0.000	0.464	0.928	1.856	2.783
	SWLCR/L	x	-0.060	-0.039	0.000	0.039	0.079	0.158	0.237
		z	-0.060	-0.040	0.000	0.040	0.080	0.160	0.240
	SWUCR/L	x	-0.080	-0.053	0.000	0.053	0.107	0.213	0.319
		z	-0.034	-0.024	0.000	0.024	0.049	0.098	0.146

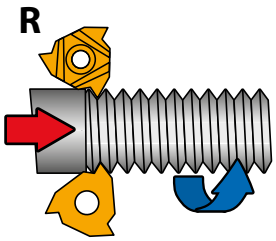
ATENÇÃO – os dados são válidos para o porta ferramentas do lado direito orientado conforme a figura. Para os porta ferramentas iinteriores, é necessária orientação para o lado esquerdo ou de outro tipo para fazer a correção das marcas +/– (para substituir os valores X/Z)

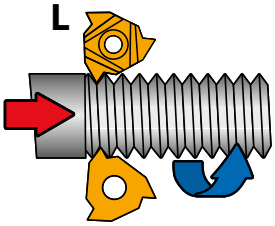
ROSCAGEM

A peça de trabalho e a máquina têm influência da eleição do método de produção. Peça de trabalho: rosca interior ou exterior, à direita ou à esquerda. Máquina: Ferramenta à direita ou à esquerda. Pode utilizar a tabela seguinte.

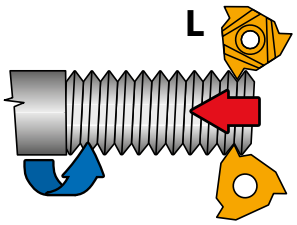
ROSCA EXTERIOR DIREITA

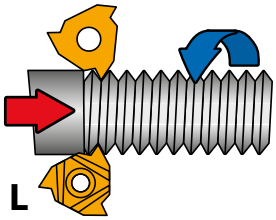


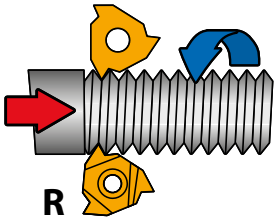




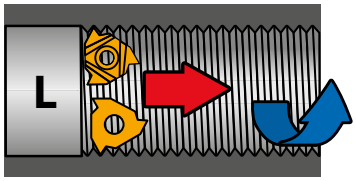
ROSCA EXTERIOR ESQUERDA

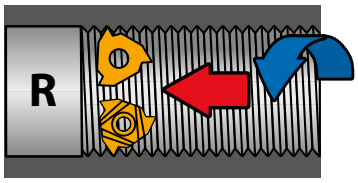




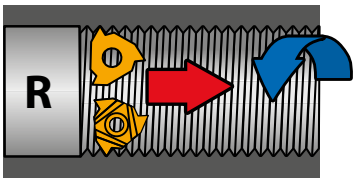


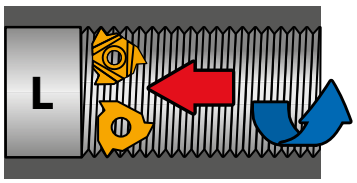
ROSCA INTERIOR, DIREITA





ROSCA INTERIOR, ESQUERDA





Movimento da peça

Movimento da ferramenta

L / R Tipo de Pastilha

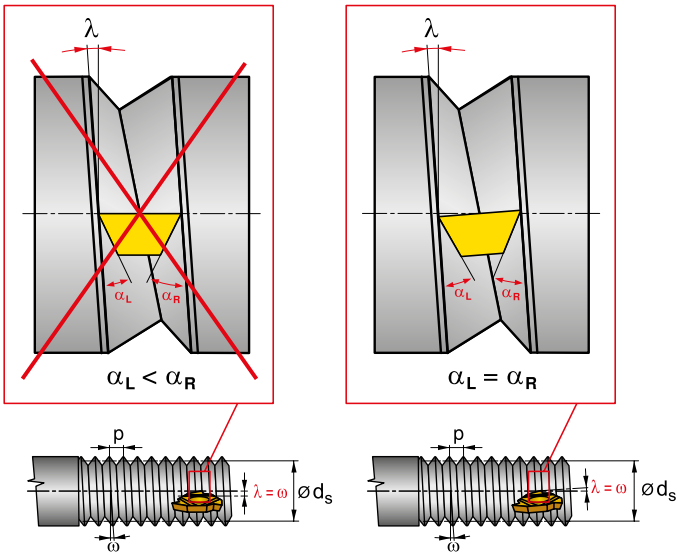
Pode utilizar-se a seguinte fórmula para calcular o ângulo da hélice:

$$tg\ \omega = \frac{p}{d_s \cdot \pi}$$

ω ângulo da hélice [°]

p Passo [mm]

d_s diâmetro do passo [mm]



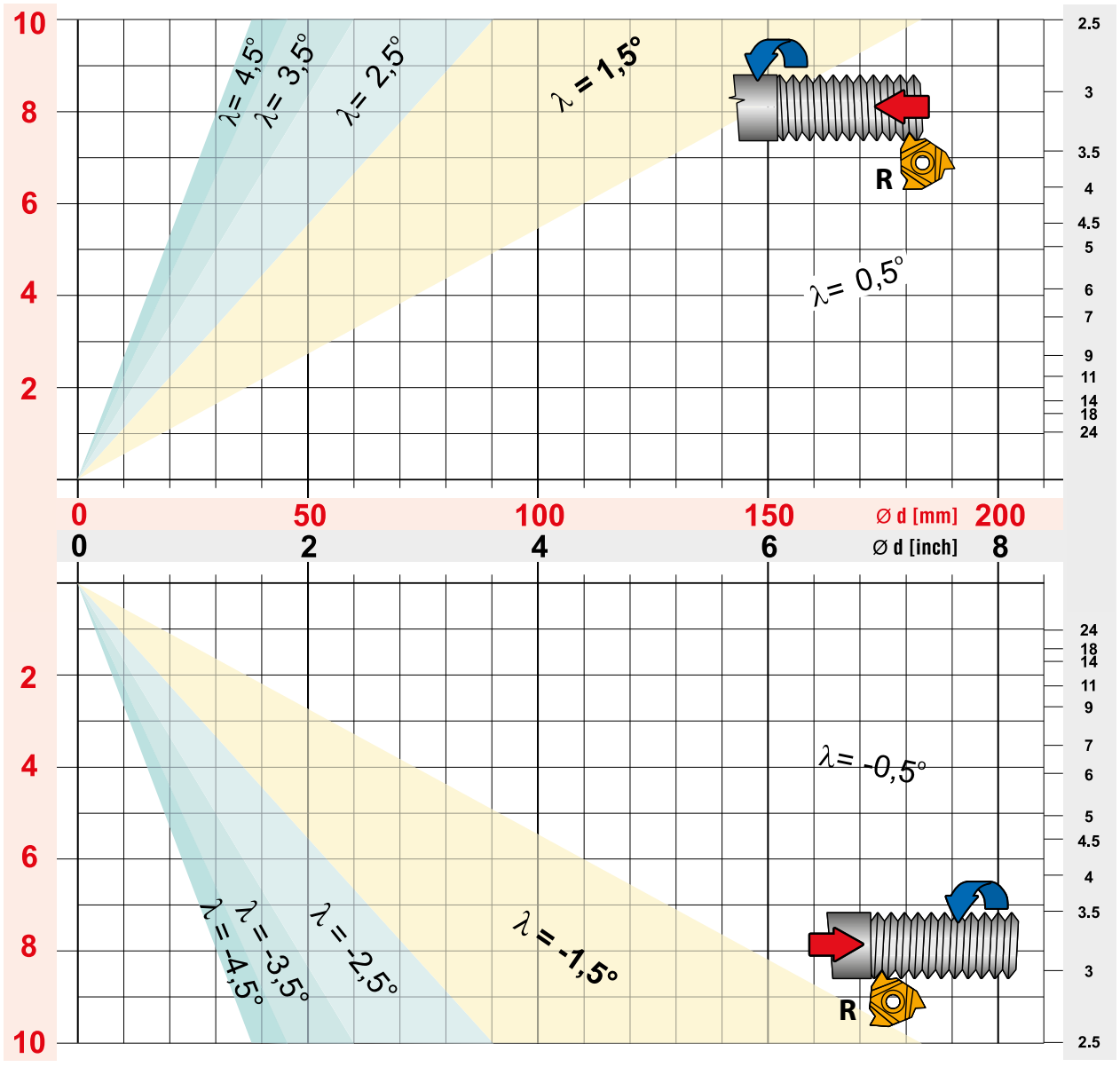
Para gerar a forma correta da rosca e um desgaste uniforme na pastilha o ângulo da hélice do fio de corte deve ser igual ao ângulo de inclinação base da rosca.
Normalmente os porta ferramentas são fornecidos com um ângulo de hélice λ = 1.5°. Pode ser selecionado um ângulo de hélice diferente mudando a bigorna.
Utilize o gráfico ou a tabela seguintes para escolher a bigorna correta. Tabela e gráfico na figura.

Seleção do calço

Ângulo Hélice λ	**Positivo**					**Negativo**		**Para pastilhas de ranhurar TN16.. ... ZZ, TN22.. ... ZZ**
	4.5°	**3.5°**	**2.5°**	**1.5°**	**0.5°**	**-0.5°**	**-1.5°**	
Porta ferramentas	**Especificações da bigorna**							
SER .... .16; SIL .... .16	PE16+4.5	PE16+3.5	PE16+2.5	**PE16+1.5**	PE16+0.5	PE16-0.5	PE16-1.5	PE16ZZ
SEL .... .16; SIR .... .16	PI16+4.5	PI16+3.5	PI16+2.5	**PI16+1.5**	PI16+0.5	PI16-0.5	PI16-1.5	PI16ZZ
SER .... .22; SIL .... .22	PE22+4.5	PE22+3.5	PE22+2.5	**PE22+1.5**	PE22+0.5	PE22-0.5	PE22-1.5	PE22ZZ
SEL .... .22; SIR .... .22	PI22+4.5	PI22+3.5	PI22+2.5	**PI22+1.5**	PI22+0.5	PI22-0.5	PI22-1.5	PI22ZZ
SER-S .... .22; SIL-S .... .22	PE22S+4.5	PE22S+3.5	PE22S+2.5	**PE22S+1.5**	PE22S+0.5	PE22S-0.5	PE22S-1.5	-
SEL-S .... .22; SIR-S .... .22	PI22S+4.5	PI22S+3.5	PI22S+2.5	**PI22S+1.5**	PI22S+0.5	PI22S-0.5	PI22S-1.5	-

Nota: Normalmente os porta ferramentas são fornecidos com um ângulo de hélice λ = 1.5°. Pode ser selecionado um ângulo de hélice diferente mudando a base.
Os calços para porta ferramentas SER-S ...., SIR-S .... estão marcados com um „***S***“

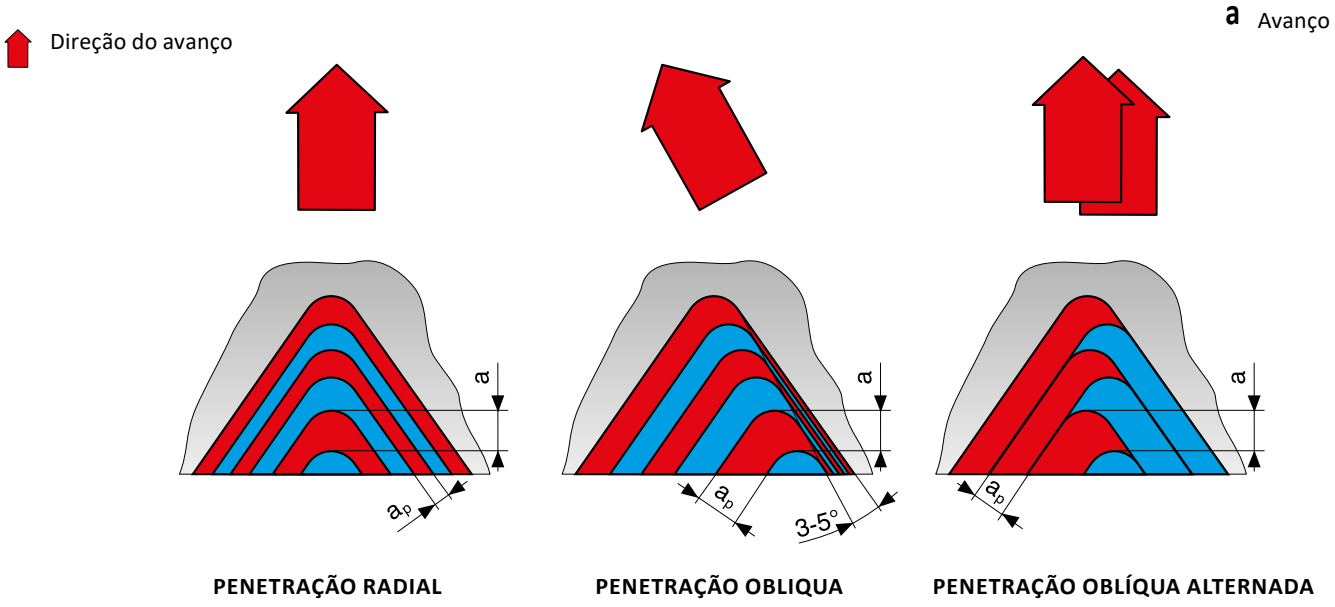
Gráfico para a seleção do calço



Movimento da peça Movimento da ferramenta **L / R** Tipo de pastilha

Método de Avanço e profundidade

A seleção do método de avanço é muito importante com materiais de apara longa para garantir um bom controlo das aparas.



PENETRAÇÃO RADIAL **PENETRAÇÃO OBLIQUA** **PENETRAÇÃO OBLÍQUA ALTERNADA**

A seleção depende do tipo de máquina, do material a maquinar e do passo.

Avanço Radial: o mais simples e o mais utilizado. O avanço é perpendicular ao eixo de rotação da peça de trabalho. Isto contribui para uma boa formação de apara e desgaste
uniforme do fio de corte. Adequado para roscas de passo pequeno (***p*** <1,5 mm). Rico de vibrações com avanços mais elevados. Primeira opção para materiais endurecidos (por exemplo, aços inoxidáveis austeníticos, aços com baixo conteúdo de carbono).

Avanço Oblíquo: reduz a fadiga térmica do fio de corte e portanto, o desgaste. Excelente controlo das aparas. Adequado para roscas com passo de 1,5 mm para roscas TR. O avanço oblíquo com desvio de 3 – 5º elimina a fricção no flanco da rosca.

Avanço Oblíquo Alternativo: Recomenda-se para roscas de passo grande e materiais com má formação de aparas. Longo tempo de vida da ferramenta. Para máquinas CNC,
elevada demanda de programação CNC.

Método de avanço e número de passagens dependem do passo de rosca. As tabelas oferecem recomendações básicas e são aplicáveis a todas as geometrias. Se ocorre uma fractura da pastilha, deve aumentar-se o número de passagens. a profundidade do avanço não deve ser inferior a 0,05 mm / passagem. No aços austeníticos e macios, a profundidade de avanço por passagem deve ser superior a 0,08 mm.

O PERFIL DE ROSCA CILINDRICO TUBOLAR CORRESPONDE A W (WHITWORTH 55º)

Marcação da Rosca	No. de Fios / 1″	Paaso de Rosca P [mm]	Diâmetro nominal da rosca [mm]	Diâmetro pequeno da rosca [mm]	Marcação da pastilha de roscar
G 1/16″	28	0,907	7.723	6.561	**TN xxxx280W**
G 1/8″			9.728	8.566	
G 1/4″	19	1,337	13.157	11.445	**TN xxxx190W**
G 3/8″			16.662	14.950	
G 1/2″	14	1,814	20.955	18.631	**TN xxxx140W**
G 5/8″			22.911	20.587	
G 3/4″			26.441	24.117	
G 7/8″			30.201	27.877	
G 1″	11	2,309	33.249	30.291	**TN xxxx110W**
G1 1/8″			37.897	34.939	
G1 1/4″			41.910	38.952	
G1 1/2″			47.803	44.845	
G1 3/4″			53.746	50.788	
G 2″			59.614	56.656	
G2 1/4″			65.710	62.752	
G2 1/2″			75.184	72.226	
G2 3/4″			81.534	78.576	
G3″			87.884	84.926	
G3 1/2″			100.330	97.372	
G4″			113.030	110.072	
G4 1/2″			125.730	122.772	
G5″			138.430	135.472	
G5 1/2″			151.130	148.172	
G6″			163.830	160.872	

Exemplo: Para uma rosca exterior direita num tubo de 1.½“ utilizar a pastilha de roscar TN 16ER110W; 8330

M – métrica 60º – exterior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA														
	Passo [mm]														
	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.50
1	0.46	0.43	0.41	0.37	0.34	0.34	0.28	0.27	0.24	0.22	0.22	0.21	0.18	0.16	0.11
2	0.43	0.40	0.39	0.34	0.32	0.31	0.26	0.24	0.22	0.20	0.20	0.17	0.16	0.14	0.09
3	0.35	0.32	0.32	0.28	0.25	0.25	0.21	0.20	0.18	0.17	0.17	0.14	0.12	0.11	0.07
4	0.30	0.28	0.27	0.24	0.22	0.21	0.18	0.17	0.16	0.14	0.14	0.11	0.11	0.07	0.06
5	0.29	0.26	0.24	0.22	0.20	0.18	0.16	0.15	0.14	0.12	0.12	0.10	0.08		
6	0.26	0.24	0.24	0.22	0.18	0.18	0.15	0.15	0.12	0.10	0.08	0.08			
7	0.24	0.21	0.22	0.20	0.17	0.16	0.14	0.12	0.11	0.10					
8	0.23	0.20	0.20	0.18	0.15	0.15	0.13	0.11	0.08	0.08					
9	0.22	0.19	0.19	0.17	0.14	0.14	0.12	0.11							
10	0.19	0.18	0.18	0.16	0.13	0.12	0.11	0.08							
11	0.18	0.17	0.16	0.14	0.12	0.11	0.10								
12	0.16	0.15	0.15	0.13	0.12	0.08	0.08								
13	0.15	0.14	0.12	0.12	0.11										
14	0.13	0.13	0.10	0.10	0.08										
15	0.13	0.12													
16	0.10	0.10													
Profundidade total de avanço	**3.83**	**3.52**	**3.19**	**2.87**	**2.53**	**2.23**	**1.92**	**1.60**	**1.25**	**1.13**	**0.93**	**0.81**	**0.65**	**0.48**	**0.33**

M – Métrica 60º – Interior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA														
	Passo [mm]														
	6.0	5.5	5.0	4.5	4.0	3.5	3.0	2.5	2.0	1.75	1.5	1.25	1.0	0.75	0.50
1	0.46	0.43	0.42	0.37	0.34	0.32	0.28	0.26	0.23	0.22	0.20	0.17	0.17	0.16	0.10
2	0.43	0.40	0.40	0.34	0.31	0.30	0.26	0.25	0.21	0.20	0.18	0.17	0.15	0.13	0.08
3	0.35	0.33	0.32	0.28	0.24	0.24	0.21	0.18	0.17	0.15	0.15	0.14	0.11	0.10	0.07
4	0.30	0.26	0.26	0.23	0.21	0.19	0.16	0.15	0.15	0.13	0.13	0.10	0.09	0.07	0.06
5	0.26	0.22	0.22	0.21	0.18	0.17	0.14	0.13	0.12	0.10	0.11	0.09	0.08		
6	0.22	0.20	0.20	0.19	0.15	0.15	0.13	0.12	0.11	0.09	0.08	0.08			
7	0.20	0.18	0.17	0.16	0.14	0.14	0.12	0.11	0.10	0.08					
8	0.19	0.17	0.16	0.15	0.13	0.13	0.11	0.10	0.08	0.08					
9	0.18	0.16	0.16	0.14	0.12	0.12	0.10	0.10							
10	0.16	0.15	0.15	0.13	0.12	0.11	0.10	0.08							
11	0.15	0.14	0.14	0.12	0.11	0.10	0.09								
12	0.15	0.14	0.14	0.12	0.10	0.08	0.08								
13	0.14	0.13	0.12	0.11	0.10										
14	0.13	0.12	0.10	0.10	0.08										
15	0.12	0.12													
16	0.10	0.10													
Profundidade total de avanço	**3.54**	**3.25**	**2.96**	**2.65**	**2.33**	**2.05**	**1.78**	**1.48**	**1.17**	**1.05**	**0.85**	**0.75**	**0.60**	**0.46**	**0.31**

W – Whitworth 55º – exterior e interior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA																
	Passo (nº de fios / polegada)																
	4	4.5	5	6	7	8	9	10	11	12	14	16	18	19	20	26	28
1	0.49	0.46	0.45	0.38	0.37	0.32	0.30	0.29	0.28	0.28	0.24	0.24	0.23	0.22	0.21	0.19	0.18
2	0.46	0.43	0.43	0.36	0.35	0.30	0.28	0.27	0.26	0.26	0.22	0.22	0.22	0.22	0.21	0.18	0.17
3	0.38	0.38	0.38	0.30	0.29	0.24	0.23	0.22	0.22	0.22	0.18	0.19	0.19	0.18	0.17	0.15	0.14
4	0.36	0.33	0.32	0.26	0.25	0.21	0.20	0.19	0.19	0.18	0.15	0.16	0.16	0.14	0.14	0.12	0.12
5	0.34	0.29	0.28	0.22	0.22	0.19	0.18	0.17	0.16	0.16	0.13	0.13	0.13	0.12	0.11	0.08	0.08
6	0.31	0.25	0.25	0.21	0.19	0.17	0.15	0.15	0.14	0.14	0.11	0.11	0.08	0.08	0.08		
7	0.29	0.24	0.22	0.19	0.18	0.15	0.14	0.14	0.13	0.13	0.09	0.08					
8	0.27	0.22	0.20	0.17	0.16	0.14	0.13	0.13	0.12	0.08	0.08						
9	0.24	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.08								
10	0.22	0.18	0.18	0.15	0.14	0.12	0.12	0.08									
11	0.20	0.17	0.17	0.14	0.12	0.12	0.08										
12	0.19	0.16	0.15	0.14	0.08	0.08											
13	0.17	0.15	0.12	0.12													
14	0.15	0.14	0.10	0.10													
15	0.12	0.12															
16	0.10	0.10															
Profundidade total de avanço	4.29	3.82	3.44	2.90	2.50	2.17	1.93	1.76	1.58	1.45	1.20	1.13	1.01	0.96	0.92	0.72	0.69

UN – UN 60º – exterior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA																	
	Passo (nº de fios / polegada)																	
	4	4.5	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
1	0.47	0.45	0.43	0.36	0.35	0.30	0.28	0.27	0.27	0.27	0.25	0.23	0.22	0.23	0.20	0.19	0.17	0.17
2	0.44	0.41	0.40	0.34	0.33	0.28	0.26	0.26	0.25	0.26	0.24	0.22	0.21	0.21	0.19	0.17	0.15	0.15
3	0.40	0.39	0.36	0.27	0.26	0.25	0.21	0.20	0.20	0.20	0.18	0.17	0.16	0.16	0.15	0.14	0.11	0.13
4	0.36	0.31	0.31	0.23	0.22	0.21	0.20	0.17	0.19	0.18	0.17	0.15	0.14	0.14	0.12	0.12	0.09	0.08
5	0.32	0.26	0.26	0.22	0.21	0.18	0.17	0.16	0.16	0.15	0.14	0.13	0.13	0.12	0.10	0.08	0.08	
6	0.27	0.23	0.23	0.20	0.19	0.16	0.15	0.15	0.14	0.13	0.12	0.11	0.11	0.08	0.08			
7	0.25	0.21	0.20	0.18	0.17	0.14	0.14	0.14	0.12	0.12	0.11	0.10	0.08					
8	0.23	0.20	0.19	0.16	0.15	0.13	0.12	0.12	0.11	0.08	0.08	0.08						
9	0.22	0.18	0.19	0.15	0.14	0.12	0.12	0.11	0.08									
10	0.21	0.17	0.18	0.14	0.12	0.12	0.11	0.08										
11	0.19	0.16	0.17	0.13	0.11	0.11	0.08											
12	0.18	0.15	0.15	0.12	0.08	0.08												
13	0.16	0.14	0.12	0.11														
14	0.15	0.14	0.10	0.10														
15	0.12	0.12																
16	0.10	0.10																
Profundidade total de avanço	**4.07**	**3.62**	**3.29**	**2.71**	**2.33**	**2.08**	**1.84**	**1.66**	**1.52**	**1.39**	**1.29**	**1.19**	**1.05**	**0.94**	**0.84**	**0.70**	**0.60**	**0.53**

UN –UN 60º – interior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA																	
	Passo (nº de fios / polegada)																	
	4	4.5	5	6	7	8	9	10	11	12	13	14	16	18	20	24	28	32
1	0.44	0.41	0.42	0.35	0.34	0.30	0.28	0.27	0.27	0.27	0.25	0.23	0.22	0.23	0.20	0.18	0.17	0.17
2	0.41	0.38	0.38	0.33	0.32	0.28	0.26	0.25	0.23	0.23	0.20	0.18	0.18	0.17	0.16	0.15	0.14	0.14
3	0.39	0.34	0.33	0.25	0.24	0.22	0.19	0.18	0.18	0.18	0.15	0.14	0.14	0.14	0.13	0.13	0.09	0.10
4	0.33	0.28	0.27	0.21	0.21	0.18	0.16	0.15	0.15	0.15	0.13	0.13	0.12	0.12	0.10	0.10	0.08	0.08
5	0.28	0.23	0.23	0.18	0.17	0.15	0.14	0.13	0.13	0.13	0.12	0.11	0.10	0.10	0.09	0.08	0.08	
6	0.24	0.20	0.20	0.16	0.15	0.13	0.13	0.12	0.11	0.11	0.11	0.10	0.09	0.08	0.08			
7	0.22	0.19	0.18	0.15	0.14	0.12	0.12	0.11	0.11	0.10	0.10	0.09	0.08					
8	0.21	0.18	0.17	0.14	0.13	0.11	0.11	0.10	0.10	0.08	0.08	0.08						
9	0.20	0.17	0.16	0.13	0.12	0.11	0.10	0.10	0.08									
10	0.18	0.16	0.15	0.12	0.12	0.10	0.09	0.08										
11	0.17	0.15	0.14	0.12	0.11	0.10	0.08											
12	0.16	0.14	0.14	0.11	0.08	0.08												
13	0.15	0.14	0.12	0.11														
14	0.14	0.13	0.10	0.10														
15	0.12	0.12																
16	0.10	0.10																
Profundidade total de avanço	**3.74**	**3.32**	**2.99**	**2.46**	**2.13**	**1.88**	**1.66**	**1.49**	**1.36**	**1.25**	**1.14**	**1.06**	**0.93**	**0.84**	**0.76**	**0.64**	**0.56**	**0.49**

NPT 60º – interior e exterior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA				
	Passo (nº de fios / polegada)				
	8	11.5	14	18	27
1	0.28	0.25	0.24	0.22	0.19
2	0.25	0.22	0.22	0.18	0.15
3	0.22	0.18	0.17	0.15	0.13
4	0.19	0.16	0.15	0.14	0.11
5	0.18	0.16	0.14	0.13	0.09
6	0.18	0.14	0.13	0.12	0.08
7	0.17	0.14	0.12	0.10	
8	0.17	0.12	0.10	0.08	
9	0.16	0.12	0.10		
10	0.16	0.10	0.08		
11	0.14	0.09			
12	0.13	0.08			
13	0.12				
14	0.11				
15	0.08				
Profundidade total de avanço	**2.54**	**1.76**	**1.45**	**1.12**	**0.75**

RD – RD 30º – exterior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA			
	Passo (nº de fios / polegada)			
	4	6	8	10
1	0.44	0.33	0.29	0.26
2	0.40	0.29	0.26	0.25
3	0.34	0.25	0.21	0.23
4	0.32	0.23	0.19	0.20
5	0.28	0.20	0.18	0.16
6	0.26	0.18	0.16	0.12
7	0.24	0.16	0.14	0.10
8	0.22	0.15	0.12	0.08
9	0.20	0.14	0.10	
10	0.19	0.12	0.08	
11	0.17	0.10		
12	0.15	0.08		
13	0.12			
14	0.10			
Profundidade total de avanço	**3.43**	**2.23**	**1.73**	**1.40**

RD – RD 30º – interior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA			
	Passo (nº de fios / polegada)			
	4	6	8	10
1	0.46	0.38	0.26	0.27
2	0.43	0.34	0.22	0.26
3	0.40	0.30	0.21	0.25
4	0.35	0.25	0.19	0.22
5	0.30	0.21	0.18	0.18
6	0.26	0.19	0.16	0.13
7	0.24	0.17	0.14	0.10
8	0.22	0.16	0.12	0.08
9	0.20	0.14	0.10	
10	0.19	0.12	0.08	
11	0.17	0.10		
12	0.15	0.08		
13	0.12			
14	0.10			
Profundidade total de avanço	**3.59**	**2.44**	**1.66**	**1.49**

TR – TR 30º – interior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA											
	Passo [mm]											
	14,0	12,0	10,0	9,0	8,0	7,0	6,0	5,0	4,0	3,0	2,0	1,5
1	0.40	0.38	0.38	0.38	0.37	0.37	0.37	0.34	0.31	0.27	0.25	0.23
2	0.37	0.36	0.36	0.35	0.35	0.34	0.35	0.33	0.28	0.25	0.24	0.22
3	0.36	0.34	0.34	0.34	0.34	0.33	0.32	0.27	0.24	0.21	0.20	0.18
4	0.36	0.34	0.34	0.33	0.33	0.31	0.29	0.25	0.20	0.17	0.17	0.14
5	0.35	0.32	0.32	0.31	0.31	0.29	0.27	0.23	0.19	0.15	0.14	0.12
6	0.35	0.32	0.32	0.30	0.29	0.26	0.25	0.21	0.18	0.13	0.13	0.08
7	0.34	0.30	0.31	0.29	0.28	0.26	0.23	0.20	0.16	0.13	0.11	
8	0.34	0.30	0.29	0.28	0.27	0.26	0.22	0.20	0.15	0.12	0.09	
9	0.34	0.30	0.28	0.26	0.25	0.24	0.22	0.18	0.15	0.12		
10	0.33	0.29	0.27	0.25	0.24	0.23	0.20	0.16	0.15	0.10		
11	0.33	0.29	0.25	0.24	0.23	0.22	0.18	0.15	0.14	0.10		
12	0.32	0.29	0.24	0.23	0.21	0.22	0.17	0.14	0.13	0.08		
13	0.32	0.28	0.23	0.22	0.20	0.20	0.17	0.13	0.10			
14	0.31	0.27	0.22	0.21	0.19	0.19	0.16	0.10				
15	0.31	0.25	0.22	0.21	0.19	0.17	0.14					
16	0.30	0.25	0.20	0.19	0.18	0.16	0.12					
17	0.30	0.24	0.19	0.18	0.17	0.12						
18	0.29	0.22	0.18	0.16	0.15							
19	0.28	0.20	0.17	0.15	0.13							
20	0.27	0.20	0.16	0.15								
21	0.23	0.19	0.15	0.13								
22	0.23	0.18	0.15									
23	0.21	0.17	0.13									
24	0.19	0.16										
25	0.17	0.15										
26	0.16	0.13										
27	0.16											
28	0.15											
29	0.13											
Profundidade total de avanço	**8.2**	**6.72**	**5.7**	**5.16**	**4.68**	**4.17**	**3.66**	**2.89**	**2.38**	**1.83**	**1.33**	**0.97**

TR – TR 30º – interior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA											
	Passo [mm]											
	14,0	12,0	10,0	9,0	8,0	7,0	6,0	5,0	4,0	3,0	2,0	1,5
1	0.40	0.38	0.38	0.38	0.37	0.37	0.37	0.34	0.31	0.27	0.25	0.23
2	0.37	0.36	0.36	0.35	0.35	0.34	0.34	0.33	0.28	0.25	0.24	0.22
3	0.36	0.34	0.34	0.34	0.34	0.33	0.32	0.27	0.24	0.22	0.21	0.19
4	0.36	0.34	0.34	0.33	0.33	0.31	0.29	0.25	0.20	0.17	0.17	0.14
5	0.35	0.32	0.32	0.31	0.31	0.29	0.27	0.23	0.19	0.15	0.14	0.12
6	0.35	0.32	0.32	0.31	0.29	0.26	0.25	0.21	0.18	0.14	0.13	0.08
7	0.34	0.30	0.31	0.29	0.28	0.26	0.23	0.20	0.16	0.13	0.11	
8	0.34	0.30	0.29	0.29	0.27	0.26	0.22	0.20	0.15	0.12	0.09	
9	0.34	0.30	0.28	0.26	0.25	0.24	0.22	0.18	0.15	0.12		
10	0.33	0.29	0.27	0.25	0.24	0.23	0.20	0.16	0.15	0.10		
11	0.33	0.29	0.25	0.24	0.23	0.22	0.18	0.15	0.14	0.10		
12	0.32	0.28	0.24	0.23	0.21	0.22	0.17	0.14	0.13	0.08		
13	0.32	0.28	0.23	0.22	0.20	0.20	0.17	0.13	0.10			
14	0.31	0.27	0.22	0.21	0.19	0.19	0.16	0.10				
15	0.31	0.25	0.22	0.21	0.19	0.17	0.14					
16	0.30	0.25	0.20	0.20	0.18	0.16	0.12					
17	0.30	0.24	0.19	0.18	0.17	0.12						
18	0.29	0.22	0.18	0.16	0.15							
19	0.28	0.20	0.17	0.15	0.13							
20	0.27	0.20	0.16	0.15								
21	0.27	0.19	0.15	0.13								
22	0.23	0.18	0.15									
23	0.23	0.17	0.13									
24	0.21	0.16										
25	0.19	0.15										
26	0.17	0.13										
27	0.16											
28	0.16											
29	0.15											
30	0.13											
Profundidade total de avanço	**8.47**	**6.71**	**5.7**	**5.19**	**4.68**	**4.17**	**3.65**	**2.89**	**2.38**	**1.85**	**1.34**	**0.98**

BSPT 55º – interior e exterior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA			
	Passo (nº de fios / polegada)			
	11	14	19	28
1	0.22	0.19	0.19	0.15
2	0.21	0.18	0.18	0.14
3	0.20	0.17	0.17	0.13
4	0.19	0.16	0.15	0.12
5	0.18	0.15	0.13	0.08
6	0.16	0.14	0.08	
7	0.15	0.12		
8	0.13	0.08		
9	0.08			
Profundidade total de avanço	**1.52**	**1.19**	**0.90**	**0.62**

ACME – ACME 29º – exterior

Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA							
	Passo (nº de fios / polegada)							
	4	5	6	8	10	12	14	16
1	0.37	0.34	0.32	0.29	0.27	0.25	0.22	0.23
2	0.34	0.32	0.28	0.25	0.23	0.22	0.20	0.21
3	0.30	0.25	0.23	0.21	0.20	0.17	0.18	0.18
4	0.27	0.23	0.21	0.17	0.18	0.14	0.15	0.14
5	0.25	0.22	0.18	0.15	0.14	0.13	0.13	0.12
6	0.24	0.20	0.18	0.13	0.12	0.12	0.11	0.08
7	0.21	0.19	0.16	0.13	0.12	0.10	0.08	
8	0.20	0.19	0.16	0.12	0.11	0.09		
9	0.20	0.18	0.16	0.12	0.11			
10	0.18	0.16	0.15	0.11	0.09			
11	0.17	0.15	0.14	0.11				
12	0.16	0.14	0.13	0.09				
13	0.16	0.13	0.11					
14	0.15	0.11						
15	0.14							
16	0.12							
Profundidade total de avanço	**3.46**	**2.83**	**2.41**	**1.88**	**1.57**	**1.22**	**1.07**	**0.96**

ACME – ACME 29º – interior

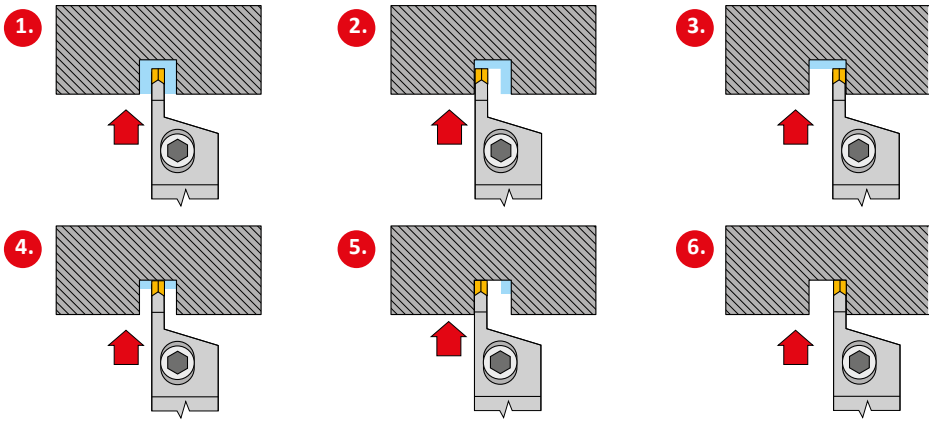
Número de passagens	REDUZA A VELOCIDADE DE CORTE PROPORCIONALMENTE AO AUMENTO DO PASSO DE ROSCA							
	Passo (nº de fios / polegada)							
	4	5	6	8	10	12	14	16
1	0.37	0.34	0.32	0.29	0.27	0.25	0.22	0.23
2	0.33	0.31	0.27	0.25	0.23	0.22	0.20	0.21
3	0.30	0.25	0.23	0.21	0.20	0.17	0.18	0.17
4	0.27	0.23	0.20	0.17	0.18	0.15	0.15	0.14
5	0.25	0.22	0.18	0.15	0.15	0.13	0.13	0.12
6	0.23	0.20	0.18	0.14	0.12	0.12	0.11	0.08
7	0.21	0.19	0.16	0.13	0.12	0.10	0.08	
8	0.20	0.19	0.15	0.12	0.11	0.09		
9	0.20	0.17	0.15	0.12	0.11			
10	0.18	0.16	0.15	0.12	0.09			
11	0.17	0.15	0.14	0.11				
12	0.16	0.14	0.13	0.09				
13	0.16	0.13	0.11					
14	0.15	0.11						
15	0.14							
16	0.12							
Profundidade total de avanço	**3.44**	**2.78**	**2.38**	**1.90**	**1.59**	**1.23**	**1.07**	**0.95**

Torneamento de rebaixos, sangrar e torneamento em cópia

A Pramet oferece uma ampla gama de ferramentas para torneamento de rebaixos superficiais e profundas, tanto radial como axialmente (ranhura frontal). O torneamento de perfis circular / em cópia também pode ser executado através do corte lateral.

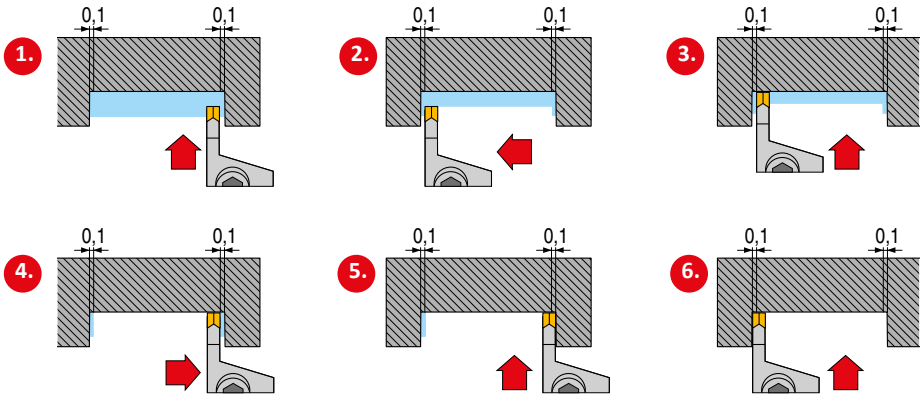
Recomendações para utilização prática:

O procedimento para tornear um rebaixo (aprofundar e alargar) é exibido na ilustração a seguir.

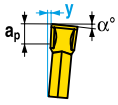


Nota: para criar uma superfície de assento plano, use o tipo de pastilha GL com quebra aparas GM ou LCMF com quebra aparas F. As passagens de ranhura radial exteriores devem sobrepor-se à passagem central em duas vezes o raio do canto da pastilha.

Ao maquinar um rebaixo largo, siga o procedimento mostrado na ilustração a seguir.

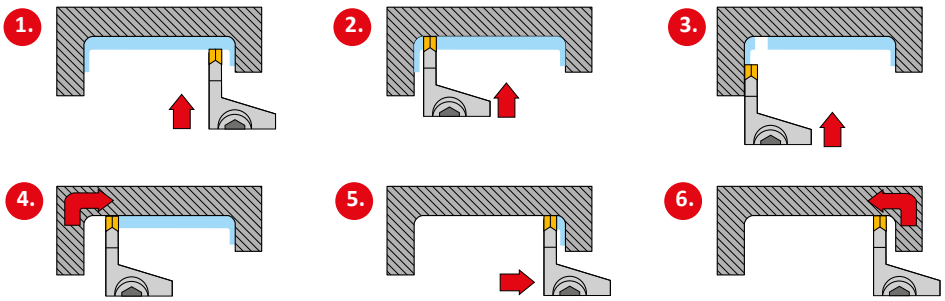


Nota: Utilize a pastilha de corte LCMF com quebra aparas M. Deve considerar a deformação da ferramenta "*y*":

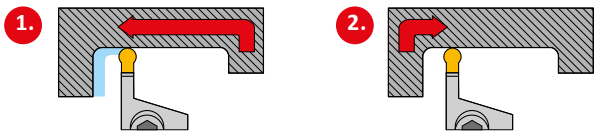


– para *f* =0,15 mm/rev; a_p = 3 mm ***y = 0,07 mm***
– para *f* =0,25 mm/rev; a_p = 3 mm ***y = 0,08 mm***
– para *f* =0,35 mm/rev; a_p = 3 mm ***y = 0,10 mm***

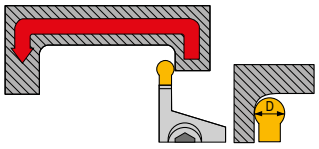
Ao abrir ou aprofundar um contorno usando o torneamento lateral, use o procedimento mostrado na ilustração a seguir.



Desbaste de contorno (pastilha com aresta de corte redonda)



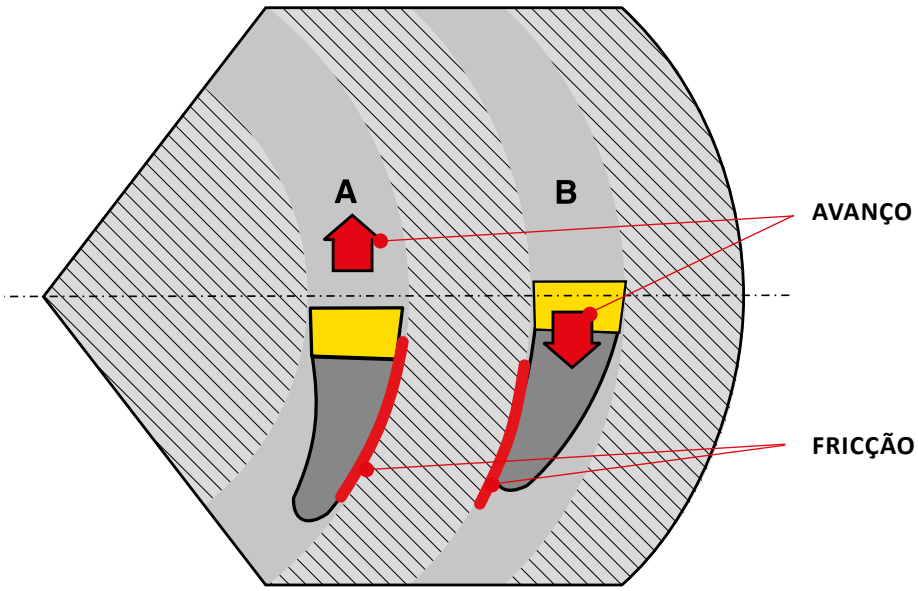
Acabamento de contorno (pastilha com aresta de corte redonda)



D (mm)	a_p (mm)
3	0.15
4	0.20
5	0.22
6	0.25
8	0.40

Para o torneamento em cópia usando pastilhas intercambiáveis com uma aresta de corte redonda, a profundidade máxima de corte é 50% do diâmetro da pastilha. Escolha o porta-ferramentas com a secção transversal máxima e balanço mínimo da ferramenta para eliminar as vibrações. O eixo longitudinal da pastilha de corte deve ser perpendicular ao eixo de rotação da peça de trabalho (em rebaixos radiais). A aresta de corte deve estar na linha de centro com uma tolerância de + - 0,1 mm.
O refrigerante deve ser aplicado diretamente na aresta de corte e na área de suporte do porta-ferramenta sob a aresta de corte da pastilha, em quantidades suficientes para garantir o arrefecimento efetivo da pastilha. Ao maquinar ranhura frontal, é necessário selecionar um porta-ferramenta com a faixa correta de diâmetros para a ranhura a ser maquinada. A ferramenta deve ser colocada paralela ao eixo de rotação da peça de trabalho (perpendicular à face da ranhura). Caso contrário, existe o risco de atrito com a (s) parede (s) da ranhura durante a maquinação.
No caso da ferramenta roçar na parede exterior da ranhura, pode ser necessário elevar a aresta de corte acima do centro (veja o exemplo A na figura).

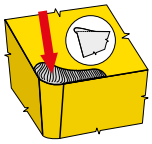
Para a ranhura frontal, a ferramenta deve ser ajustada para ficar perpendicular à face da peça de trabalho com alta precisão, caso contrário, o lado da ferramenta irá roçar contra a ranhura que está a ser criada.

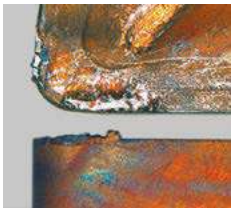


É muito importante utilizar um refrigerante eficaz, aplicado diretamente na aresta de corte em quantidades suficientes. O arrefecimento reduz a temperatura da aresta de corte e também a parte inferior do porta-ferramenta, onde a pastilha de corte está assente.

TIPOS DE DESGASTE DAS PASTILHAS DE TORNEAMENTO

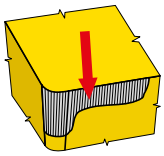
ARESTA POSTIÇA

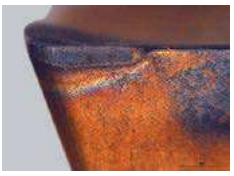




		Não tem influência
(MT)CVD / PVD	+ +	Qualquer revestimento (fator decisivo é o efeito anti-adesão)
f	↑	Quanto maior fôr o avanço menor será a probabilidade de formação de aresta postiça
v	↓↑	Alterar a velocidade de corte (geralmente aumentar)
a_p		Não tem influência
	↓↑	Utilizar una geometría más positiva (el filo de aportación no se crea cuando el ángulo de desprendimiento es mayor de 40º)
	-	Utilizar um refrigerante com propriedades de anti-aderência mais efetivas (ou então nenhum refrigerante)

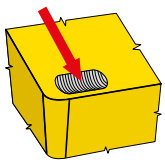
DESGASTE NO FLANCO

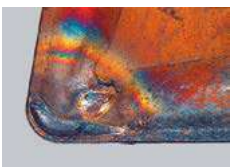




	↑	Utilizar um substrato mais resistente ao desgaste (S)
(MT)CVD / PVD	+ +	Qualquer revestimento (fator decisivo é a resistência à oxidação – α Al_2O_3)
f	↑	O avanço tem influência na forma e posição da ranhura
v	↓	Reduzir a velocidade de corte
	↑	Efeito mínimo
a_p	+	Utilizar uma geometria de corte mais positiva
	+	Utilizar refrigerante ou aumentar a sua intensidade

CRATERAS

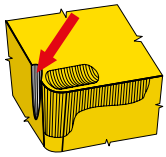




	↑	Utilizar um substrato mais resistente ao desgaste (S)
(MT)CVD / PVD	+ +	Qualquer revestimento (fator decisivo é a resistência térmica – α Al_2O_3)
f	↑	O avanço tem influência na forma e posição da cratera
v	↓	Reduzir a velocidade de corte
a_p	↓	Efeito mínimo
	↑	Utilizar uma geometria de corte mais positiva
	+ +	Utilizar refrigerante ou aumentar a sua intensidade

TIPOS DE DESGASTE DAS PASTILHAS DE TORNEAMENTO

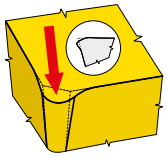
RANHURA POR OXIDAÇÃO

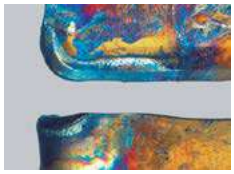




	↑	Utilizar um substrato mais resistente ao desgaste (H)
(MT)CVD PVD	+ +	Qualquer revestimento (fator decisivo é a dureza - TIC, TICN)
f	↓	Aumentar o avanço (especialmente se é inferior a 0.1 mm)
V	↓	Reduzir a velocidade de corte
a_p	↓	Não tem influência
	↑	O mais importante é aumentar o ângulo de incidência
	+ +	Utilizar refrigerante ou aumentar a sua intensidade

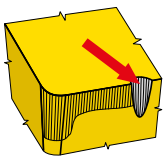
DEFORMAÇÃO PLÁSTICA

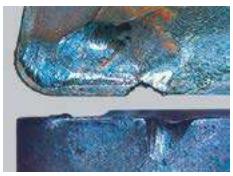




	↑	Utilizar um substrato mais resistente ao desgaste (fator decisivo é o conteúdo em Co)
(MT)CVD PVD	+	Qualquer revestimento (fator decisivo é a fricção)
f	↓	Reduzir o avanço
V	↓	Reduzir a velocidade de corte
a_p	↓	Efeito mínimo
	↑	Utilizar uma geometria de corte mais positiva
	+ +	Utilizar refrigerante ou aumentar a sua intensidade

ENTALHE LATERAL - SOLUÇÃO

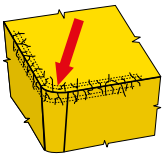




	↑ ↓	Depende do caráter do dano (abrasivo - utilizar um substrato mais resistente ao desgaste; rutura - utilizar um substrato mais tenaz)
(MT)CVD PVD	+ +	Revestimento CVD (fator decisivo é resistência à oxidação - α Al_2O_3)
f	↓	O avanço tem influência na intensidade, mas menos do que a velocidade de corte
V	↓	Reduzir a velocidade de corte
a_p	↑↓	Utilizar uma profundidade de corte desigual
	↓	Utilizar uma geometria de corte menos positiva
	+	Utilizar refrigerante ou aumentar a sua intensidade
		Utilizar uma ferramenta com menor ângulo de posição

TIPOS DE DESGASTE DAS PASTILHAS DE TORNEAMENTO

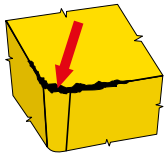
CRIAÇÃO DE MICRO FISSURAS

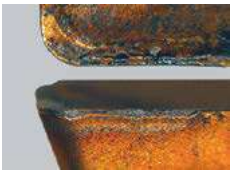




	↓	O substrato (H) tem um papel muito importante
(MT)CVD / PVD	+ +	Recomenda-se revestimento PVD
f	↓	O avanço tem influência na intensidade, mas menos que a velocidade de corte
v	↓	Menor velocidade significa menor temperatura
a_p		Não tem influência
	↓	Utilizar uma geometria de corte menos positiva
	- - -	Sem refrigerante (pode-se utilizar ar para evacuar as aparas da zone de corte)

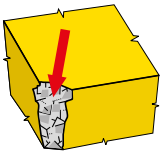
ESTILHAMENTO DO FIO DE CORTE

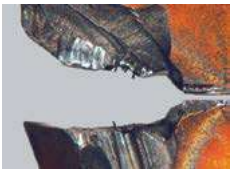




	↓	O substrato (H) tem um papel muito importante
(MT)CVD / PVD	+	Recomenda-se revestimento PVD
f	↓	É muito importante uma rutura de aparas correta
v	↑↓	Relativo à quebra de aparas e às vibrações
a_p	↓	Reduz a carga no fio de corte (importante quando se mecaniza com balanços grandes)
	↓	Utilizar uma geometria de corte menos positiva
		Não tem influência
		Melhorar as condições de trabalho, reduzir o avanço no início do corte

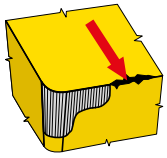
RUTURA DA PASTILHA





	↓	O substrato (H) tem um papel muito importante
(MT)CVD / PVD	+	Recomenda-se revestimento PVD
f	↓	Reduz a carga no fio de corte
v	↑↓	Relativo à evacuação de aparas e vibrações
a_p	↓	Reduz a carga no fio de corte
	↓	Utilizar uma geometria de corte menos positiva
		Não tem influência
		Utilizar melhores condições de corte

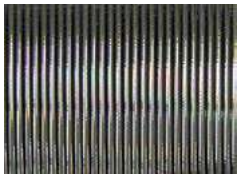
FALHA NO FIO DE CORTE POR BATIMENTO DE APARAS





	↓	O substrato (H) tem um papel muito importante
	+	Recomenda-se revestimento PVD
	↑↓	É muito importante uma quebra de aparas correta
	↑↓	Relativo à quebra de aparas e às vibrações
	↑↓	É muito importante uma quebra de aparas correta
	↓	Utilizar uma geometria de corte menos positiva
		Não tem influência
		O problema é uma má rutura, evacuação ou remoção de aparas

MÁ QUALIDADE DA SUPERFÍCIE



Descrição e causa:

As causas são diversas, em função do material da peça de trabalho, das condições de corte (avanço e velocidade de corte), a condição do fio de corte, a extensão e o tipo de desgaste, a condição e rigidez da peça de trabalho mecanizada.

- eleição incorreta da ferramenta
- espessura de apara inadequada
- velocidade de corte incorreta
- necessita refrigerante
- velocidade de avanço elevada

Solução do problema:

- utilizar uma pastilha Wiper (escova)
- utilizar pastilha de corte com a a geometria adequada
- reduzir a velocidade do avanço
- mudar (normalmente aumentar) a velocidade de corte
- utilizar um refrigerante
- Melhorar a estabilidade da ferramenta e da peça de trabalho
- mudar a secção transversal da apara
- selecionar um quebra aparas que corte mais facilmente
- aumentar o raio da ponta

VIBRAÇÕES



Descrição e causa:

São muito frequentas. Os principais motivos são o desequilibrio da peça de trabalho ou da ferramenta, má fixação da peça de trabalho, forças de corte elevadas ou o equilíbrio da ferramenta.

Solução do problema:

- melhorara a estabilidade da ferramenta e da peça de trabalho
- reduzir a profundidade de corte
- minimizar o balanço da ferramenta
- reduzir a velocidade de corte
- utilizar uma ferramenta com ângulo de posicionamento mais pequeno
- reduzir a secção transversal da apara
- utilizar uma ferramenta com uma baixa resistência de corte
- aumentar a velocidade de avanço
- selecionar um quebra aparas que corte com mais facilidade
- aumentar o raio da ponta

REBARBAS



Descrição e causa:

Isto acorre normalmente na mecanização de aços macios e materiais plásticos.

Solução do problema:

- utilizar uma pastilha de corte com fio de corte afiado
- utilizar uma pastilha de corte com geometria positiva
- utilizar uma ferramenta com um ângulo de posicionamento mais pequeno

ERROS NAS DIMENSÕES E FORMA DA PEÇA DE TRABALHO



Descrição e causa:

Depende de numerosos fatores.

Solução do problema:

- utilizar uma pastilha de corte resistente ao desgaste
- melhorar a estabilidade da ferramenta e da peça de trabalho
- minimizar o balanço da ferramenta
- utilizar uma peça de trabalho com uma margem de mecanização adequada

FORMAÇÃO INADEQUADA DE APARA



Descrição e causa:

Uma forma adequada da apara é tão importante como a durabilidade (tempo de vida útil da ferramenta). O material da peça de trabalho, o avanço, a profundidade de corte e a geometria de corte adequada (quebra aparas) afetam a formação correta das aparas. Uma apara demasiado grande é inaceitável por várias razões, mas uma apara demasiado curta (triturada) também não é desejável, dado que indica uma sobrecarga do fio e causa vibrações..

Solução do problema:

- mudar o avanço e a profundidade de corte
- utilizar uma geometria de corte mais adequada
- mudar as condições de corte

VERIFIQUE O ESTADO DE ASSENTO DA PASTILHA DE CORTE

Antes de fixar uma nova pastilha de corte ou mudar o fio (rotação da pastilha de corte) é necessário limpar o assento e verificar o seu estado ou o estado da parte de apoio e a cunha (especialmente os danos debaixo da esquina da pastilha de corte).

VERIFIQUE A MANUTENÇÃO DOS ELEMENTOS DE FIXAÇÃO

Verifique os elementos de fixação: alavancas de fixação, parafusos, cunhas, abraçadeiras. Utilize apenas peças sem danos, utilize apenas as peças originais que se encontram no catálogo. Lubrifique regularmente as roscas e as superfícies de união dos parafusos, por exemplo com um lubrificante resistente ao calor (Moliko G). Para a montagem e desmontagem, utilize apenas as chaves recomendadas no nosso catálogo pelo fabricante da ferramenta. Preste atenção ao aperto correto (proporcional), recomenda-se a utilização de chaves dinemométricas.

VERIFIQUE O APERTO

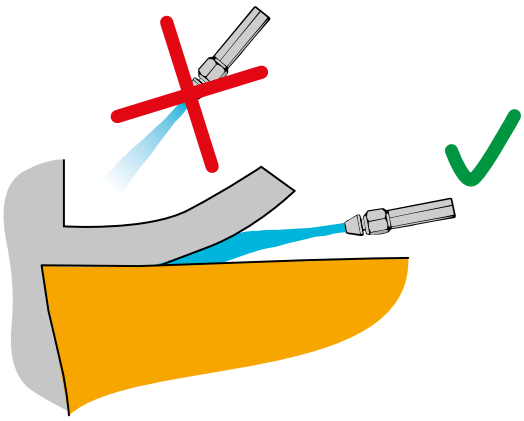
Antes de apertar, verifique o ajuste da pastilha de corte em toda a superfície de união, e o ajuste na direção radial e axial. As pastilhas de corte e as ferramentas devem estar sempre limpas e sem danos.

EFEITO DO FLUIDO DE CORTE



Material maquinado - a influência do ambiente de corte aumenta com o agravamento da maquinabilidade do material da peça.
Qualidade de corte - a influência do ambiente de corte aumenta com o aumento da tenacidade (teor de Co). O arrefecimento não é recomendado apenas para a maquinação de alta velocidade, ou seja, para a aplicação de CBN e cerâmica.
Avanço - o avanço crescente aumenta a contribuição do fluido de corte para a vida útil da ferramenta.
Velocidade de corte (típica para o material maquinado) - quanto maior a velocidade de corte, mais importante é o efeito de arrefecimento do fluido de corte e, inversamente, quanto menor a velocidade de corte, mais importante é o efeito lubrificante do fluido de corte.

O fornecimento de fluido também é um dos critérios que influencia fortemente a economia e a produtividade do processo de corte. Num caso ideal, o líquido pode ser fornecido tanto para a face quanto para o flanco da ferramenta. O fornecimento de fluido de corte pelo flanco afeta apenas a vida útil da ferramenta. Já o fornecimento de fluido pela face da ferramenta pode, em alguns casos, ajudar a formar aparas (especialmente no caso de arrefecimento de alta pressão). Se apenas uma das alternativas for possível, o tipo de desgaste indicará a direção correta. Se as pastilhas estiverem desgastadas no flanco, tente trazer o líquido de baixo, ou seja, para o flanco da pastilha. Se se forma uma cratera, o fluido deve ser direcionado para a face da ferramenta (sob a apara, não para a sua raiz).



FÓRMULA PARA CALCULAR PARÂMETROS DE CORTE

Valor	Fórmula	Unidade	Nota
Rotações (rpm)	$n = \frac{v_c \cdot 1000}{D \cdot \pi}$	(1/min)	n Rotações [1/min] D Diâmetro (da ferramenta ou peça de trabalho) [mm] v_c Velocidade de corte [m/min] f_{rev} Avanço por rotação [mm/rot] f_{min} Avanço por minuto (avanço linear) [mm/min]
Velocidade de corte	$v_c = \frac{\pi \cdot D \cdot n}{1000}$	(m/min)	
Avanço por rotação	$f_{rev} = \frac{f_{min}}{n}$	(mm/rot)	
Avanço por minuto (avanço linear)	$f_{min} = v_f = f_{rev} \cdot n$	(mm/min)	
Altura máx. do perfil R_{max}	$R_{max} = \frac{125 \cdot f_{rev}^{\ 2}}{RE}$	(mm)	R_{max} Altura max. do perfil [mm] R_a Acabamento da superfície [mm] f_{rev} Avanço por rotação [mm/rot] RE Raio da ponta [mm]
Acabamento da superfície R_a	$R_a = \frac{43{,}9 \cdot f_{rev}^{\ 1{,}88}}{RE^{\ 0{,}97}}$	(mm)	
Secção transversal da apara	$A = f_{rev} \cdot a_p$	(mm^2)	A Secção transversal da apara [mm^2] f_{rev} Avanço por rotação [mm/rot] a_p Profundidade axial do corte [mm] κ_r Ângulo de ajuste da extremidade principal [°] h Espessura da apara [mm] v_c Velocidade de corte [m/min] f_{min} Avanço por minuto (Avanço linear) [mm/min] Q Volume de remoção de material por minuto [cm^3/min] $INSD$ Insert diameter (mm)
Espessura da apara (Para pastilha com aresta reta)	$h = f_{rev} \cdot \sin \kappa_r$	(mm)	
Espessura da apara (Para pastilha de corte redonda)	$h = f_{rev} \cdot \sqrt{\frac{a_p}{INSD}}$	(mm)	
Volume de remoção de material	$Q = a_p \cdot f_{rev} \cdot v_c$	(cm^3/min)	
Potência pedida	$P_c = \frac{a_p \cdot f_{rev}^{\ 1-c} \cdot k_{c1} \cdot v_c \cdot k\kappa_r}{6 \cdot 10^4 \cdot \eta}$	(kW)	P_c Potência pedida [kW] a_p Profundidade de corte [mm] f_{rev} Avanço [mm/rot] c KTV constante [1] k_c Força de corte específica [MPa] $k_{\kappa r}$ κr Ângulo constante [1] η Eficiência (normalmente η = 0,75) [1] x Material mecanizado constante [1]
Potência pedida aproximada	$P_c = \frac{a_p \cdot f_{rev} \cdot v_c}{x}$	(kW)	

Material	Aço	Ferro Fundido	Al
Coeficiente x	20	25	100

RECOMENDAÇÃO DE PARAFUSOS DE FIXAÇÃO

PARAFUSOS DE APERTO

Tipo de parafuso	Chave de parafusos	Aperto [Nm]
28588	MA2-8304	0.8
28992	MA2-8304	0.8
416.1-832	PT-8002	3.6
5513 020-01	PT-8004	3.6
5513 020-03	PT-8001	0.8
5513 020-04	PT-8003	1.5
5513 020-05	PT-8001	0.8
5513 020-14	TX 225PLUS	8.5
5513 020-24	PT-8002	1.5
5513 020-27	PT-8000	0.6
5513 020-28	PT-8000	0.6
5513 021-03	DMN 3124	13
CS 8601-T09P	SDR T09P	1.7
CS 8601-T15P	SDR T15P	3.9
CS 8601-T20P	SDR T20P	6.4
CS 8601-T25P	SDR T25P	9.5
DVF 0573	PT-8002	1.5
DVF 2260	TX 215PLUS	3.6
DVF 3584	DMD 1650	0.6
DVF 3593	TX 207PLUS	0.8
HS 0408	HXK 3	5
HS 0520C	HXK 4	5
HS 0616C	HXK 5	8
HS 0620	HXK 5	6
HS 0620C	HXK 5	6
HS 0625	HXK 5	6
HS 0625C	HXK 5	6
HS 0630	HXK 5	6
HS 0825	HXK 6	10
HS 0830	HXK 6	10
HS 0835	HXK 6	10
HS 0840	HXK 8	11
HS 1030	HXK 8	8
HS 1060	HXK 6	10
HS 93	HXK 5	8
HS 94	HXK 5	8
HSI 1020	HXK 6	8
PS 0512	HXK 2	2
PS 0512-A	HXK 2	2
PS 0616	HXK 2,5	4
PS 12040	HXK 5	8
PS 6026-709P	SRD T09P	2

PARAFUSOS DE APERTO

Tipo de parafuso	Chave de parafusos	Aperto [Nm]
PS 8290	HXK 2	2
SR 14	HXK 10	10
SR 85011-T15P	SDR T15P	5
SR 85017-T09P	SDR T09P	2
SR 85020-T15P	SDR T15P	3
SR 86025-T20P	SRD T20P	5
T20.037	DMD 1650	0.6
UP 0909-T09P	SRD T09P	2
UP 1515-T15P	SDR T15P	8
US 2505-T07P	SDR T07P	0.9
US 2506-T07P	SDR T07P	0.9
US 3007-T09P	SDR T09P	2
US 34	HXK 3	5
US 35	HXK 4	6
US 3508-T15P	SDR T15P	3
US 3510A-T15P	SDR T15P	3
US 3510-T15P	SDR T15P	3
US 3512A-T15P	SDR T15P	3
US 3512-T15P	SDR T15P	3
US 36	HXK 4	6
US 38	HXK 5	8
US 39	HXK 5	8
US 40	HXK 4	6
US 4008-T15P	SDR T15P	3.5
US 4011-T15P	SDR T15P	3.5
US 41	HXK 4	6
US 42	HXK 4	6
US 45013-T20P	SDR T20P	5
US 4512-T15P	SDR T15P	5
US 4514A-T20	SDR T20	5
US 46	HXK 3	5
US 46017-T20P	SDR T20P	5
US 47	HXK 5	8
US 5012-T15P	SDR T15P	5
US 5015-T20P	SDR T20P	5
US 5018-T20P	SDR T20P	5
US 6020-T25P	SDR T25P	6
US 64518-T15P	SDR T15P	5
US 8025-T30P	SDR T20P	13
US 83	HXK 4	6
US 95	HXK 4	10

CHAVES DINAMOMÉTRICAS

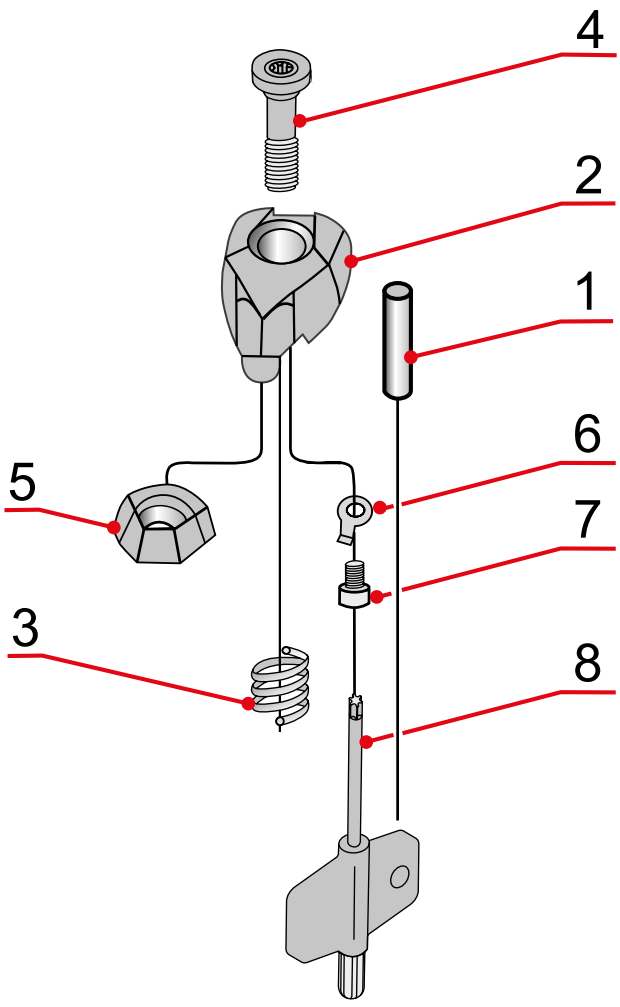
Punho de aperto	Aperto (Nm)	Rosca do parafuso de aperto
MR-0.8-2.0 vario	0.5 – 2.0	M 2 – M 3
MR-1.0-5.0 vario	0.8 – 5.0	M 2.5 – M 5
MR-0.9 fix	0.9	M 2
MR-2.0 fix	2.0	M 3
MR-3.0 fix	3.0	M 3.5
MR-3.5 fix	3.5	M 4
MR-5.0 fix	5.0	M 5

PUNHOS SUBSTITUÍVEIS

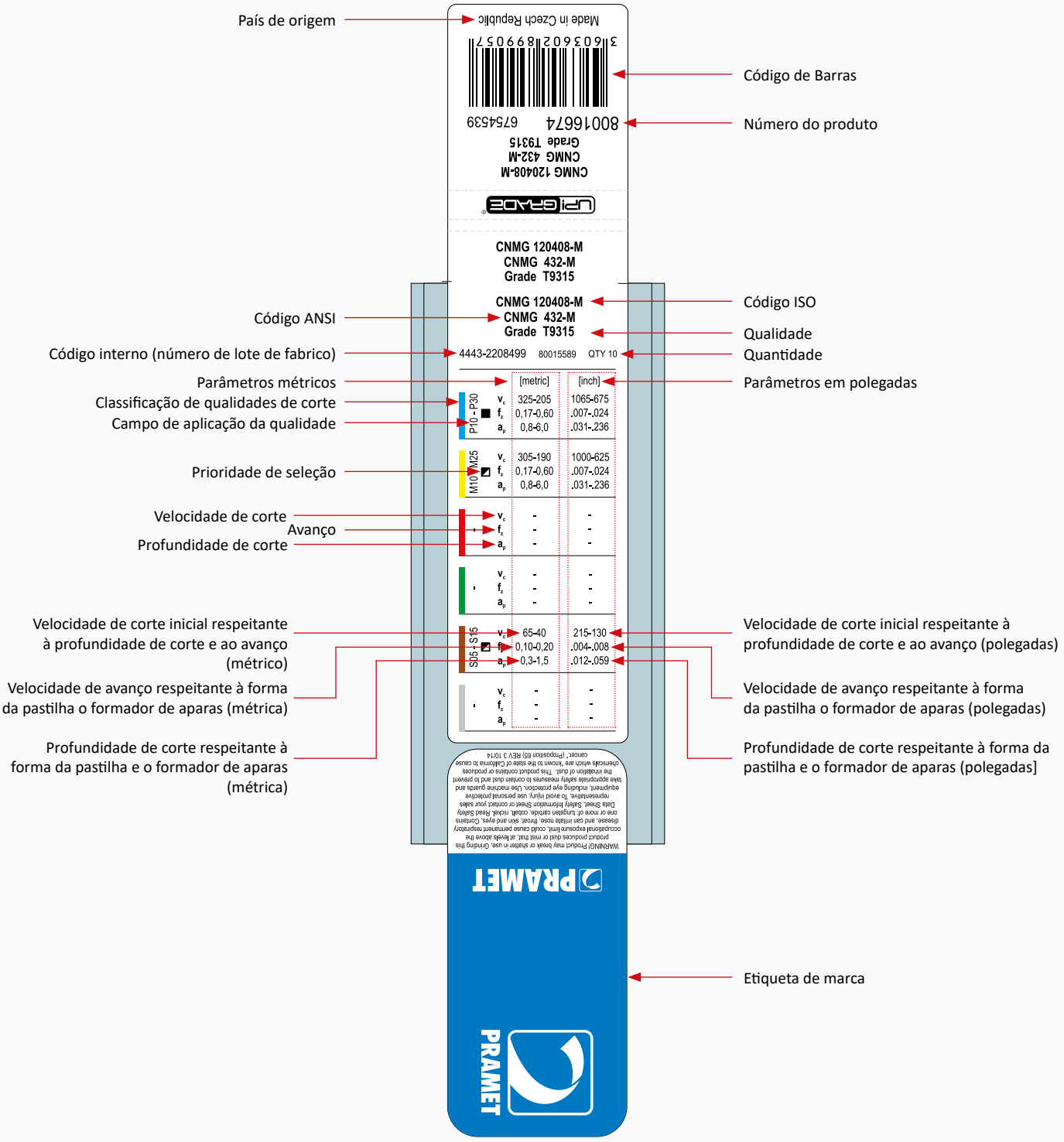
Punhos substituíveis		
D-T6	**D-T8**	**D-T15**
D-T6P	**D-T8P**	**D-T15P**
D-T7	**D-T9**	**D-T20**
D-T7P	**D-T9P**	**D-T20P**

LUBRIFICAÇÃO DE PARAFUSOS

Os parafusos de fixação das pastilhas estão sujeitos a tensões térmicas elevadas. Recomenda-se lubrificar todos os parafusoscom uma pasta de elevada qualidade como MOLYCOTE 1000.



	1	2	3	4		5	6	7	8
					Nm				
DCS 09	CP 2655	CD 09	PR 0157	CS 8601-T09P	1.7	–	–	–	–
DCS 12	CP 2607	CD 12	PR 0158	CS 8602-T15P	3.9	–	–	–	–
DCS 16	CP 2607	CD 16	PR 0159	CS 8603-T20P	6.4	–	–	–	–
DCS 19	CP 2607	CD 19	PR 0159	CS 8603-T20P	6.4	–	–	–	–
DCS 25	CP 2607	CD 25	PR 0101	CS 8604-T25P	9.5	–	–	–	–
DCS 16V	CP 2607	CD 16V	PR 0158	CS 8602-T15P	3.9	–	–	–	–
DCS 12C2	CP 2607	CD 12C2	PR 0158	CS 8602-T15P	3.9	PP 3002	H 1201	CS 9701-T07P	FLAG T07P
DCS 16C2	CP 2607	CD 16C2	PR 0159	CS 8603-T20P	6.4	PP 3003	H 1201	CS 9701-T07P	FLAG T07P
DCS 12C4	CP 2607	CD 12C4	PR 0158	CS 8602-T15P	3.9	PP 3002	H 1201	CS 9701-T07P	FLAG T07P
DCS 16C4	CP 2607	CD 16C4	PR 0159	CS 8603-T20P	6.4	PP 3003	H 1201	CS 9701-T07P	FLAG T07P


País de origem
Made in Czech Republic
3160360289905 7
Código de Barras
8001667 4 6754539
Número do produto
Grade T9315
CNMG 120408-M
CNMG 432-M
Grade T9315
CNMG 120408-M
CNMG 432-M
Grade T9315
Código ANSI
Código ISO
Qualidade
Código interno (número de lote de fabrico)
4443-2208499 80015589 QTY 10
Quantidade
Parâmetros métricos
Parâmetros em polegadas
[metric] [inch]
Classificação de qualidades de corte
Campo de aplicação da qualidade
P10 - P30
325-205 1065-675
0,17-0,60 .007-.024
0,8-6,0 .031-.236
Prioridade de seleção
M10 - M25
305-190 1000-625
0,17-0,60 .007-.024
0,8-6,0 .031-.236
Velocidade de corte
Avanço
Profundidade de corte
Velocidade de corte inicial respeitante à profundidade de corte e ao avanço (métrico)
Velocidade de avanço respeitante à forma da pastilha o formador de aparas (métrica)
Profundidade de corte respeitante à forma da pastilha e o formador de aparas (métrica)
S05 - S15
65-40 215-130
0,10-0,20 .004-.008
0,3-1,5 .012-.059
Velocidade de corte inicial respeitante à profundidade de corte e ao avanço (polegadas)
Velocidade de avanço respeitante à forma da pastilha o formador de aparas (polegadas)
Profundidade de corte respeitante à forma da pastilha e o formador de aparas (polegadas]
PRAMET
Etiqueta de marca

SIMPLY RELIABLE

Como profissional você pode julgar a qualidadedo de um trabalho apenas olhando para a apara. A apara é uma forma limpa e simples, que só por si mesma conta uma história. É um sinal claro e consistente e é por isso que podemos usá-lo como símbolo para ser **simplesmente confiável**.

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