TOOLFLO
Member IMC Group



MTTHREAD

THE ZENITH OF PRECISION MACHINING!

Solid & Indexable Threadmilling
Internal/External



MTTHREAD
THE ZENITH OF PRECISION MACHINING!

MTEC	_	06	04	C	14	1.0	ISO
Mill Thread Endmill Carbide		Shank Diameter	Cutting Diameter	No. of flutes C - 3 flutes D - 4 flutes E - 5 flutes F - 6 flutes	APMX	Thread Pitch	Thread Standard

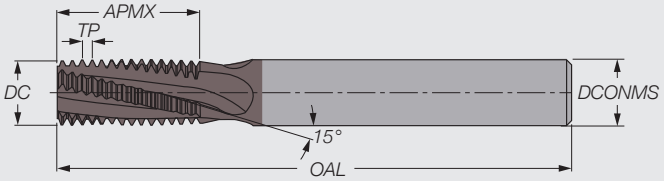
- without coolant hole
B - Central coolant hole
Z - Coolant holes through the flutes
Q - Central coolant hole and reduced neck diameter
S - Short profile for small internal threads
SH- For small internal threads in hard materials up to 62 HRC / High Temp, Titanium, and Super Alloys (Left Hand Cut)
I - Single point design of cutting head for deep threads with coolant through the flutes.

BSPT Threading Endmill

MTEC (METRIC) Internal/External

Solid Threadmill





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
28	RC 1/8	MTEC 0606C9 28BSPT	MTEC0606C928BSPT	0.907	6.0	5.40	57.0	3	8.16	•
19	RC1/4, RC3/8	MTEC 0808C14 19BSPT	MTEC0808C1419BSPT	1.337	8.0	7.16	64.0	3	12.03	•
14	RC1/2, RC7/8	MTEC 1212D19 14BSPT	MTEC1212D1914BSPT	1.814	12.0	10.88	84.0	4	16.33	•
11	RC1 -RC2	MTEC 1616D28 11BSPT	MTEC1616D2811BSPT	2.309	16.0	14.17	101.0	4	25.40	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

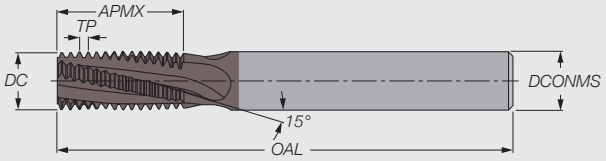
ISO Threading Endmill

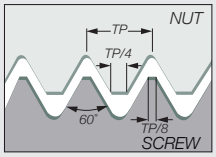
MTEC

Internal

Solid Threadmill







Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
3.00	M24	M25	MTEC 0625C16 3.0ISO	MTEC0625C1630ISO	0.625	0.620	4.000	3	1.600	•
3.00	M24	M25	MTEC 0625C23 3.0ISO	MTEC0625C2330ISO	0.625	0.625	4.500	3	2.310	•
2.50	M20	M22	MTEC 0625D13 2.5ISO	MTEC0625D1325ISO	0.625	0.620	4.000	4	1.300	•
2.00	M16	M17	MTEC 0375C11 2.0ISO	MTEC0375C1120ISO	0.375	0.370	3.000	3	1.100	•
2.00	M16	M17	MTEC 0375C15 2.0ISO	MTEC0375C1520ISO	0.375	0.375	4.000	3	1.540	•
2.00		M26	MTEC 0750F16 2.0ISO	MTEC0750F1620ISO	0.750	0.750	4.000	6	1.600	•
1.50	M10	M12	MTEC 0312C07 1.5ISO	MTEC0312C0715ISO	0.312	0.280	2.500	3	0.700	•
1.50	M10	M12	MTEC 0312C09 1.5ISO	MTEC0312C0915ISO	0.312	0.276	2.500	3	0.980	•
1.50		M14	MTEC 0375D09 1.5ISO	MTEC0375D0915ISO	0.375	0.370	3.000	4	0.900	•
1.50		M20	MTEC 0625F13 1.5ISO	MTEC0625F1315ISO	0.625	0.620	4.000	6	1.300	•
1.25	M8	M10	MTEC 0250C07 1.25ISO	MTEC0250C07125ISO	0.250	0.197	2.500	3	0.760	•
1.00	M6	M7	MTEC 0250C04 1.0ISO	MTEC0250C0410ISO	0.250	0.160	2.500	3	0.400	•
1.00		M10	MTEC 0312D07 1.0ISO	MTEC0312D0710ISO	0.312	0.310	2.500	4	0.700	•
0.80	M5	M6	MTEC 0250C04 0.8ISO	MTEC0250C0408ISO	0.250	0.142	2.500	3	0.360	•
0.50	M3	M4	MTEC 0250C02 0.5ISO	MTEC0250C0205ISO	0.250	0.087	2.500	3	0.210	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

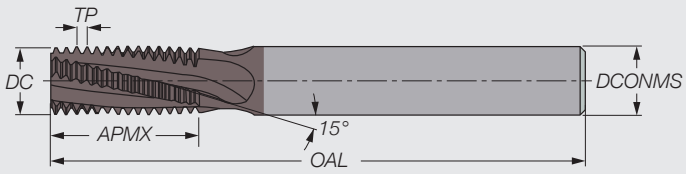
ISO Threading Endmill

MTEC (METRIC)

Internal

Solid Threadmill





Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
3.00	M24	M25	MTEC 1616C40 3.0ISO	MTEC1616C4030ISO	16.0	16.0	100	3	40.5	•
3.00	M24	M25	MTEC 1616C58 3.0ISO	MTEC1616C5830ISO	16.0	16.0	120	3	58.5	•
2.50	M20	M22	MTEC 1414D33 2.5ISO	MTEC1414D3325ISO	14.0	14.0	84	4	33.8	•
2.50	M20	M22	MTEC 1414D48 2.5ISO	MTEC1414D4825ISO	14.0	14.0	107	4	48.8	•
2.00	M16	M17	MTEC 1010C27 2.0ISO	MTEC1010C2720ISO	10.0	10.0	73	3	27.0	•
2.00	M16	M17	MTEC 1010C39 2.0ISO	MTEC1010C3920ISO	10.0	10.0	100	3	39.0	•
2.00		M18	MTEC 1212D27 2.0ISO	MTEC1212D2720ISO	12.0	12.0	84	4	27.0	•
2.00		M26	MTEC 2020F41 2.0ISO	MTEC2020F4120ISO	20.0	20.0	105	6	41.0	•
1.50	M10	M12	MTEC 0807C17 1.5ISO	MTEC0807C1715ISO	8.0	7.0	64	3	17.3	•
1.50	M10	M12	MTEC 0807C24 1.5ISO	MTEC0807C2415ISO	8.0	7.0	76	3	24.8	•
1.50		M14	MTEC 1010D21 1.5ISO	MTEC1010D2115ISO	10.0	10.0	73	4	21.8	•
1.50		M20	MTEC 1616F33 1.5ISO	MTEC1616F3315ISO	16.0	16.0	100	6	33.8	•
1.25	M8	M10	MTEC 0605C14 1.25ISO	MTEC0605C14125ISO	6.0	5.0	58	3	14.4	•
1.25	M8	M10	MTEC 0605C19 1.25ISO	MTEC0605C19125ISO	6.0	5.0	58	3	19.4	•
1.00	M6	M7	MTEC 0604C10 1.0ISO	MTEC0604C1010ISO	6.0	4.0	58	3	10.5	•
1.00	M6	M7	MTEC 0604C14 1.0ISO	MTEC0604C1410ISO	6.0	4.0	58	3	14.5	•
1.00		M10	MTEC 0808D16 1.0ISO	MTEC0808D1610ISO	8.0	8.0	64	4	16.5	•
0.80	M5	M6	MTEC 06036C9 0.8ISO	MTEC06036C908ISO	6.0	3.6	58	3	9.2	•
0.75		M6	MTEC 06045C10 0.75ISO	MTEC06045C10075ISO	6.0	4.5	58	3	10.0	•
0.70	M4	M5	MTEC 06031C7 0.7ISO	MTEC06031C707ISO	6.0	3.1	58	3	7.4	•
0.50	M3	M4	MTEC 06022C5 0.5ISO	MTEC06022C505ISO	6.0	2.2	58	3	5.3	•
0.50		M5	MTEC 06038C10 0.5ISO	MTEC06038C1005ISO	6.0	3.8	58	3	10.3	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

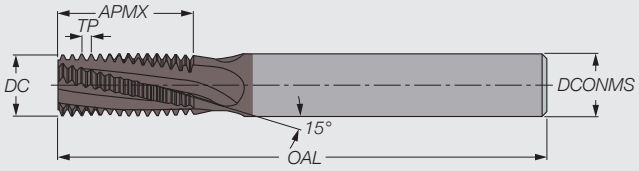
NPT Threading Endmill

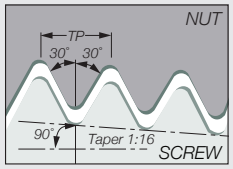
MTEC

Internal/External

Solid Threadmill







TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/16	MTEC 0250C03 27NPT	MTEC0250C0327NPT	0.037	0.250	0.230	2.5	3	0.39	•
27	1/8	MTEC 0250C04 27NPT	MTEC0250C0427NPT	0.037	0.250	0.250	2.5	3	0.40	•
18	1/4-3/8	MTEC 0312C06 18NPT	MTEC0312C0618NPT	0.055	0.312	0.312	2.5	3	0.60	•
14	1/2-3/4	MTEC 0500D08 14NPT	MTEC0500D0814NPT	0.071	0.500	0.500	2.5	4	0.80	•
11.5	1-2	MTEC 0625D11 11.5NPT	MTEC0625D11115NPT	0.086	0.625	0.620	4.0	4	1.10	•
8	>=2 1/2	MTEC 0750D16 8NPT	MTEC0750D168NPT	0.125	0.750	0.750	4.0	4	1.60	•

METRIC

TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/16-1/8	MTEC 0606C9 27NPT	MTEC0606C927NPT	0.037	6.0	5.36	58.00	3	9.900	•
18	1/4-3/8	MTEC 0808C14 18NPT	MTEC0808C1418NPT	0.055	8.0	7.12	64.00	3	14.80	•
14	1/2-3/4	MTEC 1212D20 14NPT	MTEC1212D2014NPT	0.071	12.0	10.77	84.00	4	20.90	•
11.5	1- 2	MTEC 1616D27 11.5NPT	MTEC1616D27115NPT	0.086	16.0	14.24	101.00	4	27.60	•
8	>=2 1/2	MTEC 2020D39 8NPT	MTEC2020D398NPT	0.125	20.0	20.0	105.00	4	39.70	•

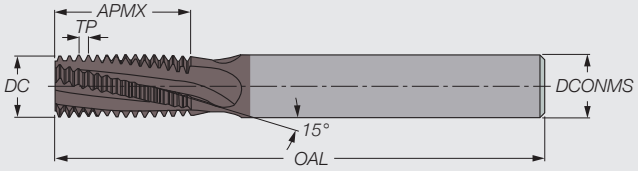
MTTHREAD
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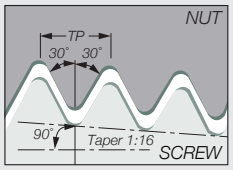
NPTF Threading Endmill

MTEC — Internal/External

Solid Threadmill







TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/16	MTEC 0250C03 27NPTF	MTEC0250C0327NPTF	0.037	0.250	0.230	2.50	3	0.39	•
27	1/8	MTEC 0250C04 27NPTF	MTEC0250C0427NPTF	0.037	0.250	0.250	2.50	3	0.39	•
18	1/4-3/8	MTEC 0312C06 18NPTF	MTEC0312C0618NPTF	0.055	0.312	0.312	2.50	3	0.58	•
14	1/2-3/4	MTEC 0500D08 14NPTF	MTEC0500D0814NPTF	0.071	0.500	0.500	3.50	4	0.82	•
11.5	1-2	MTEC 0625D11 11.5NPTF	MTEC0625D11115NPTF	0.086	0.625	0.625	4.00	4	1.09	•

METRIC

TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/16-1/8	MTEC 0606C9 27NPTF	MTEC0606C927NPTF	0.940	6.0	6.0	58.0	3	9.0	•
18	1/4-3/8	MTEC 0808C14 18NPTF	MTEC0808C1418NPTF	1.411	8.0	8.0	64.0	3	14.8	•
14	1/2-3/4	MTEC 1212D20 14NPTF	MTEC1212D2014NPTF	1.814	12.0	12.0	84.0	4	20.9	•

MTTHREAD
The Zenith of precision machining!

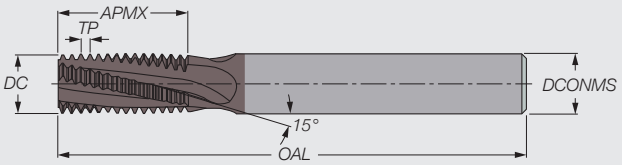
UN Threading Endmill

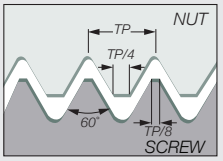
MTEC

Internal

Solid Threadmill







TPI	Coarse	Fine	Extra Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
40	5			MTEC 0250C02 40UN	MTEC0250C0240UN	0.025	0.250	0.098	2.5	3	0.24	•
32	8	10	12	MTEC 0250C02 32UN	MTEC0250C0232UN	0.031	0.250	0.126	2.5	3	0.27	•
28		1/4	7/16-1/2	MTEC 0250C04 28UN	MTEC0250C0428UN	0.035	0.250	0.160	2.5	3	0.40	•
28		1/4	7/16-1/2	MTEC 0250C05 28UN	MTEC0250C0528UN	0.035	0.250	0.236	2.5	3	0.57	•
24		5/16		MTEC 0250C06 24UN	MTEC0250C0624UN	0.041	0.250	0.200	2.5	3	0.60	•
24		3/8	9/16-5/8	MTEC 0312C08 24UN	MTEC0312C0824UN	0.041	0.312	0.280	2.5	3	0.80	•
20	1/4			MTEC 0250C05 20UN	MTEC0250C0520UN	0.050	0.250	0.180	2.5	3	0.50	•
20		7/16-1/2		MTEC 0312C08 20UN	MTEC0312C0820UN	0.050	0.312	0.280	2.5	3	0.80	•
20		7/16, 1/2		MTEC 0500E11 20UN	MTEC0500E1120UN	0.050	0.500	0.470	3.0	5	1.10	•
18	1/4			MTEC 0250C06 18UN	MTEC0250C0618UN	0.055	0.250	0.200	2.5	3	0.60	•
18		9/16-5/8	1 1/8-1 5/8	MTEC 0375D10 18UN	MTEC0375D1018UN	0.055	0.375	0.375	3.0	4	1.00	•
16	3/8			MTEC 0250C07 16UN	MTEC0250C0716UN	0.062	0.250	0.240	2.5	3	0.70	•
16		3/4		MTEC 0500D12 16UN	MTEC0500D1216UN	0.062	0.500	0.470	3.0	4	1.20	•
14	7/16			MTEC 0312C08 14UN	MTEC0312C0814UN	0.071	0.312	0.280	2.5	3	0.80	•
14		7/8		MTEC 0625E15 14UN	MTEC0625E1514UN	0.071	0.625	0.590	4.0	5	1.50	•
13	1/2			MTEC 0312C09 13UN	MTEC0312C0913UN	0.076	0.312	0.310	2.5	3	0.90	•
12	9/16			MTEC 0375C10 12UN	MTEC0375C1012UN	0.083	0.375	0.375	3.0	3	1.00	•
12		1-1 1/2		MTEC 0625E16 12UN	MTEC0625E1612UN	0.083	0.625	0.630	4.0	5	1.60	•
11	5/8			MTEC 0375C11 11UN	MTEC0375C1111UN	0.090	0.375	0.372	3.0	3	1.10	•
10	3/4			MTEC 0500C14 10UN	MTEC0500C1410UN	0.100	0.500	0.470	3.0	3	1.40	•
9	7/8			MTEC 0625C15 9UN	MTEC0625C159UN	0.111	0.625	0.590	4.0	3	1.50	•
8	1			MTEC 0625C17 8UN	MTEC0625C178UN	0.125	0.625	0.625	4.0	3	1.70	•
7	1 1/8-1 1/4			MTEC 0750D17 7UN	MTEC0750D177UN	0.142	0.750	0.750	4.0	4	1.78	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

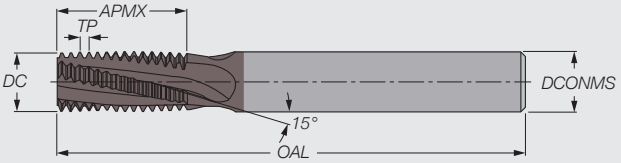
UN Threading Endmill

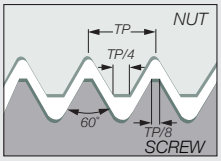
MTEC (METRIC)

Internal

Solid Threadmill







TPI	Coarse	Fine	Extra Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
40	5			MTEC 06025C6 40UN	MTEC06025C640UN	0.635	6	2.5	57	3	6.00	•
32	8	10	12	MTEC 06032C6 32UN	MTEC06032C632UN	0.794	6	3.2	57	3	6.80	•
28		1/4		MTEC 0604C11 28UN	MTEC0604C1128UN	0.907	6	4	57	3	11.30	•
28			7/16-1/2	MTEC 0606C14 28UN	MTEC0606C1428UN	0.907	6	6	57	3	14.50	•
24		5/16		MTEC 0605C14 24UN	MTEC0605C1424UN	1.058	6	5	57	3	14.30	•
24			9/16-5/8	MTEC 0807C21 24UN	MTEC0807C2124UN	1.058	8	7	63	3	20.00	•
20	1/4			MTEC 06045C12 20UN	MTEC06045C1220UN	1.270	6	4.5	57	3	12.10	•
20		7/16-1/2		MTEC 0807C21 20UN	MTEC0807C2120UN	1.270	8	7	63	3	20.00	•
20			3/4-1	MTEC 1212E27 20UN	MTEC1212E2720UN	1.270	12	12	83	5	27.30	•
18	5/16			MTEC 0605C14 18UN	MTEC0605C1418UN	1.411	6	5	57	3	14.80	•
18		9/16-5/8	1 1/8-1 5/8	MTEC 1010D26 18UN	MTEC1010D2618UN	1.411	10	10	72	4	26.10	•
16	3/8			MTEC 0606C16 16UN	MTEC0606C1616UN	1.588	6	6	57	3	16.70	•
16		3/4		MTEC 1212D31 16UN	MTEC1212D3116UN	1.588	12	12	83	4	30.00	•
14		7/8		MTEC 1615E37 14UN	MTEC1615E3714UN	1.814	16	15	100	5	37.20	•
13	1/2			MTEC 0808C22 13UN	MTEC0808C2213UN	1.954	8	8	63	3	22.50	•
12	9/16			MTEC 1010C26 12UN	MTEC1010C2612UN	2.117	10	10	72	3	26.50	•
12		1-1 1/2		MTEC 1616E41 12UN	MTEC1616E4112UN	2.117	16	16	100	5	41.30	•
11	5/8			MTEC 1010C28 11UN	MTEC1010C2811UN	2.309	10	10	72	3	28.90	•
10	3/4			MTEC 1212C34 10UN	MTEC1212C3410UN	2.540	12	12	83	3	34.30	•
9	7/8			MTEC 1615C38 9UN	MTEC1615C389UN	2.822	16	15	100	3	38.10	•
8	1			MTEC 1616C42 8UN	MTEC1616C428UN	3.175	16	16	100	3	42.90	•

MTTHREAD
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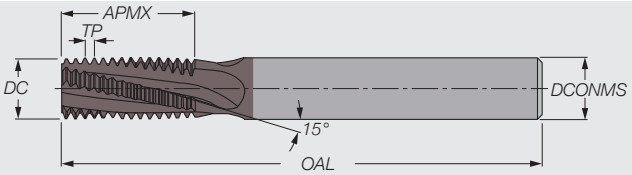
Whitworth Threading Endmill

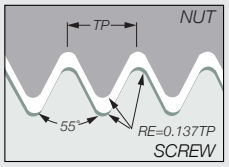
MTEC (METRIC)

Internal/External

Solid Threadmill







TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
28	G1/8	MTEC 0606C9 28W	MTEC0606C928W	0.907	6.0	6.0	58.0	3	9.5	•
19	G 1/4 -3/8	MTEC 0808C14 19W	MTEC0808C1419W	1.336	8.0	8.0	64.0	3	24.0	•
14	G1/2, G7/8	MTEC 1212D19 14W	MTEC1212D1914W	1.814	12.0	12.0	84.0	4	19.3	•
14	G1/2, G7/8	MTEC 1212D26 14W	MTEC1212D2614W	1.814	12.0	12.0	84.0	4	26.3	•
11	G1 -G1 1/2	MTEC 1212C24 11W	MTEC1212C2411W	2.309	12.0	12.0	84.0	3	24.2	•
11	G1, G3	MTEC 1616D38 11W	MTEC1616D3811W	2.309	16.0	16.0	101.0	4	38.1	•

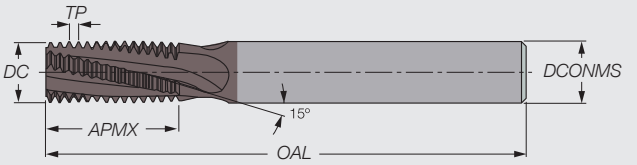
ISO Threading Endmill

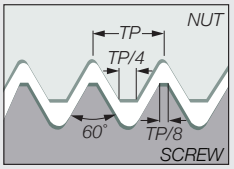
MTEC E (METRIC)

External

Solid Threadmill







Pitch (TP)	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
2.00	MTEC E 1010C17 2.0ISO	MTECE1010C1720ISO	10.0	10.0	73.0	3	17.0	•
2.00	MTEC E 1212D21 2.0ISO	MTECE1212D2120ISO	12.0	12.0	84.0	4	21.0	•
1.75	MTEC E 1212D20 1.75ISO	MTECE1212D20175ISO	12.0	12.0	84.0	4	20.1	•
1.50	MTEC E 1010D15 1.5ISO	MTECE1010D1515ISO	10.0	10.0	73.0	4	15.8	•
1.50	MTEC E 1212D20 1.5ISO	MTECE1212D2015ISO	12.0	12.0	84.0	4	20.3	•
1.25	MTEC E 1010D16 1.25ISO	MTECE1010D16125ISO	10.0	10.0	73.0	4	16.9	•
1.00	MTEC E 1010D16 1.0ISO	MTECE1010D1610ISO	10.0	10.0	73.0	4	16.5	•
1.00	MTEC E 1212E20 1.0ISO	MTECE1212E2010ISO	12.0	12.0	84.0	5	20.5	•

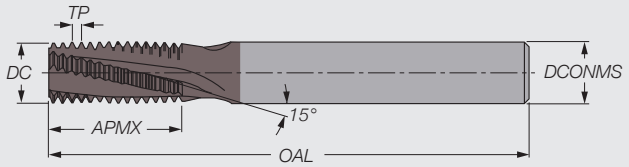
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

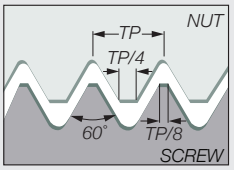
UN Endmill Endmill

MTEC E (METRIC) — External

Solid Threadmill







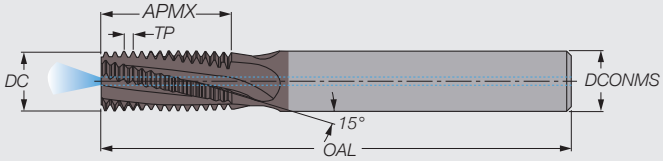
TPI	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
24	MTEC E 1010D16 24UN	MTECE1010D1624UN	1.058	10.0	10.0	73.0	4	16.4	•
20	MTEC E 1212E21 20UN	MTECE1212E2120UN	1.270	12.0	12.0	84.0	5	21.0	•
12	MTEC E 1212D20 12UN	MTECE1212D2012UN	2.116	12.0	12.0	84.0	4	20.1	•

BSPT Threading Endmill

MTECB (METRIC) — Internal/External

Solid Threadmill with Coolant Holes





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
28	RC1/8	MTECB 08078C14 28BSPT	MTECB08078C1428BSPT	0.907	8.0	7.8	64.0	3	14.1	•
19	RC1/4, RC3/8	MTECB 1010D16 19BSPT	MTECB1010D1619BSPT	1.336	10.0	10.0	73.0	4	16.7	•
14	RC1/2, RC7/8	MTECB 1616E26 14BSPT	MTECB1616E2614BSPT	1.814	16.0	16.0	105.0	5	26.3	•

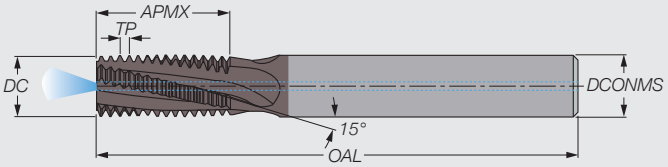
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading Endmill

MTECB — Internal

Solid Threadmill with Coolant Hole





Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
3.00	M24	M25	MTECB 0750D15 3.0ISO	MTECB0750D1530ISO	0.750					•
2.00	M12		MTECB 0375C11 2.0ISO	MTECB0375C1120ISO	0.375	0.370	3.00	3	1.023	•
2.00		M26	MTECB 0750F16 2.0ISO	MTECB0750F1620ISO	0.750	0.747	4.00	6	1.610	•
1.75	M12		MTECB 0375C11 1.75ISO	MTECB0375C11175ISO	0.375	0.352	3.00	3	1.102	•
1.50	M10	M12	MTECB 0312C09 1.5ISO	MTECB0312C0915ISO	0.313	0.307	2.50	3	0.980	•
1.25	M8	M10	MTECB 0250C07 1.25ISO	MTECB0250C07125ISO	0.250	0.250	2.50	3	0.760	•
1.00	M6	M7	MTECB 0250C06 1.0ISO	MTECB0250C0610ISO	0.250	0.181	2.50	3	0.600	•
1.00			MTECB 0312D06 1.0ISO	MTECB0312D0610ISO	0.313	0.310	2.50	4	0.650	•

METRIC

Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
3.00		M20	MTECB 2018D58 3.0ISO	MTECB2018D5830ISO	20.00	18.00	120.00	4	58.50	•
2.50	M20	M22	MTECB 1615E33 2.5ISO	MTECB1615E3325ISO	16.00	15.00	105.00	5	33.80	•
2.50	M20	M22	MTECB 1615E48 2.5ISO	MTECB1615E4825ISO	16.00	15.00	105.00	5	48.80	•
2.00	M14	M15	MTECB 1010C27 2.0ISO	MTECB1010C2720ISO	10.00	10.00	73.00	3	27.00	•
2.00	M16	M17	MTECB 12118D27 2.0ISO	MTECB12118D2720ISO	12.00	11.80	84.00	4	27.00	•
2.00	M16	M17	MTECB 12118D39 2.0ISO	MTECB12118D3920ISO	12.00	11.80	105.00	4	39.00	•
1.75	M12		MTECB 1009C20 1.75ISO	MTECB1009C20175ISO	10.00	9.00	73.00	3	20.10	•
1.75	M12		MTECB 1009C28 1.75ISO	MTECB1009C28175ISO	10.00	9.00	73.00	3	28.90	•
1.50	M10	M12	MTECB 08078C17 1.5ISO	MTECB08078C1715ISO	8.00	7.80	64.00	3	17.00	•
1.50		M12	MTECB 08078C24 1.5ISO	MTECB08078C2415ISO	8.00	7.80	76.00	3	24.80	•
1.50		M14	MTECB 1010D21 1.5ISO	MTECB1010D2115ISO	10.00	10.00	73.00	4	21.80	•
1.50		M16	MTECB 1212D26 1.5ISO	MTECB1212D2615ISO	12.00	12.00	84.00	4	26.30	•
1.50		M20	MTECB 1616F33 1.5ISO	MTECB1616F3315ISO	16.00	16.00	105.00	6	33.80	•
1.25	M8	M10	MTECB 0606C14 1.25ISO	MTECB0606C14125ISO	6.00	6.00	58.00	3	14.40	•
1.25	M8	M10	MTECB 0606C19 1.25ISO	MTECB0606C19125ISO	6.00	6.00	58.00	3	19.40	•
1.00	M6	M7	MTECB 06046C10 1.0ISO	MTECB06046C1010ISO	6.00	4.60	58.00	3	10.50	•
1.00		M9	MTECB 0606C12 1.0ISO	MTECB0606C1210ISO	6.00	6.00	58.00	3	12.50	•
1.00	M6	M7	MTECB 06046C14 1.0ISO	MTECB06046C1410ISO	6.00	4.60	58.00	3	14.50	•
1.00		M10	MTECB 0808D16 1.0ISO	MTECB0808D1610ISO	8.00	8.00	64.00	4	16.50	•
1.00		M12	MTECB 1010D24 1.0ISO	MTECB1010D2410ISO	10.00	10.00	73.00	4	24.50	•
0.80	M5	M6	MTECB 06038C9 0.8ISO	MTECB06038C908ISO	6.00	3.80	58.00	3	9.20	•
0.75		M6	MTECB 06045C10 0.75ISO	MTECB06045C10075ISO	6.00	4.50	58.00	3	10.10	•
0.75		M12	MTECB 1010D24 0.75ISO	MTECB1010D24075ISO	10.00	10.00	73.00	4	24.40	•
0.70	M4	M5	MTECB 06031C7 0.7ISO	MTECB06031C707ISO	6.00	3.10	58.00	3	7.40	•
0.50		M5	MTECB 06038C10 0.5ISO	MTECB06038C1005ISO	6.00	3.80	58.00	3	58.00	•

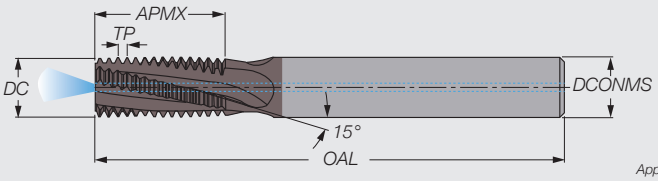
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

NPS Threading Endmill

MTECB — Internal/External

Solid Threadmill with Coolant Hole





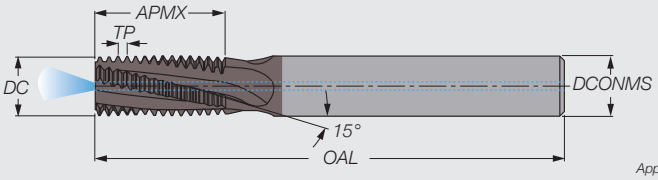
TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
18	1/4-3/8	MTECB 0375D06 18NPS	MTECB0375D0618NPS	0.055	0.375	0.375	3.00	4	0.640	•
14	1/2-3/4	MTECB 0625D08 14NPS	MTECB0625D0814NPS	0.071	0.625	0.610	4.00	4	0.890	•
11.5	1-2	MTECB 0750D11 11.5NPS	MTECB0750D11115NPS	0.086	0.750	0.750	4.00	4	1.170	•

NPSF Threading Endmill

MTECB — Internal/External

Solid Threadmill with Coolant Hole





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECB 0312C04 27NPSF	MTECB0312C0427NPSF	0.037	0.312	0.299	2.50	3	0.430	•
14	1/2-3/4	MTECB 0625D08 14NPSF	MTECB0625D0814NPSF	0.071	0.625	0.610	4.00	4	0.890	•

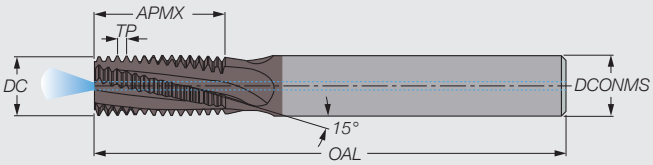
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

NPT Threading Endmill

MTECB — Internal/External

Solid Threadmill with Coolant Hole





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECB 0312C04 27NPT	MTECB0312C0427NPT	0.037	0.313	0.299	2.50	3	0.430	•
18	1/4-3/8	MTECB 0375D06 18NPT	MTECB0375D0618NPT	0.055	0.375	0.375	3.00	4	0.640	•
14	1/2-3/4	MTECB 0625D08 14NPT	MTECB0625D0814NPT	0.071	0.625	0.610	4.00	4	0.890	•
11.5	1-2	MTECB 0750D11 11.5NPT	MTECB0750D11115NPT	0.086	0.750	0.750	4.00	4	1.170	•

METRIC

TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECB 08076C10 27NPT	MTECB08076C1027NPT	0.940	8.00	7.60	64.00	3	10.80	•
18	1/4-3/8	MTECB 1010D16 18NPT	MTECB1010D1618NPT	1.411	10.00	10.00	73.00	4	16.20	•
14	1/2-3/4	MTECB 16155D22 14NPT	MTECB16155D2214NPT	1.814	16.00	15.50	105.00	4	22.70	•

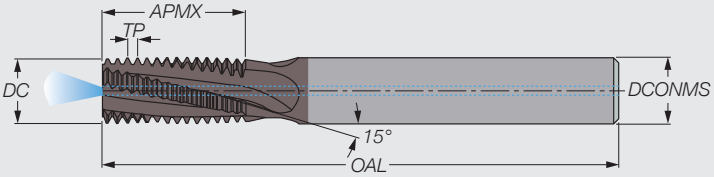
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

NPTF Threading Endmill

MTECB — Internal/External

Solid Threadmill with Coolant Hole





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECB 0312C04 27NPTF	MTECB0312C0427NPTF	0.037	0.313	0.299	2.50	3	0.430	•
14	1/2-3/4	MTECB 0625D08 14NPTF	MTECB0625D0814NPTF	0.071	0.625	0.610	4.00	4	0.890	•

METRIC

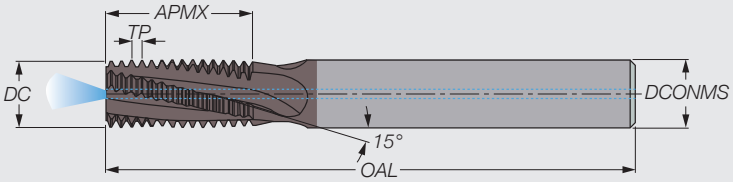
TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECB 08076C10 27NPTF	MTECB08076C1027NPTF	0.094	8.00	7.60	64.00	3	10.80	•

PG Threading Endmill

MTECB (METRIC) — Internal/External

Solid Threadmill with Coolant Hole





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
18	PG9 - PG16	MTECB 1212D20 18PG	MTECB1212D2018PG	1.411	12.00	12.00	84.00	4	20.50	•
16	PG21 - PG48	MTECB 1212D23 16PG	MTECB1212D2316PG	1.587	12.00	12.00	84.00	4	23.00	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

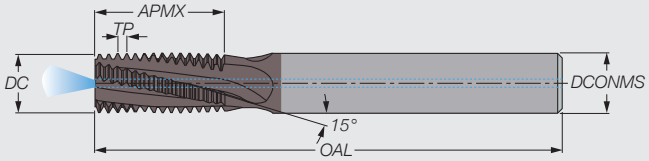
UN Threading Endmill

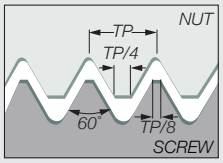
MTECB

Internal

Solid Threadmill with Coolant Hole







TPI	Coarse	Fine	Extra Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
32	8	10	12	MTECB 0250C05 32UN	MTECB0250C0532UN	0.031	0.250	0.250	2.50	3	0.580	•
32			3/8	MTECB 0312D07 32UN	MTECB0312D0732UN	0.031	0.313	0.312	2.50	4	0.740	•
28		1/4		MTECB 0250C04 28UN	MTECB0250C0428UN	0.035	0.250	0.197	2.50	3	0.440	•
28			7/16-1/2	MTECB 0250C05 28UN	MTECB0250C0528UN	0.035	0.250	0.250	2.50	3	0.560	•
24		5/16		MTECB 0312C05 24UN	MTECB0312C0524UN	0.041	0.313	0.260	2.50	3	0.560	•
24		3/8	9/16-5/8	MTECB 0312D08 24UN	MTECB0312D0824UN	0.041	0.313	0.312	2.50	4	0.810	•
20	1/4			MTECB 0250C04 20UN	MTECB0250C0420UN	0.050	0.250	0.185	2.50	3	0.480	•
20		7/16		MTECB 0312C08 20UN	MTECB0312C0820UN	0.050	0.313	0.312	2.50	3	0.830	•
20		1/2		MTECB 0375D08 20UN	MTECB0375D0820UN	0.050	0.375	0.375	3.00	4	0.880	•
20			3/4-1	MTECB 0500E11 20UN	MTECB0500E1120UN	0.050	0.500	0.500	3.50	5	1.070	•
18	5/16			MTECB 0250C05 18UN	MTECB0250C0518UN	0.055	0.250	0.220	2.50	3	0.580	•
18		9/16-5/8	1 1/8-1 5/8	MTECB 0500D10 18UN	MTECB0500D1018UN	0.055	0.500	0.445	4.00	4	1.030	•
16	3/8			MTECB 0312C06 16UN	MTECB0312C0616UN	0.062	0.313	0.264	2.50	3	0.660	•
16		3/4		MTECB 0500D12 16UN	MTECB0500D1216UN	0.062	0.500	0.500	3.50	4	1.220	•
14	7/16			MTECB 0312C08 14UN	MTECB0312C0814UN	0.071	0.313	0.303	2.50	3	0.820	•
14		7/8		MTECB 0625E14 14UN	MTECB0625E1414UN	0.071	0.625	0.625	4.00	5	1.460	•
13	1/2			MTECB 0375C08 13UN	MTECB0375C0813UN	0.076	0.375	0.362	3.00	3	0.890	•
12	9/16			MTECB 0500C10 12UN	MTECB0500C1012UN	0.083	0.500	0.413	3.50	3	1.040	•
12		1 1/2		MTECB 0625E16 12UN	MTECB0625E1612UN	0.083	0.625	0.625	4.00	5	1.630	•
11	5/8			MTECB 0500C11 11UN	MTECB0500C1111UN	0.090	0.500	0.449	4.00	3	1.140	•
10	3/4			MTECB 0625D13 10UN	MTECB0625D1310UN	0.100	0.625	0.567	4.00	4	1.350	•
9	7/8			MTECB 0625C15 9UN	MTECB0625C159UN	0.111	0.625	0.625	4.00	3	1.500	•
8	1			MTECB 0750D16 8UN	MTECB0750D168UN	0.125	0.750	0.750	4.00	4	1.690	•
7	1 1/8-1 1/4			MTECB 0750D17 7UN	MTECB0750D177UN	0.142	0.750	0.750	4.00	4	1.780	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

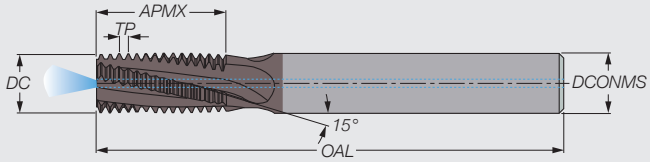
UN Threading Endmill

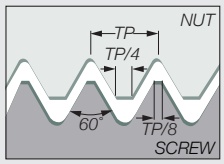
MTECB (METRIC)

Internal

Solid Threadmill with Coolant Hole







TPI	Coarse	Fine	Extra Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
32	8	10	12	MTECB 06032C6 32UN	MTECB06032C632UN	0.793	6.00	3.20	58.00	3	6.80	•
32			7/16-1/2	MTECB 0606C14 32UN	MTECB0606C1432UN	0.793	6.00	6.00	58.00	3	16.00	•
32			3/8	MTECB 0808D18 32UN	MTECB0808D1832UN	0.793	8.00	8.00	64.00	4	18.70	•
28		1/4		MTECB 0605C11 28UN	MTECB0605C1128UN	0.907	6.00	5.00	58.00	3	11.30	•
24		5/16		MTECB 08066C14 24UN	MTECB08066C1424UN	1.058	8.00	6.60	64.00	3	14.30	•
24			9/16-5/8	MTECB 0808D21 24UN	MTECB0808D2124UN	1.058	8.00	8.00	64.00	4	20.60	•
20		7/16		MTECB 0808C21 20UN	MTECB0808C2120UN	1.270	8.00	8.00	64.00	3	21.00	•
20		1/2		MTECB 1010D22 20UN	MTECB1010D2220UN	1.270	10.00	10.00	73.00	4	22.30	•
18	5/16			MTECB 06056C14 18UN	MTECB06056C1418UN	1.411	6.00	5.60	58.00	3	14.80	•
18		9/16-5/8	1 1/8-1 5/8	MTECB 12113D26 18UN	MTECB12113D2618UN	1.411	12.00	11.30	84.00	4	26.10	•
16	3/8			MTECB 08067C16 16UN	MTECB08067C1616UN	1.587	8.00	6.70	64.00	3	16.70	•
16		3/4		MTECB 1212D31 16UN	MTECB1212D3116UN	1.587	12.00	12.00	84.00	4	31.00	•
14	7/16			MTECB 08077C20 14UN	MTECB08077C2014UN	1.814	8.00	7.70	64.00	3	20.90	•
14		7/8		MTECB 1616E37 14UN	MTECB1616E3714UN	1.814	16.00	16.00	105.00	5	37.20	•
13		1/2		MTECB 10092C22 13UN	MTECB10092C2213UN	1.953	10.00	9.20	73.00	3	22.50	•
11	5/8			MTECB 12114C28 11UN	MTECB12114C2811UN	2.309	12.00	11.40	84.00	3	28.90	•
10	3/4			MTECB 16144D34 10UN	MTECB16144D3410UN	2.540	16.00	14.40	105.00	4	34.30	•
8	1			MTECB 20195D42 8UN	MTECB20195D428UN	3.175	20.00	19.50	105.00	4	42.90	•

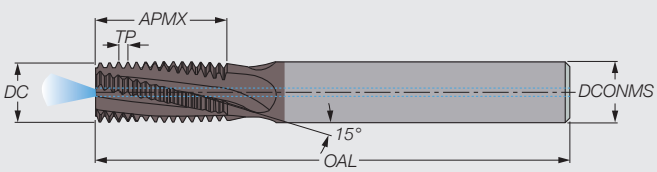
Whitworth Threading Endmill

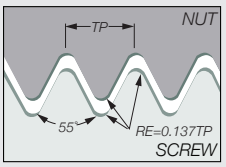
MTECB (METRIC)

Internal/External

Solid Threadmill with Coolant Hole







TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
28	G1/8	MTECB 08078C14 28W	MTECB08078C1428W	0.907	8.00	7.80	64.00	3	14.10	•
19	G 1/4 -3/8	MTECB 1010D16 19W	MTECB1010D1619W	1.336	10.00	10.00	73.00	4	16.70	•
14	G1/2, G7/8	MTECB 1616E26 14W	MTECB1616E2614W	1.814	16.00	16.00	105.00	5	26.30	•
11	G ≥1	MTECB 1616D38 11W	MTECB1616D3811W	2.309	16.00	16.00	105.00	4	38.10	•
11	G ≥1	MTECB 2020E47 11W	MTECB2020E4711W	2.309	20.00	20.00	105.00	5	47.30	•

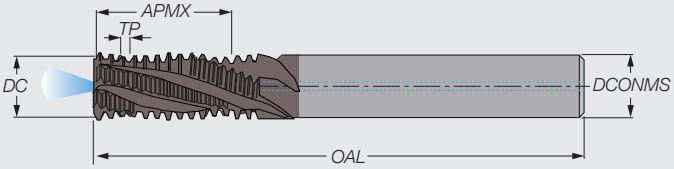
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading Endmill

MTECBA (METRIC) — Internal

Solid Threadmill with Coolant Hole





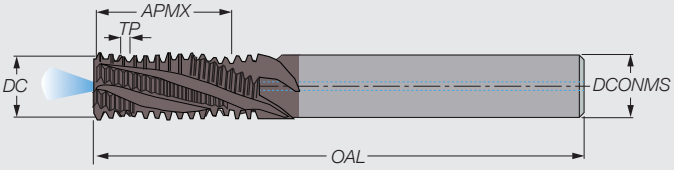
Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
0.5	M3	M4	MTECBA 03024C6 0.5ISO	MTECBA03024C605ISO	3.00	2.40	39.00	3	6.80	•

UN Threading Endmill

MTECBA (METRIC) — Internal

Solid Threadmill with Coolant Hole





TPI	Coarse	Fine	Extra Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
20		7/16		MTECBA 10092C23 20UN	MTECBA10092C2320UN	10.00	9.20	73.00	3	23.50	•
20	1/4			MTECBA 08048C14 20UN-C (w/chamfer)	MTECBA08048C1420UNC	8.00	4.80	64.00	3	15.60	•
18		9/16-5/8	1-1/8-1 5/8	MTECBA 1212D30 18UN	MTECBA1212D3018UN	12.00	12.00	84.00	4	30.30	•
16		3/4		MTECBA 1616E38 16UN	MTECBA1616E3816UN	16.00	16.00	105.00	5	38.90	•
16	3/8			MTECBA 12074C21 16UN-C (w/chamfer)	MTECBA12074C2116UNC	12.00	7.40	84.00	3	21.40	•

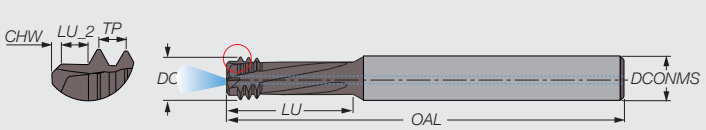
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

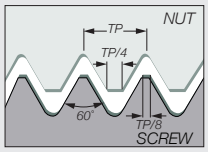
ISO Threading Endmill

MTECD (METRIC) — Internal

Solid Threadmill with Coolant Hole (Left Hand Cut)







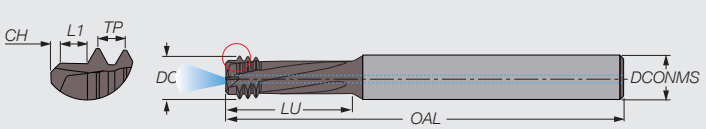
Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	CHW	LU2	AC22
2.00	M16	<=M23	MTECD 12118D35 2.0ISO	MTECD12118D3520ISO	12.00	11.80	84.00	4	35.00	0.60	2.00	•
1.75	M12		MTECD 1009D26 1.75ISO	MTECD1009D26175ISO	10.00	9.00	73.00	4	26.00	0.60	1.80	•
1.50	M10	<=M15	MTECD 08078D23 1.5ISO	MTECD08078D2315ISO	8.00	7.80	64.00	4	23.00	0.60	1.50	•
1.25	M8	M12	MTECD 08061D18 1.25ISO	MTECD08061D18125ISO	8.00	6.10	64.00	4	18.00	0.50	1.30	•
1.00	M6	M9	MTECD 08047C14 1.0ISO	MTECD08047C1410ISO	8.00	4.70	64.00	3	14.00	0.40	1.00	•
0.80	M5		MTECD 0604C14 0.8ISO	MTECD0604C1408ISO	6.00	4.00	58.00	3	14.40	0.30	0.80	•
0.70	M4		MTECD 06032C11 0.7ISO	MTECD06032C1107ISO	6.00	3.15	58.00	3	11.60	0.20	0.70	•

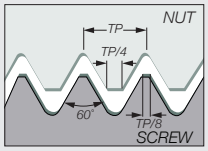
UN Threading Endmill

MTECD (METRIC) — Internal

Solid Threadmill with Coolant Hole (Left Hand Cut)







TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	CH	L1	AC22
36		8	MTECD 06033C12 36UN	MTECD06033C1236UN	0.705	6.00	3.30	58.00	3	12.00	0.20	0.70	•
32	8		MTECD 06032C12 32UN	MTECD06032C1232UN	0.793	6.00	3.20	58.00	3	12.30	0.30	0.80	•
32	8		MTECD 06038C14 32UN	MTECD06038C1432UN	0.793	6.00	3.80	58.00	3	14.00	0.30	0.80	•
28	1/4	3/8	MTECD 0805C14 28UN	MTECD0805C1428UN	0.907	8.00	5.00	64.00	3	14.50	0.40	0.90	•
24	5/16	1/2	MTECD 08065D17 24UN	MTECD08065D1724UN	1.058	8.00	6.50	64.00	4	17.00	0.50	1.10	•
20	1/4	3/8	MTECD 08048C14 20UN	MTECD08048C1420UN	1.270	8.00	4.80	64.00	3	14.00	0.40	1.30	•
18	5/16	7/16	MTECD 0806D17 18UN	MTECD0806D1718UN	1.411	8.00	6.00	64.00	4	17.00	0.50	1.40	•
16	3/8	1/2	MTECD 08067C22 16UN	MTECD08067C2216UN	1.587	8.00	6.70	64.00	3	22.00	0.50	1.60	•

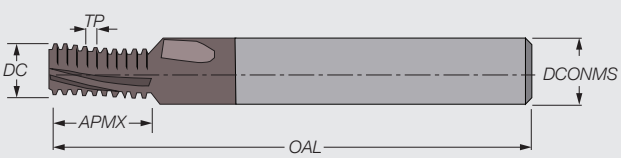
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading Endmill

MTECH — Internal

Solid Threadmill





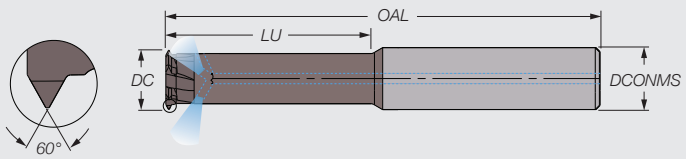
Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
1.25	M8	M10	MTECH 0806D14 1.25ISO	MTECH0806D14125ISO	8	7.6	64	4	14.4	•
1	M6	M7	MTECH 08048D10 1.0ISO	MTECH08048D1010ISO	8	6.4	64	4	10.5	•

55° & 60° Partial Profile V-Threading Endmill

MTECI (METRIC) — Internal/External

Solid Threadmill with Coolant Holes in Flutes





Description	EDP Code	TPI int	TPI ext	DC	DCONMS	OAL	NOF	PITCH int	PITCH ext	LU	AC22
MTECI 03023C7 A55	MTECI03023C7A55	40-32	40-32	2.30	3.00	39.00	3	0.63-0.78	0.63-0.78	7.10	•
MTECI 03019C5 A60	MTECI03019C5A60	72-40	72-40	1.90	3.00	39.00	3	0.35-0.60	0.35-0.60	5.20	•
MTECI 03024C7 A60	MTECI03024C7A60	48-32	48-32	2.40	3.00	38.00	3	0.50-0.80	0.50-0.80	7.10	•
MTECI 06032C9 A60	MTECI06032C9A60	48-24	48-24	3.20	6.00	57.00	3	0.50-1.00	0.50-1.00	9.50	•
MTECI 0604C12 A60	MTECI0604C12A60	48-24	48-24	4.00	6.00	58.00	3	0.50-1.00	0.50-1.00	12.50	•
MTECI 0605D20 A60	MTECI0605D20A60	56-28	64-32	5.00	6.00	58.00	4	0.50-0.80	0.40-0.80	20.00	•
MTECI 0808D28 A60	MTECI0808D28A60	56-28	64-32	8.00	8.00	64.00	4	0.50-0.80	0.40-0.80	28.00	•
MTECI 0808D30 A60	MTECI0808D30A60	28-14	32-16	8.00	8.00	64.00	4	1.00-1.75	0.80-1.50	30.00	•
MTECI 1010D35 A60	MTECI1010D35A60	28-14	32-16	10.00	10.00	73.00	4	1.00-1.75	0.80-1.50	35.00	•
MTECI 1212E39 A60	MTECI1212E39A60	28-14	32-16	12.00	12.00	84.00	5	1.00-1.75	0.80-1.50	39.00	•
MTECI 1212E40 A60	MTECI1212E40A60	13-8	15-10	12.00	12.00	84.00	5	2.00-3.00	1.75-2.50	40.00	•
MTECI 1614E45 A60	MTECI1614E45A60	13-8	15-10	14.00	16.00	101.00	5	2.00-3.00	1.75-2.50	45.00	•
MTECI 1616E50 A60	MTECI1616E50A60	13-8	15-10	16.00	16.00	101.00	5	2.00-3.00	1.75-2.50	50.00	•

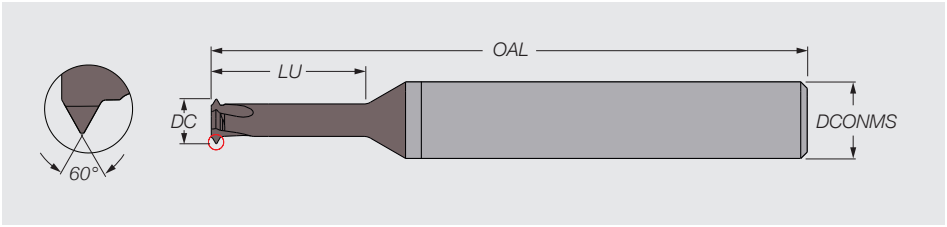
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading Endmill

MTECI (METRIC) — Internal

Solid Threadmill





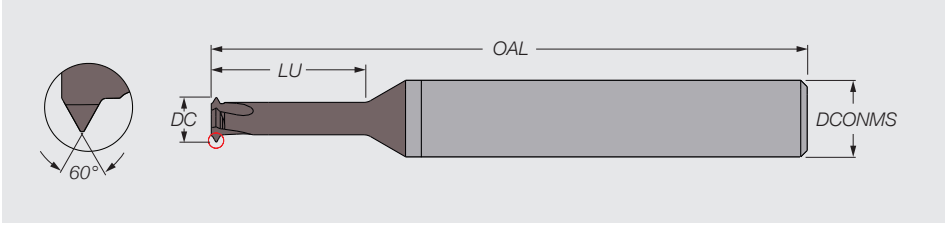
Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	AC22
0.50	M3.0	M3.5, M4.0	MTECI 03024C10 0.5ISO	MTECI03024C1005ISO	3.00	2.37	39.00	3	10.60	•
0.40	M2.0		MTECI 03016C7 0.4ISO	MTECI03016C704ISO	3.00	1.55	39.00	3	7.10	•
0.35	M1.6	M2, M2.2	MTECI 03012C6 0.35ISO	MTECI03012C6035ISO	3.00	1.20	39.00	3	5.70	•
0.30	M1.4		MTECI 03011C5 0.3ISO	MTECI03011C503ISO	3.00	1.05	39.00	3	5.00	•
0.25	M1.2	M1.4	MTECI 03009C4 0.25ISO	MTECI03009C4025ISO	3.00	0.90	39.00	3	4.30	•
0.25	M1		MTECI 03007C3 0.25ISO	MTECI03007C3025ISO	3.00	0.72	39.00	3	3.60	•

UN Threading Endmill

MTECI (METRIC) — Internal

Solid Threadmill





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	AC22
56	2	3	MTECI 03016C9 56UN	MTECI03016C956UN	0.017	3.00	17.00	39.00	3	8.9	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

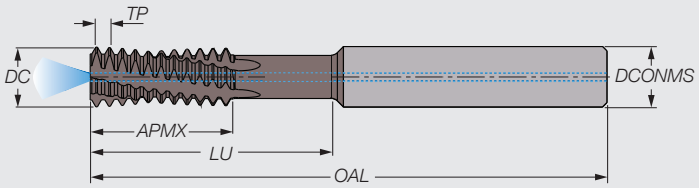
ISO Threading Endmill

MTECQ (METRIC)

Internal

Solid Threadmill with Coolant Hole





Pitch (TP)	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	APMX	AC22
3.50	M26	MTECQ 2020D45 3.5ISO	MTECQ2020D4535ISO	20.00	20.00	105.00	4	45.50	28.00	•
2.00	M16	MTECQ 1212D42 2.0ISO	MTECQ1212D4220ISO	12.00	12.00	84.00	4	42.00	24.00	•
2.00	M24	MTECQ 2020F56 2.0ISO	MTECQ2020F5620ISO	20.00	20.00	105.00	6	56.00	34.00	•
1.50	M13	MTECQ 1010D30 1.5ISO	MTECQ1010D3015ISO	10.00	10.00	73.00	4	30.00	18.00	•
1.50	M23	MTECQ 2020F60 1.5ISO	MTECQ2020F6015ISO	20.00	20.00	105.00	6	60.00	36.00	•
1.00	M12	MTECQ 1010D32 1.0ISO	MTECQ1010D3210ISO	10.00	10.00	73.00	4	32.00	18.00	•
1.00	M14	MTECQ 1212D38 1.0ISO	MTECQ1212D3810ISO	12.00	12.00	84.00	4	38.00	21.00	•

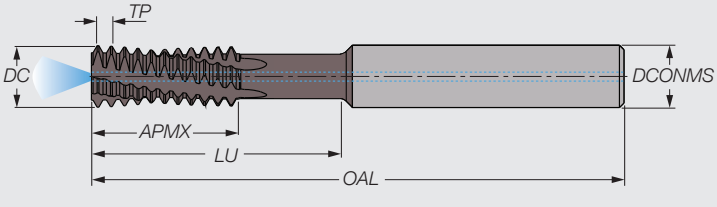
UN Threading Endmill

MTECQ (METRIC)

Internal

Solid Threadmill with Coolant Holes





TPI	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	APMX	AC22
20	M12	MTECQ 1010D30 20UN	MTECQ 1010D3020UN	1.270	10.00	10.00	73.00	4	30.50	17.80	•
20	M18	MTECQ 1616F43 20UN	MTECQ1616F4320UN	1.270	16.00	16.00	105.00	6	43.20	25.40	•
16	M19	MTECQ 1616E42 16UN	MTECQ1616E4216UN	1.587	16.00	16.00	105.00	5	42.90	25.40	•
12	M16	MTECQ 1212D42 12UN	MTECQ1212D4212UN	2.116	12.00	12.00	84.00	4	42.30	25.40	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

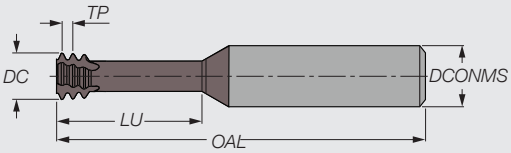
ISO Threading Endmill

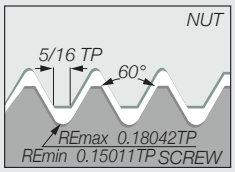
MTECS

Internal

Solid Threadmill - Small Diameter







Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	AC22
2.50	M20		MTECS 0625E16 2.5ISO	MTECS0625E1625ISO	0.625	0.591	4.00	5	1.690	•
2.00	M16	M18, M20	MTECS 0500D13 2.00ISO	MTECS0500D13200ISO	0.500	0.465	3.00	4	1.380	•
1.75	M12		MTECS 0375C10 1.75ISO	MTECS0375C10175ISO	0.375	0.354	3.00	3	1.020	•
1.50	M10	M14, M16	MTECS 0312C91 1.5ISO	MTECS0312C9115ISO	0.312	0.307	2.50	3	0.910	•
1.25	M8	M10, M12	MTECS 0250C71 1.25ISO	MTECS0250C71125ISO	0.250	0.234	2.50	3	0.710	•
1.25	M8	M10, M12	MTECS 0250C94 1.25ISO	MTECS0250C94125ISO	0.250	0.234	2.50	3	0.940	•
1.00	M6	M8	MTECS 0250C55 1.0ISO	MTECS0250C5510ISO	0.250	0.183	2.50	3	0.550	•
1.00	M6	M8	MTECS 0250C79 1.0ISO	MTECS0250C7910ISO	0.250	0.183	2.50	3	0.790	•
0.80	M5		MTECS 0250C49 0.8ISO	MTECS0250C4908ISO	0.250	0.150	2.50	3	0.490	•
0.80	M5		MTECS 0250C63 0.8ISO	MTECS0250C6308ISO	0.250	0.150	2.50	3	0.630	•
0.70	M4		MTECS 0250C35 0.7ISO	MTECS0250C3507ISO	0.250	0.122	2.50	3	0.350	•
0.70	M4		MTECS 0250C49 0.7ISO	MTECS0250C4907ISO	0.250	0.122	2.50	3	0.490	•
0.60	M3.5		MTECS 0250C30 0.6ISO	MTECS0250C3006ISO	0.250	0.108	2.50	3	0.300	•
0.50	M3		MTECS 0250C26 0.5ISO	MTECS0250C2605ISO	0.250	0.093	2.50	3	0.260	•
0.50	M3		MTECS 0250C37 0.5ISO	MTECS0250C3705ISO	0.250	0.093	2.50	3	0.370	•
0.45	M2.5		MTECS 0250C22 0.45ISO	MTECS0250C22045ISO	0.250	0.077	2.50	3	0.220	•
0.45	M2.2		MTECS 0250C20 0.45ISO	MTECS0250C20045ISO	0.250	0.065	2.50	3	0.200	•
0.45	M2.5		MTECS 0250C30 0.45ISO	MTECS0250C30045ISO	0.250	0.077	2.50	3	0.300	•
0.40	M2		MTECS 0250C18 0.4ISO	MTECS0250C1804ISO	0.250	0.061	2.50	3	0.180	•

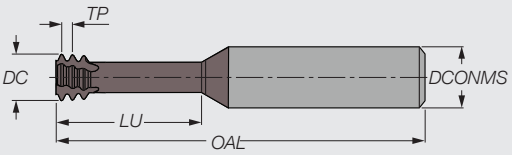
ISO Threading Endmill

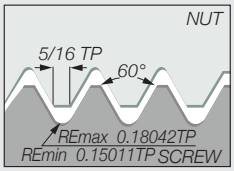
MTECS (METRIC)

Internal

Solid Threadmill - Small Diameter







Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	AC22
2.50	M20		MTECS 1615E43 2.5ISO	MTECS1615E4325ISO	16.00	15.00	100.00	5	43.00	•
2.00	M16		MTECS 12118D35 2.0ISO	MTECS12118D3520ISO	12.00	11.80	84.00	4	35.00	•
2.00	M16		MTECS 12118D50 2.0ISO	MTECS12118D5020ISO	12.00	11.80	100.00	4	50.00	•
1.75	M12		MTECS 1009C26 1.75ISO	MTECS1009C26175ISO	10.00	9.00	73.00	3	26.00	•
1.75	M12		MTECS 1009C37 1.75ISO	MTECS1009C37175ISO	10.00	9.00	73.00	3	37.80	•
1.50	M10	M14, M16	MTECS 08078C23 1.5ISO	MTECS08078C2315ISO	8.00	7.80	64.00	3	23.00	•
1.50	M10	M14, M16	MTECS 08078C31 1.5ISO	MTECS08078C3115ISO	8.00	7.80	64.00	3	31.50	•
1.25	M8	M10, M12	MTECS 0606C18 1.25ISO	MTECS0606C18125ISO	6.00	6.00	58.00	3	18.00	•
1.25	M8	M10, M12	MTECS 0606C24 1.25ISO	MTECS0606C24125ISO	6.00	6.00	58.00	3	24.00	•
1.25	M8	M10, M12	MTECS 0606C24 1.25ISO-L	MTECS0606C24125ISOL	6.00	6.00	100.00	3	24.60	•
1.00	M6	M8	MTECS 06047C14 1.0ISO	MTECS06047C1410ISO	6.00	4.65	58.00	3	14.00	•
1.00	M6	M8	MTECS 06047C20 1.0ISO	MTECS06047C2010ISO	6.00	4.65	58.00	3	20.00	•
1.00	M6	M8	MTECS 06047C20 1.0ISO-L	MTECS06047C2010ISOL	6.00	4.65	100.00	3	20.00	•
1.00	M6	M8	MTECS 06048C25 1.0ISO	MTECS06048C2510ISO	6.00	4.80	58.00	3	25.00	•
0.80	M5		MTECS 06038C12 0.8ISO	MTECS06038C1208ISO	6.00	3.80	58.00	3	12.50	•
0.80	M5		MTECS 06038C16 0.8ISO	MTECS06038C1608ISO	6.00	3.80	58.00	3	16.00	•
0.80	M5		MTECS 06038C16 0.8ISO-L	MTECS06038C1608ISOL	6.00	3.80	100.00	3	16.00	•
0.80	M5		MTECS 0604C20 0.8ISO	MTECS0604C2008ISOA	6.00	4.00	58.00	3	20.80	•
0.75		M10, M12	MTECS 0808D25 0.75ISO	MTECS0808D25075ISO	8.00	8.00	64.00	4	25.00	•
0.70	M4		MTECS 06031C9 0.7ISO	MTECS06031C907ISO	6.00	3.10	58.00	3	9.00	•
0.70	M4		MTECS 06031C12 0.7ISO	MTECS06031C1207ISO	6.00	3.10	58.00	3	12.50	•
0.70	M4		MTECS 06031C12 0.7ISO-L	MTECS06031C1207ISOL	6.00	3.10	100.00	3	12.50	•
0.70	M4		MTECS 06031C16 0.7ISO	MTECS06031C1607ISO	6.00	3.10	58.00	3	16.70	•
0.60	M3.5		MTECS 06028C7 0.6ISO	MTECS06028C706ISO	6.00	2.75	58.00	3	7.50	•
0.60	M3.5		MTECS 06028C10 0.6ISO	MTECS06028C1006ISO	6.00	2.75	58.00	3	10.50	•
0.50	M3		MTECS 03024C12 0.5ISO	MTECS03024C1205ISO	3.00	2.40	39.00	3	12.50	•
0.50	M3		MTECS 03024C15 0.5ISO	MTECS03024C1505ISO	3.00	2.40	39.00	3	15.50	•
0.50	M3		MTECS 06024C6 0.5ISO	MTECS06024C605ISO	6.00	2.47	58.00	3	6.50	•
0.50	M3		MTECS 06024C9 0.5ISO	MTECS06024C905ISO	6.00	2.37	58.00	3	9.50	•
0.50	M3		MTECS 06024C9 0.5ISO-L	MTECS06024C905ISOL	6.00	2.37	100.00	3	9.50	•
0.50	M3		MTECS 06054D20 0.5ISO	MTECS06054D2005ISO	6.00	5.35	58.00	4	20.00	•
0.45	M2.2		MTECS 03017C7 0.45ISO	MTECS03017C7045ISO	3.00	1.65	39.00	3	7.00	•
0.45	M2.2		MTECS 06017C5 0.45ISO	MTECS06017C5045ISO	6.00	1.65	58.00	3	5.00	•
0.45	M2.5		MTECS 0602C5 0.45ISO	MTECS0602C5045ISO	6.00	1.95	58.00	3	5.50	•
0.45	M2.5		MTECS 0602C5 0.45ISO-L	MTECS0602C5045ISOL	6.00	1.95	100.00	3	5.50	•
0.45	M2.5		MTECS 0602C7 0.45ISO	MTECS0602C7045ISO	6.00	1.95	58.00	3	7.50	•
0.40	M2		MTECS 03016C6 0.4ISO	MTECS03016C604ISO	3.00	1.53	39.00	3	6.00	•
0.40	M2		MTECS 06016C4 0.4ISO	MTECS06016C404ISO	6.00	1.53	58.00	3	4.50	•
0.35	M1.6	M2	MTECS 03012C5 0.35ISO	MTECS03012C5035ISO	3.00	1.20	39.00	3	4.80	•
0.30	M1.4		MTECS 03011C4 0.3ISO	MTECS03011C403ISO	3.00	1.05	39.00	3	4.00	•
0.25	M1		MTECS 03007C2 0.25ISO	MTECS03007C2025ISO	3.00	0.72	39.00	3	2.50	•
0.25	M1.2	M1.4	MTECS 03009C3 0.25ISO	MTECS03009C3025ISO	3.00	0.90	39.00	3	3.00	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

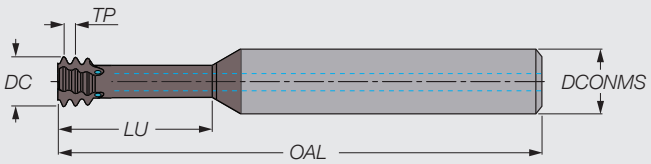
MJ Threading Endmill

MTECS (METRIC)

Internal

Solid Threadmill - Small Diameter





Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	AC22
2.00	MJ14	MJ16	MTECS 1010C35 2.0MJ	MTECS1010C3520MJ	10.00	10.00	73.00	3	35.00	•
1.75	MJ12		MTECS 10092C30 1.75MJ	MTECS10092C30175MJ	10.00	9.20	73.00	3	30.00	•
1.50	MJ10		MTECS 0808C25 1.5MJ	MTECS0808C2515MJ	8.00	8.00	64.00	3	25.00	•
1.25	MJ8		MTECS 08061C20 1.25MJ	MTECS08061C20125MJ	8.00	6.10	64.00	3	20.00	•
1.00	MJ6		MTECS 06048C15 1.0MJ	MTECS06048C1510MJ	6.00	4.80	58.00	3	15.00	•
0.80	MJ5		MTECS 06039C12 0.8MJ	MTECS06039C1208MJ	6.00	3.90	58.00	3	12.50	•
0.70	MJ4		MTECS 06032C10 0.7MJ	MTECS06032C1007MJ	6.00	3.20	58.00	3	10.00	•

MTTHREAD
The Zenith of precision machining!

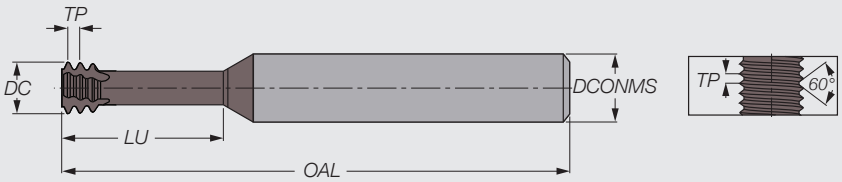
UN Threading Endmill

MTECS

Internal

Solid Threadmill - Small Diameter





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	AC22
80		0	MTECS 0250C16 80UN	MTECS0250C1680UN	0.012	0.250	0.045	2.50	3	0.16	•
72		1	MTECS 0250C15 72UN	MTECS0250C1572UN	0.013	0.250	0.057	2.50	3	0.15	•
64	1	2	MTECS 0250C15 64UN	MTECS0250C1564UN	0.015	0.250	0.055	2.50	3	0.15	•
56	2	3	MTECS 0250C17 56UN	MTECS0250C1756UN	0.017	0.250	0.065	2.50	3	0.17	•
56	2	3	MTECS 0250C26 56UN	MTECS0250C2656UN	0.017	0.250	0.065	2.50	3	0.26	•
48	3	4	MTECS 0250C20 48UN	MTECS0250C2048UN	0.020	0.250	0.075	2.50	3	0.20	•
40	4		MTECS 0250C25 40UN	MTECS0250C2540UN	0.025	0.250	0.083	2.50	3	0.25	•
40	4		MTECS 0250C28 40UN	MTECS0250C2840UN	0.025	0.250	0.096	2.50	3	0.28	•
40	4		MTECS 0250C31 40UN	MTECS0250C3140UN	0.025	0.250	0.830	2.50	3	0.31	•
40	4		MTECS 0250C38 40UN	MTECS0250C3840UN	0.025	0.250	0.096	2.50	3	0.38	•
36		8	MTECS 0250C35 36UN	MTECS0250C3536UN	0.027	0.250	0.130	2.50	3	0.35	•
32	6		MTECS 0250C28 32UN	MTECS0250C2832UN	0.031	0.250	0.100	2.50	3	0.28	•
32	6		MTECS 0250C37 32UN	MTECS0250C3732UN	0.031	0.250	0.126	2.50	3	0.37	•
32	6		MTECS 0250C40 32UN	MTECS0250C4032UN	0.031	0.250	0.100	2.50	3	0.41	•
32	6		MTECS 0250C41 32UN	MTECS0250C4132UN	0.031	0.250	0.146	2.50	3	0.41	•
32	6		MTECS 0250C49 32UN	MTECS0250C4932UN	0.031	0.250	0.126	2.50	3	0.49	•
32	6		MTECS 0250C59 32UN	MTECS0250C5932UN	0.031	0.250	0.146	2.50	3	0.59	•
28		12	MTECS 0250C43 28UN	MTECS0250C4328UN	0.035	0.250	0.165	2.50	3	0.43	•
28		12	MTECS 0250C57 28UN	MTECS0250C5728UN	0.035	0.250	0.197	2.50	3	0.57	•
28		12	MTECS 0250C75 28UN	MTECS0250C7528UN	0.035	0.250	0.197	2.50	3	0.75	•
24	10, 12		MTECS 0250C42 24UN	MTECS0250C4224UN	0.041	0.250	0.138	2.50	3	0.42	•
24		5/16, 3/8	MTECS 0312C67 24UN	MTECS0312C6724UN	0.041	0.312	0.260	2.50	3	0.67	•
24		5/16, 3/8	MTECS 0312C94 24UN	MTECS0312C9424UN	0.041	0.312	0.260	2.50	3	0.94	•
20	1/4		MTECS 0250C55 20UN	MTECS0250C5520UN	0.050	0.250	0.187	2.50	3	0.55	•
20	1/4		MTECS 0250C75 20UN	MTECS0250C7520UN	0.050	0.250	0.187	2.50	3	0.75	•
20		7/16	MTECS 0312C98 20UN	MTECS0312C9820UN	0.050	0.312	0.312	2.50	3	0.98	•
18	5/16		MTECS 0250C67 18UN	MTECS0250C6718UN	0.055	0.250	0.236	2.50	3	0.67	•
18	5/16		MTECS 0250C91 18UN	MTECS0250C9118UN	0.055	0.250	0.236	2.50	3	0.910	•
18		5/8	MTECS 0500D14 18UN	MTECS0500D1418UN	0.055	0.500	0.500	2.50	4	1.38	•
16	3/8		MTECS 0312C87 16UN	MTECS0312C8716UN	0.062	0.312	0.264	2.50	3	0.87	•
14	7/16		MTECS 0312C98 14UN	MTECS0312C9814UN	0.071	0.312	0.303	2.50	3	0.98	•
13	1/2		MTECS 0375C10 13UN	MTECS0375C1013UN	0.076	0.375	0.362	3.00	3	1.08	•
12	9/16		MTECS 0500C12 12UN	MTECS0500C1212UN	0.083	0.500	0.413	3.00	3	1.24	•
11	5/8		MTECS 0500C13 11UN	MTECS0500C1311UN	0.090	0.500	0.449	3.00	3	1.36	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

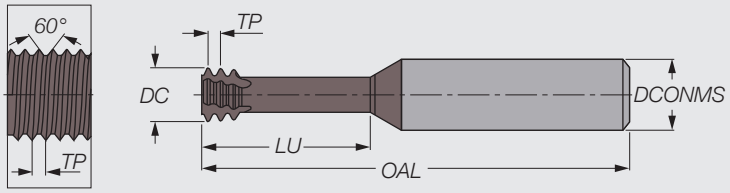
UN Threading Endmill

MTECS (METRIC) cont. on next page

Internal

Solid Threadmill - Small Diameter





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	AC22
80		0	MTECS 03012C8 80UN	MTECS03012C880UN	0.317	3.00	1.15	39.00	3	8.0	•
72		1	MTECS 03015C6 72UN	MTECS03015C672UN	0.352	3.00	1.45	39.00	3	6.0	•
56	2	3	MTECS 03016C11 56UN	MTECS03016C1156UN	0.453	3.00	1.65	39.00	3	11.4	•
56	2	3	MTECS 03016C6 56UN	MTECS03016C656UN	0.453	3.00	1.65	39.00	3	6.6	•
56	2	3	MTECS 03016C9 56UN	MTECS03016C9 56UN	0.453	3.00	1.65	39.00	3	9.2	•
56	2	3	MTECS 06016C4 56UN	MTECS06016C456UN	0.453	6.00	1.65	58.00	3	4.4	•
56	2	3	MTECS 06016C6 56UN	MTECS06016C656UN	0.453	6.00	1.65	58.00	3	6.6	•
56	2	3	MTECS 06016C6 56UN-L	MTECS06016C656UN-L	0.453	6.00	1.65	100.00	3	6.6	•
48	3	4	MTECS 06019C5 48UN	MTECS06019C548UN	0.529	6.00	1.90	58.00	3	5.2	•
40	4		MTECS 03021C12 40UN	MTECS03021C1240UN	0.635	3.00	2.10	39.00	3	12.0	•
40	4		MTECS 03021C8 40UN	MTECS03021C840UN	0.635	3.00	2.10	39.00	3	8.0	•
40	4		MTECS 06021C6 40UN	MTECS06021C640UN	0.635	6.00	2.10	58.00	3	6.3	•
40	4		MTECS 06021C6 40UN-L	MTECS06021C640UN-L	0.635	6.00	2.10	100.00	3	6.3	•
40	4		MTECS 06021C8 40UN	MTECS06021C840UN	0.635	6.00	2.10	58.00	3	8.0	•
40	4		MTECS 06021C8 40UN-L	MTECS06021C840UNL	0.635	6.00	2.10	100.00	3	8.0	•
40			MTECS 06024C9 40UN	MTECS06024C940UN	0.635	6.00	2.45	58.00	3	9.6	•
36		8	MTECS 06033C9 36UN	MTECS06033C936UN	0.705	6.00	3.30	58.00	3	9.0	•
32	6		MTECS 03025C14 32UN	MTECS03025C1432UN	0.793	3.00	2.55	39.00	3	14.8	•
32	6		MTECS 06025C10 32UN	MTECS06025C1032UN	0.793	6.00	2.55	58.00	3	10.5	•
32	6		MTECS 06025C10 32UN-L	MTECS06025C1032UNL	0.793	6.00	2.55	100.00	3	10.5	•
32	6		MTECS 06025C7 32UN	MTECS06025C732UN	0.793	6.00	2.55	58.00	3	7.1	•
32	8	10	MTECS 06032C12 32UN	MTECS06032C1232UN	0.793	6.00	3.20	58.00	3	12.5	•
32	8	10	MTECS 06032C9 32UN	MTECS06032C932UN	0.793	6.00	3.20	58.00	3	9.5	•
32		10	MTECS 06037C10 32UN	MTECS06037C1032UN	0.793	6.00	3.70	58.00	3	10.5	•
32		10	MTECS 06037C15 32UN	MTECS06037C1532UN	0.793	6.00	3.70	58.00	3	15.0	•
32		10	MTECS 06037C15 32UN-L	MTECS06037C1532UNL	0.793	6.00	3.70	101.00	3	15.0	•
28		12	MTECS 06042C11 28UN	MTECS06042C1128UN	0.907	6.00	4.20	58.00	3	11.0	•
28		1/4	MTECS 0605C14 28UN	MTECS0605C1428UN	0.907	6.00	5.00	58.00	3	14.5	•
28		1/4	MTECS 0605C19 28UN	MTECS0605C1928UN	0.907	6.00	5.00	58.00	3	19.0	•
24	10, 12		MTECS 06035C10 24UN	MTECS06035C1024UN	1.058	6.00	3.50	58.00	3	10.6	•
24	10, 12		MTECS 06035C15 24UN	MTECS06035C1524UN	1.058	6.00	3.50	58.00	3	15.5	•
24		5/16	MTECS 08066C17 24UN	MTECS08066C1724UN	1.058	8.00	6.60	64.00	3	17.0	•
24		5/16	MTECS 08066C24 24UN	MTECS08066C2424UN	1.058	8.00	6.60	64.00	3	24.0	•
20	1/4		MTECS 06047C14 20UN	MTECS06047C1420UN	1.270	6.00	4.75	58.00	3	14.0	•
20	1/4		MTECS 06047C19 20UN	MTECS06047C1920UN	1.270	6.00	4.75	58.00	3	19.0	•
20	1/4		MTECS 06047C19 20UN-L	MTECS06047C1920UNL	1.270	6.00	4.75	100.00	3	19.0	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

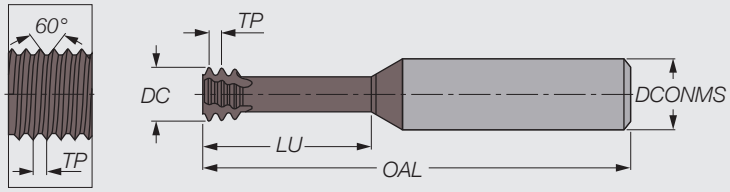
UN Threading Endmill

MTECS (METRIC) cont. from previous page

Internal

Solid Threadmill - Small Diameter





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	AC22
20		7/16	MTECS 0808C25 20UN	MTECS0808C2520UN	1.270	8.00	8.00	64.00	3	25.0	•
20		7/16	MTECS 0808C34 20UN	MTECS0808C3420UN	1.270	8.00	8.00	64.00	3	34.6	•
18	5/16		MTECS 0606C17 18UN	MTECS0606C1718UN	1.411	6.00	6.00	58.00	3	17.0	•
18	5/16		MTECS 0606C23 18UN	MTECS0606C2318UN	1.411	6.00	6.00	58.00	3	23.0	•
18		5/8	MTECS 1212D35 18UN	MTECS1212D3518UN	1.411	12.00	12.00	84.00	4	35.0	•
16	3/8		MTECS 08067C22 16UN	MTECS08067C2216UN	1.587	8.00	6.70	64.00	3	22.0	•
16	3/8		MTECS 08067C30 16UN	MTECS08067C3016UN	1.587	8.00	6.70	64.00	3	30.2	•
14	7/16		MTECS 08077C25 14UN	MTECS08077C2514UN	1.814	8.00	7.70	64.00	3	25.0	•
14	7/16		MTECS 08077C35 14UN	MTECS08077C3514UN	1.814	8.00	7.70	64.00	3	35.2	•
13	1/2		MTECS 10092C27 13UN	MTECS10092C2713UN	1.953	10.00	9.20	73.00	3	27.5	•
11	5/8		MTECS 12114C34 11UN	MTECS12114C3411UN	2.309	12.00	11.40	84.00	3	34.5	•
11	5/8		MTECS 12114C50 11UN	MTECS12114C5011UN	2.309	12.00	11.40	101.00	3	50.0	•
10	3/4		MTECS 16144D41 10UN	MTECS16144D4110UN	2.540	16.00	14.40	105.00	4	41.5	•

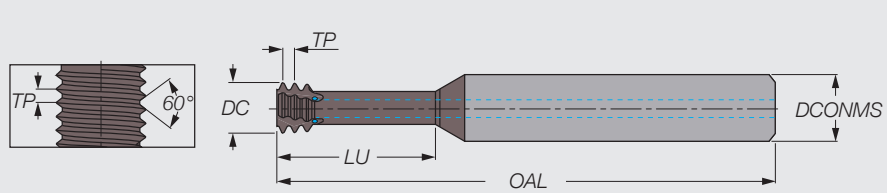
UNJ Threading Endmill

MTECS (METRIC)

Internal

Solid Threadmill - Small Diameter





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	AC22
32	8	10	MTECS 06033C10 32UNJ	MTECS06033C1032UNJ	0.793	6.00	3.30	58.00	3	10.5	•
28		1/4	MTECS 08051C16 28UNJ	MTECS08051C1628UNJ	0.907	8.00	5.10	64.00	3	16.0	•
24		5/16, 3/8	MTECS 08067C20 24UNJ	MTECS08067C2024UNJ	1.058	8.00	6.70	64.00	3	20.0	•
20	1/4		MTECS 06049C16 20UNJ	MTECS06049C1620UNJ	1.270	6.00	4.90	58.00	3	16.0	•
20		7/16	MTECS 0808C28 20UNJ	MTECS0808C2820UNJ	1.270	8.00	8.00	64.00	3	28.0	•
18	5/16		MTECS 08061C20 18UNJ	MTECS08061C2018UNJ	1.411	8.00	6.15	64.00	3	20.0	•
16	3/8		MTECS 08069C24 16UNJ	MTECS08069C2416UNJ	1.587	8.00	6.90	64.00	3	24.0	•
13	1/2		MTECS 10094C27 13UNJ	MTECS10094C2713UNJ	1.953	10.00	9.40	73.00	3	27.5	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

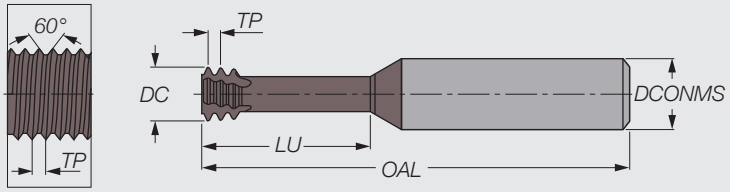
Whitworth Threading Endmill

MTECS (METRIC)

Internal/External

Solid Threadmill





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	AC22
28	G1/8	MTECS 08078C19 28W	MTECS08078C1928W	0.907	8.0	7.8	64.00	3	19.5	•
19	G 1/4-3/8	MTECS 1010D30 19W	MTECS1010D3019W	1.336	10.0	10.0	73.00	4	30.0	•
14	G 1/2-7/8	MTECS 1212D37 14W	MTECS1212D3714W	1.814	12.0	12.0	84.00	4	37.0	•
11	G ≥1	MTECS 1616D44 11W	MTECS1616D4411W	2.309	16.0	16.0	105.00	4	44.0	•

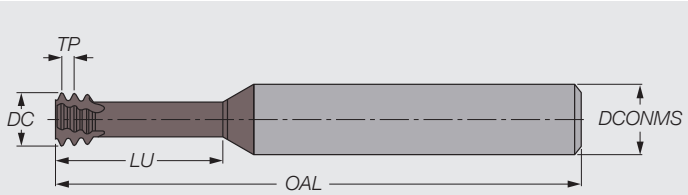
ISO Threading Endmill

MTECSH

Internal

Solid Threadmill - Small Diameter (Left Hand Cut)





Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	ZA212
1.75	M12		MTECSH 0375C10 1.75ISO	MTECSH0375C10175ISO	0.375	0.354	3.00	3	1.020	•
1.50	M10	M14, M16	MTECSH 0312C91 1.50ISO	MTECSH0312C9115ISO	0.312	0.305	2.50	3	0.910	•
1.25	M8	M10, M12	MTECSH 0250C71 1.25ISO	MTECSH0250C711250ISO	0.250	0.234	2.50	3	0.710	•
1.25	M8	M10, M12	MTECSH 0250C94 1.25ISO	MTECSH0250C94125ISO	0.250	0.234	2.50	3	0.969	•
1.00	M6	M8	MTECSH 0250C55 1.0ISO	MTECSH0250C5510ISO	0.250	0.183	2.50	3	0.550	•
1.00	M6	M8	MTECSH 0250C79 1.0ISO	MTECSH0250C7910ISO	0.250	0.183	2.50	3	0.811	•
0.80	M4		MTECSH 0250C49 0.8ISO	MTECSH0250C4908ISO	0.250	0.149	2.50	3	0.490	•
0.70	M4		MTECSH 0250C35 0.7ISO	MTECSH0250C3507ISO	0.250	0.122	2.50	3	0.350	•
0.70	M4		MTECSH 0250C49 0.7ISO	MTECSH0250C4907ISO	0.250	0.122	2.50	3	0.490	•
0.50	M3	M4, M5	MTECSH 0250C26 0.5ISO	MTECSH0250C2605ISO	0.250	0.093	2.50	3	0.260	•
0.50	M3	M4, M5	MTECSH 0250C37 0.50ISO	MTECSH0250C3705ISO	0.250	0.093	2.50	3	0.370	•

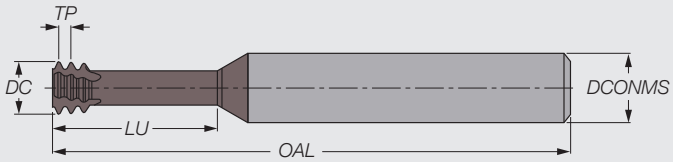
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading Endmill

MTECSH (METRIC) — Internal

Solid Threadmill - Small Diameter (Left Hand Cut)





Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	LU	ZA212
2.00	M16	M18, M20	MTECSH 12118D35 2.0ISO	MTECSH12118D3520ISO	12.00	11.80	84.00	4	35.0	•
1.75	M12		MTECSH 1009C26 1.75ISO	MTECSH1009C26175ISO	10.00	9.00	73.00	3	26.0	•
1.50	M10	M14, M16	MTECSH 08078C23 1.5ISO	MTECSH08078C2315ISO	8.00	7.80	64.00	3	23.0	•
1.25	M8		MTECSH 0606C18 1.25ISO	MTECSH0606C18125ISO	6.00	5.95	58.00	3	18.0	•
1.25	M8		MTECSH 0606C24 1.25ISO	MTECSH0606C24125ISO	6.00	5.95	58.00	3	24.0	•
1.00	M6		MTECSH 06047C14 1.0ISO	MTECSH06047C1410ISO	6.00	4.65	58.00	3	14.0	•
1.00	M6		MTECSH 06047C20 1.0ISO	MTECSH06047C2010ISO	6.00	4.65	58.00	3	20.0	•
0.80	M5		MTECSH 06038C12 0.8ISO	MTECSH06038C1208ISO	6.0	3.80	58.00	3	12.5	•
0.80	M5		MTECSH 06038C16 0.8ISO	MTECSH06038C1608ISO	6.0	3.80	58.00	3	16.0	•
0.70	M4		MTECSH 06031C12 0.7ISO	MTECSH06031C1207ISO	6.0	3.10	58.00	3	12.5	•
0.70	M4		MTECSH 06031C9 0.7ISO	MTECSH06031C907ISO	6.0	3.10	58.00	3	9.0	•
0.60	M3.5		MTECSH 06028C7 0.6ISO	MTECSH06028C706ISO	6.0	2.75	58.00	3	7.5	•
0.60	M3.5		MTECSH 06028C10 0.6ISO	MTECSH06028C1006ISO	6.0	2.75	58.00	3	10.0	•
0.50	M3	M4, M5	MTECSH 06024C6 0.5ISO	MTECSH06024C605ISO	6.0	2.35	58.00	3	6.5	•
0.50	M3	M4, M5	MTECSH 06024C9 0.5ISO	MTECSH06024C905ISO	6.0	2.35	58.00	3	9.5	•
0.45	M2.2		MTECSH 06017C5 0.45ISO	MTECSH06017C5045ISO	6.0	1.65	58.00	3	5.0	•
0.45	M2.5		MTECSH 0602C5 0.45ISO	MTECSH0602C5045ISO	6.0	1.95	58.00	3	5.5	•
0.45	M2.5		MTECSH 0602C7 0.45ISO	MTECSH0602C7045ISO	6.0	1.95	58.00	3	7.5	•
0.40	M2		MTECSH 03016C6 0.4ISO	MTECSH03016C604ISO	3.0	1.55	39.00	3	6.0	•
0.40	M2		MTECSH 06016C4 0.4ISO	MTECSH06016C404ISO	6.0	1.55	58.00	3	4.5	•
0.35	M1.6	M2	MTECSH 03012C5 0.35ISO	MTECSH03012C5035ISO	3.0	1.20	39.00	3	4.8	•
0.30	M1.4		MTECSH 03011C4 0.3ISO	MTECSH03011C403ISO	3.0	1.05	39.00	3	4.0	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

UN Threading Endmill

MTECSH

Internal

Solid Threadmill - Small Diameter (Left Hand Cut)





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	ZA212
80		0	MTECSH 0250C16 80UN	MTECSH0250C1680UN	0.012	0.250	0.450	2.50	3	0.157	•
72		1	MTECSH 0250C15 72UN	MTECSH0250C1572UN	0.013	0.250	0.057	2.50	3	0.150	•
56	2	3	MTECSH 0250C17 56UN	MTECSH0250C1756UN	0.017	0.250	0.065	2.50	3	0.170	•
56	2	3	MTECSH 0250C26 56UN	MTECSH0250C2656UN	0.017	0.250	0.065	2.50	3	0.260	•
48	3	4	MTECSH 0250C20 48UN	MTECSH0250C2048UN	0.020	0.250	0.075	2.50	3	0.200	•
40	4		MTECSH 0250C25 40UN	MTECSH0250C2540UN	0.025	0.250	0.083	2.50	3	0.250	•
40	4		MTECSH 0250C31 40UN	MTECSH0250C3140UN	0.025	0.250	0.083	2.50	3	0.310	•
36		8	MTECSH 0250C35 36UN	MTECSH0250C3536UN	0.027	0.250	0.130	2.50	3	0.350	•
32	6		MTECSH 0250C28 32UN	MTECSH0250C2832UN	0.031	0.250	0.100	2.50	3	0.280	•
32	8		MTECSH 0250C37 32UN	MTECSH0250C3732UN	0.031	0.250	0.126	2.50	3	0.370	•
32	6		MTECSH 0250C40 32UN	MTECSH0250C4032UN	0.031	0.250	0.100	2.50	3	0.400	•
32		10	MTECSH 0250C41 32UN	MTECSH0250C4132UN	0.031	0.250	0.146	2.50	3	0.410	•
32	8		MTECSH 0250C49 32UN	MTECSH0250C4932UN	0.031	0.250	0.126	2.50	3	0.490	•
32		10	MTECSH 0250C59 32UN	MTECSH0250C5932UN	0.031	0.250	0.146	2.50	3	0.590	•
28		1/4	MTECSH 0250C57 28UN	MTECSH0250C5728UN	0.035	0.250	0.197	2.50	3	0.570	•
28		1/4	MTECSH 0250C75 28UN	MTECSH0250C7528UN	0.035	0.250	0.197	2.50	3	0.750	•
24	10, 12		MTECSH 0250C42 24UN	MTECSH0250C4224UN	0.041	0.250	0.138	2.50	3	0.420	•
24		5/16, 3/8	MTECSH 0312C67 24UN	MTECSH0312C6724UN	0.041	0.312	0.260	2.50	3	0.670	•
24		5/16, 3/8	MTECSH 0312C94 24UN	MTECSH0312C9424UN	0.041	0.213	0.260	2.50	3	0.940	•
20	1/4		MTECSH 0250C55 20UN	MTECSH0250C5520UN	0.050	0.250	0.187	2.50	3	0.550	•
20	1/4		MTECSH 0250C75 20UN	MTECSH0250C7520UN	0.050	0.250	0.187	2.50	3	0.750	•
18	5/16		MTECSH 0250C67 18UN	MTECSH0250C6718UN	0.055	0.250	0.236	2.50	3	0.670	•
18	5/16		MTECSH 0250C91 18UN	MTECSH0250C9118UN	0.055	0.250	0.236	2.50	3	0.910	•
16	3/8		MTECSH 0312C87 16UN	MTECSH0312C8716UN	0.062	0.312	0.264	2.50	3	0.870	•
14	7/16		MTECSH 0312C98 14UN	MTECSH0312C9814UN	0.071	0.312	0.303	2.50	3	0.980	•
13	1/2		MTECSH 0375C10 13UN	MTECSH0375C1013UN	0.076	0.375	0.362	3.00	3	1.080	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

UN Threading Endmill

MTECSH (METRIC)

Internal

Solid Threadmill - Small Diameter (Left Hand Cut)





TPI	Coarse	Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	LU	ZA212
80		0	MTECSH 06012C4 80UN	MTECSH06012C480UN	0.317	6.00	1.15	58.00	3	4.0	•
72		1	MTECSH 03015C6 72UN	MTECSH03015C672UN	0.352	3.00	1.45	39.00	3	6.0	•
56	2	3	MTECSH 06016C6 56UN	MTECSH06016C656UN	0.453	6.00	1.65	58.00	3	6.6	•
48	3	4	MTECSH 06019C5 48UN	MTECSH06019C548UN	0.529	6.00	1.90	58.00	3	5.2	•
40	4		MTECSH 06021C6 40UN	MTECSH06021C640UN	0.635	6.00	2.10	58.00	3	6.3	•
40	4		MTECSH 06021C8 40UN	MTECSH06021C840UN	0.635	6.00	2.10	58.00	3	8.0	•
40	5	6	MTECSH 06024C7 40UN	MTECSH06024C740UN	0.635	6.00	2.45	58.00	3	7.0	•
40	5	6	MTECSH 06024C9 40UN	MTECSH06024C940UN	0.635	6.00	2.45	58.00	3	9.6	•
32	6		MTECSH 06025C10 32UN	MTECSH06025C1032UN	0.793	6.00	2.55	58.00	3	10.5	•
32	6		MTECSH 06025C7 32UN	MTECSH06025C732UN	0.793	6.00	2.55	58.00	3	7.1	•
32	8		MTECSH 06032C12 32UN	MTECSH06032C1232UN	0.793	6.00	3.20	58.00	3	12.5	•
32	8		MTECSH 06032C9 32UN	MTECSH06032C932UN	0.793	6.00	3.20	58.00	3	9.5	•
32		10	MTECSH 06037C10 32UN	MTECSH06037C1032UN	0.793	6.00	3.70	58.00	3	10.5	•
32		10	MTECSH 06037C15 32UN	MTECSH06037C1532UN	0.793	6.00	3.70	58.00	3	15.0	•
28		12	MTECSH 06042C11 28UN	MTECSH06042C1128UN	0.907	6.00	4.20	58.00	3	11.0	•
28		1/4	MTECSH 0605C14 28UN	MTECSH0605C1428UN	0.907	6.00	5.00	58.00	3	14.5	•
28		1/4	MTECSH 0605C19 28UN	MTECSH0605C1928UN	0.907	6.00	5.00	58.00	3	19.0	•
24	10, 12		MTECSH 06035C10 24UN	MTECSH06035C1024UN	1.058	6.00	3.50	58.00	3	10.6	•
24		5/16	MTECSH 08066C17 24UN	MTECSH08066C1724UN	1.058	8.00	6.60	64.00	3	17.0	•
24		5/16	MTECSH 08066C24 24UN	MTECSH08066C2424UN	1.058	8.00	6.60	64.00	3	24.0	•
20	1/4		MTECSH 06047C14 20UN	MTECSH06047C1420UN	1.270	6.00	4.75	58.00	3	14.0	•
20	1/4		MTECSH 06047C19 20UN	MTECSH06047C1920UN	1.270	6.00	4.75	58.00	3	19.0	•
20		7/16	MTECSH 0808C25 20UN	MTECSH0808C2520UN	1.270	8.00	8.00	64.00	3	25.0	•
18	5/16		MTECSH 0606C17 18UN	MTECSH0606C1718UN	1.411	6.00	6.00	58.00	3	17.0	•
18	5/16		MTECSH 0606C23 18UN	MTECSH0606C2318UN	1.411	6.00	6.00	58.00	3	23.0	•
16	3/8		MTECSH 08067C22 16UN	MTECSH08067C2216UN	1.587	8.00	6.70	64.00	3	22.0	•
14	7/16		MTECSH 08077C25 14UN	MTECSH08077C2514UN	1.814	8.00	7.70	64.00	3	25.0	•
13	1/2		MTECSH 10092C27 13UN	MTECSH10092C2713UN	1.953	10.00	9.20	73.00	3	27.5	•
11	5/8		MTECSH 12114C34 11UN	MTECSH12114C3411UN	2.309	12.00	11.40	84.00	3	34.5	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

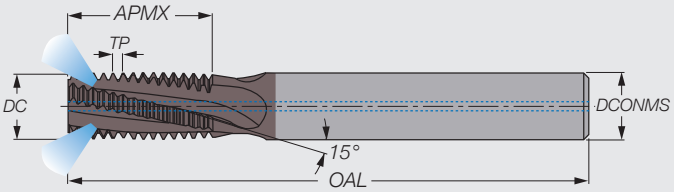
BSPT Threading Endmill

MTECZ (METRIC)

Internal/External

Solid Threadmill with Coolant Holes in Flutes





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
28	RC1/8	MTECZ 08078C14 28BSPT	MTECZ08078C1428BSPT	0.907	8.00	7.80	64.00	3	14.10	•
19	RC1/4, RC3/8	MTECZ 1010D16 19BSPT	MTECZ1010D1619BSPT	1.337	10.00	10.00	73.00	4	16.70	•

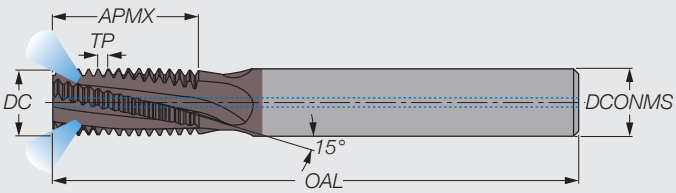
ISO Threading Endmill

MTECZ (METRIC)

Internal

Solid Threadmill with Coolant Holes in Flutes





Pitch (TP)	Coarse	Fine	Description	EDP Code	DCONMS	DC	OAL	NOF	APMX	AC22
2.00	M14	M15	MTECZ 1010C27 2.0ISO	MTECZ1010C2720ISO	10.00	10.00	73.00	3	27.00	•
2.00	M16	M17	MTECZ 12118D27 2.0ISO	MTECZ12118D2720ISO	12.00	11.80	84.00	4	27.00	•
1.75	M12		MTECZ 1009C20 1.75ISO	MTECZ1009C20175ISO	10.00	9.00	73.00	3	20.10	•
1.75	M12		MTECZ 1009C28 1.75ISO	MTECZ1009C28175ISO	10.00	9.00	73.00	3	28.90	•
1.50	M10	M12	MTECZ 08078C17 1.5ISO	MTECZ08078C1715ISO	8.00	7.80	64.00	3	17.00	•
1.50		M14	MTECZ 1010D21 1.5ISO	MTECZ1010D2115ISO	10.00	10.00	73.00	4	21.80	•
1.50		M16	MTECZ 1212D26 1.5ISO	MTECZ1212D2615ISO	12.00	12.00	84.00	4	26.30	•
1.50		M20	MTECZ 1616E33 1.5ISO	MTECZ1616E3315ISO	16.00	16.00	101.00	5	33.80	•
1.25	M8	M10	MTECZ 0606C14 1.25ISO	MTECZ0606C14125ISO	6.00	6.00	58.00	3	14.40	•
1.25	M8	M10	MTECZ 0606C19 1.25ISO	MTECZ0606C19125ISO	6.00	6.00	58.00	3	19.40	•
1.00	M6	M7	MTECZ 06048C10 1.0ISO	MTECZ06048C1010ISO	6.00	4.80	58.00	3	10.50	•
1.00		M9	MTECZ 0606C12 1.0ISO	MTECZ0606C1210ISO	6.00	6.00	58.00	3	12.50	•
1.00		M10	MTECZ 0808D16 1.0ISO	MTECZ0808D1610ISO	8.00	8.00	64.00	4	16.50	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

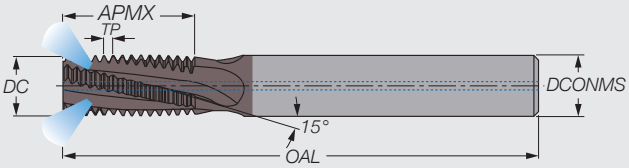
NPT Threading Endmill

MTECZ (METRIC)

Internal/External

Solid Threadmill with Coolant Holes in Flutes





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECZ 08076C10 27NPT	MTECZ08076C1027NPT	0.940	8.00	7.60	64.00	3	10.80	•
18	1/4, 3/8	MTECZ 1010D16 18NPT	MTECZ1010D1618NPT	1.411	10.00	10.00	73.00	4	16.20	•
14	1/2, 3/4	MTECZ 16155D22 14NPT	MTECZ16155D2214NPT	1.814	16.00	15.50	101.00	4	22.70	•

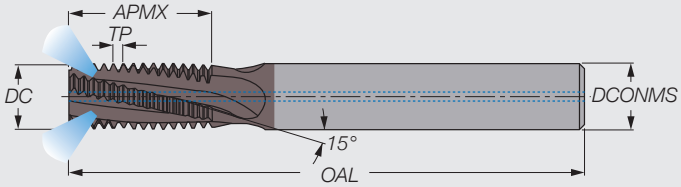
NPTF Threading Endmill

MTECZ (METRIC)

Internal/External

Solid Threadmill with Coolant Holes in Flutes





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
27	1/8	MTECZ 08076C10 27NPTF	MTECZ08076C1027NPTF	0.940	8.00	7.60	64.00	3	10.80	•
18	1/4, 3/8	MTECZ 1010D16 18NPTF	MTECZ1010D1618NPTF	1.411	10.00	10.00	73.00	4	16.20	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

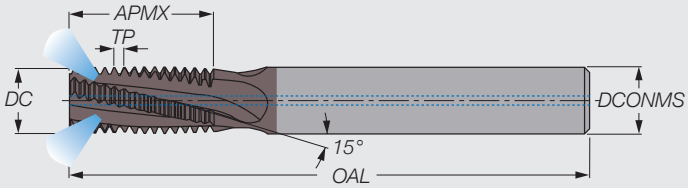
UN Threading Endmill

MTECZ (METRIC)

Internal

Solid Threadmill with Coolant Holes in Flutes





TPI	Coarse	Fine	Extra Fine	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
20		1/2		MTECZ 1010D22 20UN	MTECZ1010D2220UN	1.270	10.00	10.00	73.00	4	22.30	•
20			3/4-1	MTECZ 1212E27 20UN	MTECZ1212E2720UN	1.270	12.00	12.00	84.00	5	27.30	•
18		9/16-5/8	1 1/8-1 5/8	MTECZ 12113D26 18UN	MTECZ12113D2618UN	1.411	12.00	11.30	84.00	4	26.10	•
16	3/8			MTECZ 08067C16 16UN	MTECZ08067C1616UN	1.587	8.00	6.70	64.00	3	16.70	•
16		3/4		MTECZ 1212D31 16UN	MTECZ1212D3116UN	1.587	12.00	12.00	84.00	4	31.00	•
11	5/8			MTECZ 12114C28 11UN	MTECZ12114C2811UN	2.309	12.00	11.40	84.00	3	28.90	•
10	3/4			MTECZ 16144D34 10UN	MTECZ16144D3410UN	2.540	16.00	14.40	101.00	4	34.40	•

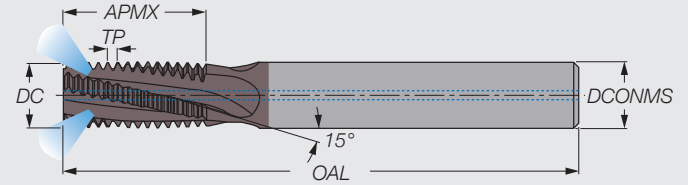
Whitworth Threading Endmill

MTECZ (METRIC)

Internal/External

Solid Threadmill with Coolant Holes in Flutes





TPI	Standard	Description	EDP Code	TP	DCONMS	DC	OAL	NOF	APMX	AC22
28	G1/8	MTECZ 08078C14 28W	MTECZ08078C1428W	0.907	8.00	7.80	64.00	3	14.10	•
19	G 1/4-3/8	MTECZ 1010D16 19W	MTECZ1010D1619W	1.336	10.00	10.00	73.00	4	16.70	•
16	1/2	MTECZ 10092D24 16W	MTECZ10092D2416W	1.587	10.00	9.20	73.00	4	24.60	•
14	G1/2-G7/8	MTECZ 1616E26 14W	MTECZ1616E2614W	1.814	16.00	16.00	101.00	5	26.30	•
12	1/2	MTECZ 10086D24 12W	MTECZ10086D2412W	2.116	10.00	8.60	73.00	4	24.40	•
11	5/8	MTECZ 12109D28 11W	MTECZ12109D2811W	2.309	12.00	10.90	84.00	4	28.90	•
11	G ≥1	MTECZ 1616D38 11W	MTECZ1616D3811W	2.309	16.00	16.00	101.00	4	38.10	•

TC Series
Indexable Threadmilling

MTTHREAD
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TC Series Threadmilling Insert Nomenclature Chart

TI — threadmilling insert

15 — insert length
- 75 = .750
- 1 = 1.000
- 1.5 = 1.500

N — type of insert
- N = Neutral
- P = Positive

8 — thread pitch

UN — threadform

I — type of insert
- E = External
- I = Internal

TC Series Threadmilling Cutter Nomenclature Chart

TC — tc series cutter

S — cutter design
- N = Neutral Pocket design
- P = Positive Pocket design
- S = Shell Mill design

15 — insert length
- 75 = .750
- 1 = 1.000
- 1.5 = 1.500

300 — diameter
Shank Head
(Shell Mill only)

334 — cutter diameter

8 — no. of flutes

TC Series Solid Threadmill Nomenclature Chart

TS — threadmill solid

H — flute geometry
- S = Straight

I — application
- I = Internal
- E = External
- X = Int/Ext

250 — shank diameter

079 — cutter diameter

40 — pitch

UN — threadform

TCT/TCN

- TCT cutters offer tapered head to accommodate NPT and NPTF style inserts
- TCN cutters offer straight head to accommodate UN and ISO style inserts
- Inserts are CNC ground to tolerance of +/-.0005 effective in the cutter
- Positive geometry provides high shear action which results in better quality threads

TCS

- Cutters feature our patented locking system for accurate indexes
- Inserts are CNC ground to tolerance of +/-.0005 effective in the cutter
- Positive geometry provides high shear action which results in better quality threads
- Design allows for maximum number of flutes in minimum part diameter
- Run at high speeds to reduce machining time by as much as 50%

TCP

- Cutters feature our patented locking system for accurate indexes
- Inserts are CNC ground to tolerance of +/-.0005 effective in the cutter
- Positive geometry provides high shear action which results in better quality threads
- Design allows for maximum number of flutes in minimum part diameter

TSSI/X

- Produce better quality threads than tapping
- Excels in materials that are difficult to cut

MTTHREAD
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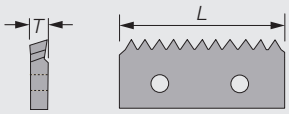
TC Series Threadmilling BSPT

TI_P — Internal/External

Positive Rake

See below for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI75P-19BSPT-I/E	TMIA4419I/E	19	.750	.080	•
TI1P-19BSPT-I/E	TMIB4419I/E	19	1.000	.140	•
TI1P-14BSPT-I/E	TMIB4414I/E	14	1.000	.140	•

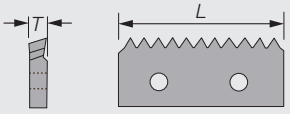
TC Series Threadmilling NPT/NPTF

TI_P — Internal/External

Positive Rake

See below for related tools



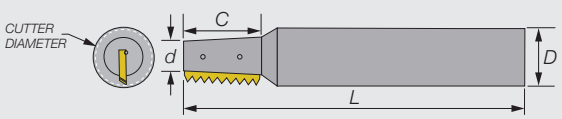


Description	EDP Code	TPI	L	T	ZS3B
TI75P-18NPT-I/E	TMIA3618I/E	18	.750	.080	•
TI75P-18NPTF-I/E	TMIA4618I/E	18	.750	.080	•
TI1P-14NPT-I/E	TMIB3614I/E	14	1.000	.140	•
TI1P-14NPTF-I/E	TMIB4614I/E	14	1.000	.140	•

TC Series Cutter Body for Threadmilling NPT/NPTF

TCT_ — Internal/External





Description	EDP Code	Insert	D	d	L	Cutter Dia	C	Flutes	Screw
TCT75-500-400-1	TMTA084001	TI75P-18NPT/NPTF/BSPT	.500	.229	3.000	.400	.750	1	TS250
TCT1-500-659-1	TMTB086591	TI1P-14NPT/NPTF/BSPT	.500	.379	3.000	.659	1.000	1	TS45

SPARE PARTS

Description	Screw	Wrench
TCT75...	TS250	T-8 TORX
TCT1...	TS45	T-9 TORX

MTTHREAD
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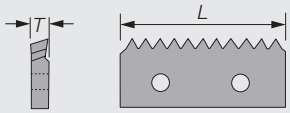
TC Series Threadmilling BSPP

TI_P — Internal/External

Positive Rake

See page 41 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI75P-19BSPP-I/E	TMIA4419I/E	19	.750	.080	•
TI1P-19BSPP-I/E	TMIB4419I/E	19	1.000	.140	•
TI1P-14BSPP-I/E	TMIB4414I/E	14	1.000	.140	•

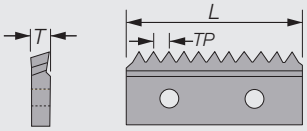
TC Series Threadmilling ISO

TI1P — External

Positive Rake

See page 41 for related tools





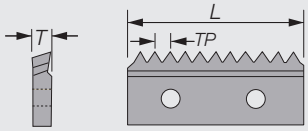
Description	EDP Code	TP	L	T	ZS3B
TI1P-2.0 ISO-E	TMIB7020E	2.0	1.000	.140	•
TI1P-1.5 ISO-E	TMIB7015E	1.5	1.000	.140	•
TI1P-1.0 ISO-E	TMIB7010E	1.0	1.000	.140	•

TC Series Threadmilling ISO

TI75P — Internal

See page 41 for related tools





Description	EDP Code	TP	L	T	ZS3B
TI75P-1.5ISO-I	TMIA7015I	1.50	0.750	0.08	•
TI75P-1.25ISO-I	TMIA70125I	1.30	0.750	0.08	•
TI75P-1.0ISO-I	TMIA7010I	1.00	0.750	0.08	•
TI75P-0.5ISO-I	TMIA7005I	0.50	0.750	0.08	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

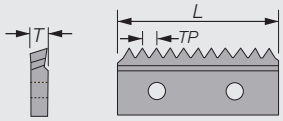
TC Series Threadmilling ISO

TI_P — Internal

Positive Rake

See page 41 for related tools





Description	EDP Code	TP	L	T	ZS3B
TI75P-1.5 ISO-I	TMIA7015I	1.50	.750	.080	•
TI75P-1.25 ISO-I	TMIA70125I	1.25	.750	.080	•
TI75P-1.0 ISO-I	TMIA7010I	1.00	.750	.080	•
TI75P-0.5 ISO-I	TMIA7005I	0.50	.750	.080	•
TI1P-2.0 ISO-I	TMIB7020I	2.00	1.000	.140	•
TI1P-1.5 ISO-I	TMIB7015I	1.50	1.000	.140	•
TI1P-1.0 ISO-I	TMIB7010I	1.00	1.000	.140	•

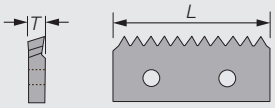
TC Series Threadmilling UN

TI_P — External

Positive Rake

See page 41 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI75P-32UN-E	TMIA6632E	32	.750	.080	•
TI75P-24UN-E	TMIA6624E	24	.750	.080	•
TI75P-20UN-E	TMIA6620E	20	.750	.080	•
TI75P-18UN-E	TMIA6618E	18	.750	.080	•
TI75P-16UN-E	TMIA6616E	16	.750	.080	•
TI1P-32UN-E	TMIB6632E	32	1.000	.140	•
TI1P-24UN-E	TMIB6624E	24	1.000	.140	•
TI1P-20UN-E	TMIB6620E	20	1.000	.140	•
TI1P-18UN-E	TMIB6618E	18	1.000	.140	•
TI1P-16UN-E	TMIB6616E	16	1.000	.140	•
TI1P-13UN-E	TMIB6613E	13	1.000	.140	•
TI1P-12UN-E	TMIB6612E	12	1.000	.140	•
TI1P-10UN-E*	TMIB6610E	10	1.000	.140	•

*To be used in TCN1 750-611-1 cutter only.

MTTHREAD
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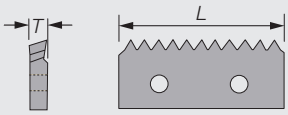
TC Series Threadmilling UN

TI_P — Internal

Positive Rake

See page 41 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI75P-32UN-I	TMIA6632I	32	.750	.080	•
TI75P-24UN-I	TMIA6624I	24	.750	.080	•
TI75P-20UN-I	TMIA6620I	20	.750	.080	•
TI75P-18UN-I	TMIA6618I	18	.750	.080	•
TI75P-16UN-I	TMIA6616I	16	.750	.080	•
TI1P-32UN-I	TMIB6632I	32	1.000	.140	•
TI1P-24UN-I	TMIB6624I	24	1.000	.140	•
TI1P-20UN-I	TMIB6620I	20	1.000	.140	•
TI1P-18UN-I	TMIB6618I	18	1.000	.140	•
TI1P-16UN-I	TMIB6616I	16	1.000	.140	•
TI1P-14UN-I	TMIB6614I	14	1.000	.140	•
TI1P-13UN-I	TMIB6613I	13	1.000	.140	•
TI1P-12UN-I	TMIB6612I	12	1.000	.140	•
TI1P-10UN-I*	TMIB6610I	10	1.000	.140	•

*To be used in TCN1 750-611-1 cutter only.

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

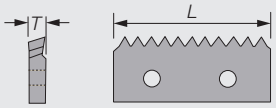
TC Series Threadmilling UNJ

TI_P — Internal

Positive Rake

See page 41 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI75P-32UNJ-I	TMIA6832I	32	.750	.080	•
TI75P-24UNJ-I	TMIA6824I	24	.750	.080	•
TI75P-20UNJ-I	TMIA6820I	20	.750	.080	•
TI75P-18UNJ-I	TMIA6818I	18	.750	.080	•
TI75P-16UNJ-I	TMIA6816I	18	.750	.080	•
TI1P-32UNJ-I	TMIB6832I	32	1.000	.140	•
TI1P-24UNJ-I	TMIB6824I	24	1.000	.140	•
TI1P-20UNJ-I	TMIB6820I	20	1.000	.140	•
TI1P-18UNJ-I	TMIB6818I	18	1.000	.140	•
TI1P-16UNJ-I	TMIB6816I	16	1.000	.140	•
TI1P-14UNJ-I	TMIB6814I	14	1.000	.140	•
TI1P-12UNJ-I	TMIB6812I	12	1.000	.140	•
TI1P-10UNJ-I	TMIB6810I	10	1.000	.140	•

*To be used in TCN1 750-611-1 cutter only.

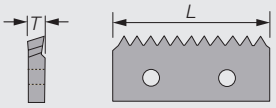
TC Series Threadmilling UNJ

TI_P — External

Positive Rake

See page 41 for related tools





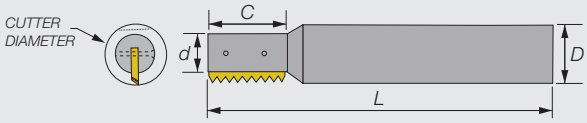
Description	EDP Code	TPI	L	T	ZS3B
TI75P-32UNJ-E	TMIA6832E	32	.750	.080	•
TI75P-24UNJ-E	TMIA6824E	24	.750	.080	•
TI75P-20UNJ-E	TMIA6820E	20	.750	.080	•
TI75P-18UNJ-E	TMIA6818E	18	.750	.080	•
TI75P-16UNJ-E	TMIA6816E	16	.750	.080	•
TI1P-32UNJ-E	TMIB6832E	32	1.000	.140	•
TI1P-24UNJ-E	TMIB6824E	24	1.000	.140	•
TI1P-20UNJ-E	TMIB6820E	20	1.000	.140	•
TI1P-18UNJ-E	TMIB6818E	18	1.000	.140	•
TI1P-16UNJ-E	TMIB6816E	16	1.000	.140	•
TI1P-12UNJ-E	TMIB6812E	12	1.000	.140	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

TC Series Cutter Body For Threadmilling UN

TCN_ Internal/External



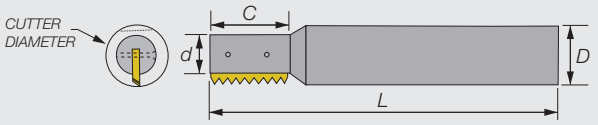


Description	EDP Code	Insert	D	d	L	Cutter Dia	C	Flutes	Screw
TCN75-500-394-1	TMNA083941	TI75P-BSPP/ISO/UN/UNJ	.500	.250	3.000	.394	.750	1	TS250
TCN75-500-468-1	TMNA084681	TI75P-BSPP/ISO/UN/UNJ	.500	.330	3.500	.468	.750	1	TS25
TCN1-750-625-1	TMNB126251	TI1P-BSPP/ISO/UN/UNJ	.750	.454	3.500	.625	1.000	1	TS40
TCN1-750-625-1L	TMNB126251L	TI1P-BSPP/ISO/UN/UNJ	.750	.454	4.500	.625	1.000	1	TS40
TCN1-750-611-1	TMNB126111	TI1P-10UN/UNJ	.750	.383	3.500	.611	1.000	1	TS40

TC Series Threadmilling TCN

Bolt In style Threadmilling Cutter Body Internal/External





Description	EDP Code	Insert	D	d	L	Cutter Diameter	C	Flutes	Screw
TCN1 20M-611-1	TMNB20M6111	TI1P-10UN/UNJ	20.00	9.73	90.47	15.52	25.40	1	TSM40
TCN1 20M-625-1	TMNB20M6251	TI1P-BSPP/ISO/UN/UNJ	20.00	11.53	90.47	15.88	25.40	1	TSM40
TCN75 13M-394-1	TMNA13M3941	TI75P-BSPP/ISO/UN/UNJ	13.00	6.35	76.99	10.01	19.05	1	TS250
TCN75 13M-468-1	TMNA13M4681	TI75P-BSPP/ISO/UN/UNJ	13.00	8.38	90.47	11.89	19.05	1	TS25

SPARE PARTS

Description	Screw	Wrench
TCN75-500-394-1	TS250	T-8 TORX
TCN75-500-468-1	TS25	T-8 TORX
TCN1-750-625-1	TS40	T-10 TORX
TCN1-750-611-1	TS40	T-10 TORX

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

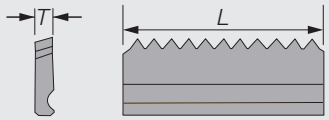
TC Series Threadmilling BSPT

TI_N — Internal/External

Neutral Rake

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI1N-11BSPT-I/E	TMIC4411I/E	11	1.000	.140	•
TI15N-11BSPT-I/E	TMID85011I/E	11	1.500	.140	•

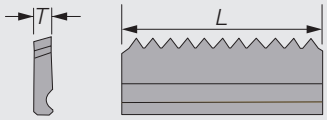
TC Series Threadmilling NGT/SGT

TI_N — Internal/External

Neutral Rake

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI15N-14NGT-I/E	TMID4714I/E	14	1.500	.140	•
TI15N-14SGT-I/E	TMID4914I/E	14	1.500	.140	•

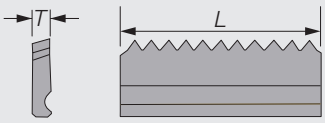
TC Series Threadmilling NPT/NPTF

TI_N — Internal/External

Neutral Rake

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI15N-11.5NPT-I/E	TMID3611I/E	11.5	1.500	.140	•
TI15N-11.5NPTF-I/E	TMID4611I/E	11.5	1.500	.140	•
TI15N-8NPT-I/E	TMID3608I/E	8	1.500	.140	•
TI15N-8NPTF-I/E	TMID4608I/E	8	1.500	.140	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

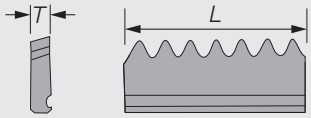
TC Series Threadmilling API Round

TI15N — Internal/External

Neutral Rake

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI15N-10RD-I/E	TMID3410I/E	10	1.500	.140	•
TI15N-8RD-I/E	TMID3200I/E	8	1.500	.140	•

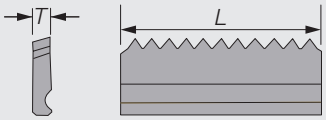
TC Series Threadmilling UN

TI_N — Internal

Neutral Rake

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI1N-32UN-I	TMIC6632I	32	1.000	.140	•
TI1N-24UN-I	TMIC6624I	24	1.000	.140	•
TI1N-20UN-I	TMIC6620I	20	1.000	.140	•
TI1N-18UN-I	TMIC6618I	18	1.000	.140	•
TI1N-16UN-I	TMIC6616I	16	1.000	.140	•
TI1N-12UN-I	TMIC6612I	12	1.000	.140	•
TI1N-10UN-I	TMIC6610I	10	1.000	.140	•
TI1N-8UN-I	TMIC6608I	8	1.000	.140	•
TI1N-7UN-I	TMIC6607I	7	1.000	.140	•
TI15N-24UN-I	TMID6624I	24	1.500	.140	•
TI15N-20UN-I	TMID6620I	20	1.500	.140	•
TI15N-18UN-I	TMID6618I	18	1.500	.140	•
TI15N-16UN-I	TMID6616I	16	1.500	.140	•
TI15N-14UN-I	TMID6614I	14	1.500	.140	•
TI15N-12UN-I	TMID6612I	12	1.500	.140	•
TI15N-10UN-I	TMID6610I	10	1.500	.140	•
TI15N-8UN-I	TMID6608I	8	1.500	.140	•
TI15N-7UN-I	TMID6607I	7	1.500	.140	•
TI15N-6UN-I	TMID6606I	6	1.500	.140	•
TI15N-4.5UN-I	TMID66045I	4.5	1.500	.140	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

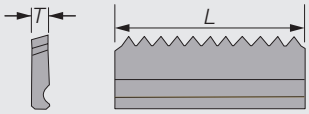
TC Series Threadmilling UNJ

TI_N - Neutral Rake

Internal

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI1N-32UNJ-I	TMIC6832I	32	1.000	.140	•
TI1N-24UNJ-I	TMIC6824I	24	1.000	.140	•
TI1N-20UNJ-I	TMIC6820I	20	1.000	.140	•
TI1N-18UNJ-I	TMIC6818I	18	1.000	.140	•
TI1N-16UNJ-I	TMIC6816I	16	1.000	.140	•
TI1N-12UNJ-I	TMIC6812I	12	1.000	.140	•
TI1N-10UNJ-I	TMIC6810I	10	1.000	.140	•
TI15N-24UNJ-I	TMID6824I	24	1.500	.140	•
TI15N-20UNJ-I	TMID6820I	20	1.500	.140	•
TI15N-18UNJ-I	TMID6818I	18	1.500	.140	•
TI15N-16UNJ-I	TMID6816I	16	1.500	.140	•
TI15N-12UNJ-I	TMID6812I	12	1.500	.140	•
TI15N-10UNJ-I	TMID6810I	10	1.500	.140	•
TI15N-8UNJ-I	TMID6808I	8	1.500	.140	•

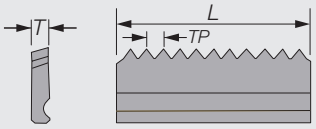
TC Series Threadmilling ISO

TI15N - Neutral Rake

Internal

See pages 47 & 48 for related tools





Description	EDP Code	TP	L	T	ZS3B
TI15N-6.0 ISO-I	TMID7060I	6.0	1.500	.140	•
TI15N-5.0 ISO-I	TMID7050I	5.0	1.500	.140	•
TI15N-4.5 ISO-I	TMID7045I	4.5	1.500	.140	•
TI15N-4.0 ISO-I	TMID7040I	4.0	1.500	.140	•
TI15N-3.5 ISO-I	TMID7035I	3.5	1.500	.140	•
TI15N-3.0 ISO-I	TMID7030I	3.0	1.500	.140	•
TI15N-2.5 ISO-I	TMID7025I	2.5	1.500	.140	•
TI15N-2.0 ISO-I	TMID7020I	2.0	1.500	.140	•
TI15N-1.5 ISO-I	TMID7015I	1.5	1.500	.140	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

TC Series Threadmilling Acme

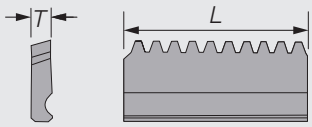
TI_N - Neutral Rake

Internal

Full profile

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI1N-12ACME-I	TMIC0212I	12	1.000	.140	•
TI1N-10ACME-I	TMIC0210I	10	1.000	.140	•
TI1N-8ACME-I	TMIC0208I	8	1.000	.140	•
TI15N-12ACME-I	TMID0212I	12	1.500	.140	•
TI15N-10ACME-I	TMID0210I	10	1.500	.140	•
TI15N-8ACME-I	TMID0208I	8	1.500	.140	•
TI15N-6ACME-I	TMID0206I	6	1.500	.140	•
TI15N-5ACME-I	TMID0205I	5	1.500	.140	•
TI15N-4ACME-I	TMID0204I	4	1.500	.140	•

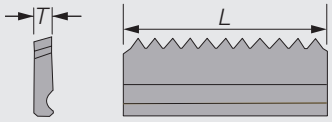
TC Series Threadmilling UN

TI_N - Neutral Rake

External

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI1N-32UN-E	TMIC6632E	32	1.000	.140	•
TI1N-24UN-E	TMIC6624E	24	1.000	.140	•
TI1N-20UN-E	TMIC6620E	20	1.000	.140	•
TI1N-18UN-E	TMIC6618E	18	1.000	.140	•
TI1N-16UN-E	TMIC6616E	16	1.000	.140	•
TI1N-12UN-E	TMIC6612E	12	1.000	.140	•
TI1N-10UN-E	TMIC6610E	10	1.000	.140	•
TI15N-24UN-E	TMID6624E	24	1.500	.140	•
TI15N-20UN-E	TMID6620E	20	1.500	.140	•
TI15N-18UN-E	TMID6618E	18	1.500	.140	•
TI15N-16UN-E	TMID6616E	16	1.500	.140	•
TI15N-12UN-E	TMID6612E	12	1.500	.140	•
TI15N-10UN-E	TMID6610E	10	1.500	.140	•
TI15N-8UN-E	TMID6608E	8	1.500	.140	•
TI15N-6UN-E	TMID6606E	6	1.500	.140	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

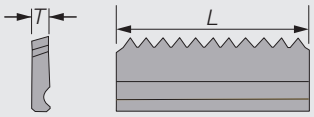
TC Series Threadmilling UNJ

TI_N - Neutral Rake

External

See pages 47 & 48 for related tools





Description	EDP Code	TPI	L	T	ZS3B
TI1N-32UNJ-E	TMIC6832E	32	1.000	.140	•
TI1N-24UNJ-E	TMIC6824E	24	1.000	.140	•
TI1N-20UNJ-E	TMIC6820E	20	1.000	.140	•
TI1N-18UNJ-E	TMIC6818E	18	1.000	.140	•
TI1N-16UNJ-E	TMIC6816E	16	1.000	.140	•
TI1N-12UNJ-E	TMIC6812E	12	1.000	.140	•
TI1N-10UNJ-E	TMIC6810E	10	1.000	.140	•
TI15N-24UNJ-E	TMID6824E	24	1.500	.140	•
TI15N-20UNJ-E	TMID6820E	20	1.500	.140	•
TI15N-18UNJ-E	TMID6818E	18	1.500	.140	•
TI15N-16UNJ-E	TMID6816E	16	1.500	.140	•
TI15N-12UNJ-E	TMID6812E	12	1.500	.140	•
TI15N-10UNJ-E	TMID6810E	10	1.500	.140	•
TI15N-8UNJ-E	TMID6808E	8	1.500	.140	•

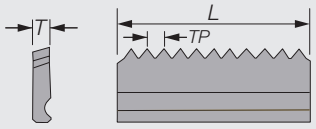
TC Series Threadmilling ISO

TI15N - Neutral Rake

External

See pages 47 & 48 for related tools





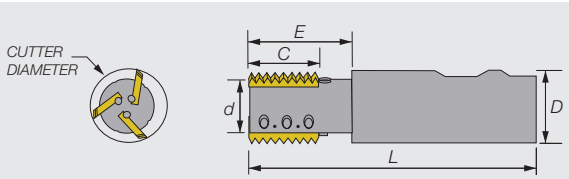
Description	EDP Code	TP	L	T	ZS3B
TI15N-6.0 ISO-E	TMID7060E	6.0	1.500	.140	•
TI15N-5.0 ISO-E	TMID7050E	5.0	1.500	.140	•
TI15N-4.5 ISO-E	TMID7045E	4.5	1.500	.140	•
TI15N-4.0 ISO-E	TMID7040E	4.0	1.500	.140	•
TI15N-2.0 ISO-E	TMID7020E	2.0	1.500	.140	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

TC Series Cutter Body for Threadmilling UN, NPT, ISO, Acme, API

TCP_ Internal/External



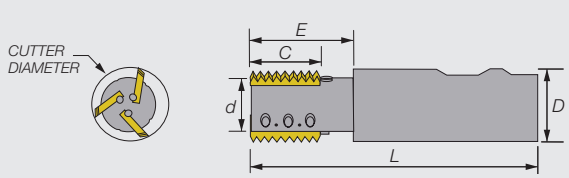


Description	EDP Code	Insert	Coolant Port	D	d	E	L	Cutter Dia (UN/115NPT)	Cutter Dia (8NPT)	C	Flutes	Screw	Pin
TCP1 100-969-2	TMPB169692	TI1N		1.000	.750	1.500	4.500	.969	.969	1.000	2	TSS-3	DP1
TCP1 125-175-5	TMPB201755	TI1N	√	1.250	1.500	1.750	4.000	1.755	1.755	1.000	5	TSS-2	DP1
TCP15 100-932-1	TMPC169321	TI15N		1.000	.722	1.900	4.500	.932	1.065	1.500	1	TSS-2	DP135
TCP15 100-111-3	TMPC161113	TI15N	√	1.000	.812	2.000	4.500	1.116	1.247	1.500	3	TSS-3	DP135
TCP15 100-111-3L	TMPC161113L	TI15N	√	1.000	.812	2.750	5.500	1.116	1.247	1.500	3	TSS-3	DP135
TCP15 100-969-2	TMPC169692	TI15N		1.000	.750	2.000	5.000	.969	1.101	1.500	2	TSS-3	DP135
TCP15 125-175-5	TMPC201755	TI15N	√	1.250	1.500	2.550	4.500	1.755	1.888	1.500	5	TSS-2	DP135
TCP15 125-175-5L	TMPC201755L	TI15N	√	1.250	1.500	2.750	8.250	1.755	1.888	1.500	5	TSS-2	DP135

TC Series Threadmilling TCN

TCP_ (Metric)





Description	EDP Code	Insert	Coolant Port	D	d	E	L	Cutter Dia (UN/115NPT)	Cutter Dia (8NPT)	C	Flutes	Screw	Pin
TCP1 25M-969-2	TMPB25M9692	TI1N		25.00	15.87	38.10	114.30	24.61	24.61	25.40	2	TSSM-3	DP1
TCP1 32M-175-5	TMPB32M1755	TI1N	√	32.00	38.10	44.45	101.60	44.58	44.58	25.40	5	TSSM-2	DP1
TCP15 25M-111-3	TMPC25M1113	TI15N	√	25.00	27.81	57.15	115.06	28.35	31.67	38.10	3	TSSM-3	DP135
TCP15 25M-111-3L	TMPC25M1113L	TI15N	√	25.00	27.81	70.00	139.70	28.35	31.67	38.10	3	TSSM-3	DP135
TCP15 25M-932-1	TMPC25M9321	TI15N		25.00	18.34	48.26	114.30	23.67	27.05	38.10	1	TSSM-2	DP135
TCP15 25M-969-2	TMPC25M9692	TI15N		25.00	18.34	50.80	127.00	24.61	27.05	38.10	2	TSSM-2	DP135
TCP15 32M-175-5	TMPC32M1755	TI15N	√	32.00	38.10	64.77	114.30	44.58	47.96	38.10	5	TSSM-2	DP135
TCP15-32M-175-5L	TMPC32M1755L	TI15N	√	32.00	38.10	69.85	209.50	44.58	47.96	38.10	5	TSSM-2	DP135

SPARE PARTS

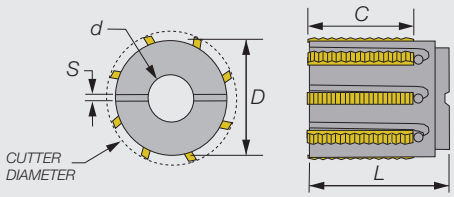
Description	Pin	Screw
TCP1 100...	DP1	TSS-3
TCP1 125...	DP1	TSS-2
TCP15 100-932-1	DP135	TSS-2
TCP15 100-111-3	DP135	TSS-3
TCP15 125...	DP135	TSS-2

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

TC Series Shell Mill Body for Threadmilling UN, NPT, ISO, Acme

TCS_ Internal/External





Description	EDP Code	Insert	D	d	S	L	Cutter Dia.	C	Flutes	Pin	Screw
TCS15 200-234-6	TMSC322346	TI15N	2.000	.750	.250	2.250	2.349	1.500	6	DP135	TSS-2
TCS15 250-274-7	TMSC402747	TI15N	2.500	1.000	.375	2.250	2.846	1.500	7	DP135	TSS-2
TCS15 300-334-8	TMSC483348	TI15N	3.000	1.250	.500	2.250	3.341	1.500	8	DP135	TSS-2

SPARE PARTS




Description	Pin	Screw
TCS15...	DP135	TSS-2

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

TC Series Threadmilling Technical Information

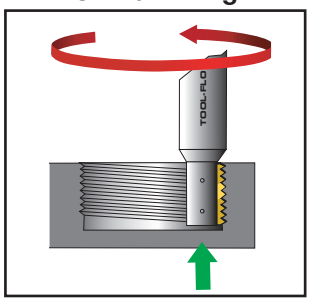
NPT & NPTF

When programming an NPT or NPTF thread form, a correction factor to compensate for the tapered thread form may need to be made. This is achieved by dividing the circular move into quarters or eighths, and moving the cutter out as the arc is generated so that the taper is included in the movement. The amount of taper for a given form is determined by the following formula:

$$\text{Taper per pitch} = \frac{.0625"}{\text{pitch}}$$

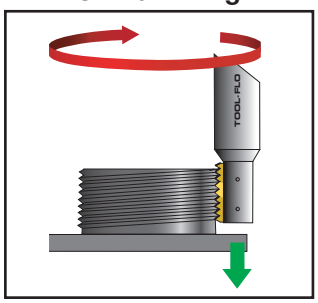
This amount of taper per pitch is then divided by number of programmed quadrants. This determines the amount that the cutter forms of the thread.

Climb Milling



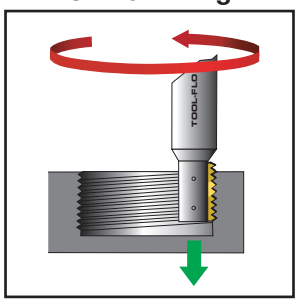
INTERNAL RIGHT HAND

Climb Milling



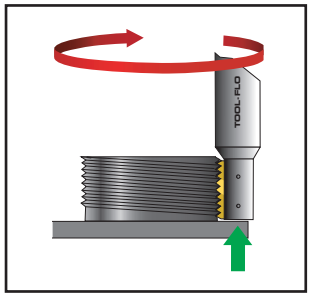
EXTERNAL RIGHT HAND

Climb Milling



INTERNAL LEFT HAND

Climb Milling



EXTERNAL LEFT HAND

NPT SELECTION CHART

Size	Cutter	Insert
1/4", 3/8"	TCT75 500-400-1	TI75P-18NPT
1/2". 3/4"	TCT1 500-659-1	TI1P-14NPT
1"	TCP15 100-932-1	TI15N-11.5NPT
1-1/4", 1-1/2"	TCP15 100-111-3	TI15N-11.5NPT
2"	TCP15 125-175-5	TI15N-11.5NPT
3"	TCP15 125-175-5	TI15N-8NPT

RECOMMENDED SPEED AND FEED RATES

Material	Chip Load	Speed (SFPM)
1018 Steel	.0008 - .002	250 - 500
Standard steel (4140)	.0005 - .002	175 - 350
300 Series Stainless	.0005 - .0035	250 - 500
400 Series Stainless	.0002 - .0015	125 - 300
Gray Iron	.0005 - .003	400 - 800
Ductile iron	.001 - .005	600 - 1000
Aluminum	.0015 - .006	800 - 1200
Brass	.002 - .0065	400 - 700

Minimum internal thread size vs pitch for given cutter body for UN threads

cutter body description / pitch	32	24	20	18	16	14	12	10	8
TCN75 500-394-1	1/2"	1/2"	1/2"	9/16"	9/16"	9/16"	9/16"		
TCN75 500-468-1	5/8"	5/8"	5/8"	5/8"	5/8"	11/16"	11/16"		
TCN1 750-625-1	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"		
TCP1 100-969-2	1-1/8"	1-1/8"	1-1/8"	1-3/16"	1-3/16"	1-3/16"	1-3/16"		
TCP1 125-175-5	1-15/16"	1-15/16"	1-15/16"	1-15/16"	1-15/16"	1-15/16"	1-15/16"		
TCP15 100-932-1			1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"	1-1/8"
TCP15 100-111-3			1-5/16"	1-5/16"	1-5/16"	1-5/16"	1-5/16"	1-3/8"	1-3/8"
TCP15 125-175-5			1-15/16"	1-15/16"	1-15/16"	2"	2"	2"	2"

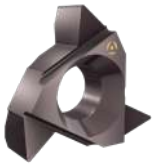
MT Series
Indexable Threadmilling

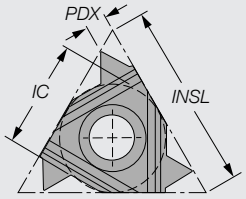
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

55° & 60° V-Thread

MT LD

See page 72 for related tools



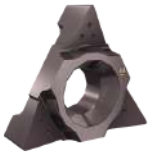


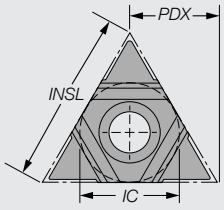
Description	EDP Code	IC	TPIN (TPI MIN)	TPIX (TPI MAX)	INSL	PDX	AC22
MT LD 1155D	MTLD1155D	0.250	14.00	24.00	0.433	0.04	•
MT LD 1655D	MTLD1655D	0.375	8.00	12.00	0.649	0.07	•
MT LD 1160D	MTLD1160D	0.250	12.00	24.00	0.433	0.04	•
MT LD 1660D	MTLD1660D	0.375	7.00	10.00	0.649	0.07	•

55° & 60° V-Thread

MT LD

See page 70 for related tools





Description	EDP Code	IC	TPIN (TPI MIN)	TPIX (TPI MAX)	INSL	PDX	AC22
MT LD 11U55D	MTLD11U55D	0.250	7.00	12.00	0.433	0.20	•
MT LD 16U55D	MTLD16U55D	0.375	4.50	6.00	0.649	0.30	•
MT LD 11U60D	MTLD11U60D	0.250	6.00	10.00	0.433	0.20	•
MT LD 16U60D	MTLD16U60D	0.375	4.00	6.00	0.649	0.30	•

MTTHREAD
The Zenith of precision machining!

Acme Threading

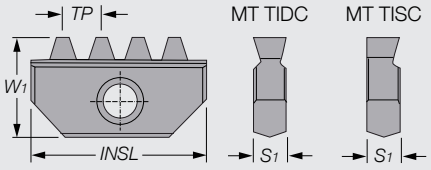
MT TIDC/TISC

Internal

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 826 I12ACME	MTTIDC826I12ACME	12	0.083	0.827	0.472	0.185	•
MT TIDC 826 I10ACME	MTTIDC826I10ACME	10	0.100	0.827	0.472	0.185	•
MT TIDC 826 I8ACME	MTTIDC826I8ACME	8	0.125	0.827	0.472	0.185	•
MT TIDC 1118 I12ACME	MTTIDC1118I12ACME	12	0.083	1.181	0.657	0.220	•
MT TIDC 1118 I10ACME	MTTIDC1118I10ACME	10	0.100	1.181	0.657	0.220	•
MT TIDC 1118 I8ACME	MTTIDC1118I8ACME	8	0.125	1.181	0.657	0.220	•
MT TIDC 1118 I6ACME	MTTIDC1118I6ACME	6	0.166	1.181	0.657	0.220	•
MT TIDC 1118 I5ACME	MTTIDC1118I5ACME	5	0.200	1.181	0.657	0.220	•
MT TIDC 1118 I4ACME	MTTIDC1118I4ACME	4	0.250	1.181	0.657	0.220	•
MT TIDC 1574 I4ACME	MTTIDC1574I4ACME	4	0.250	1.575	0.787	0.248	•

Single-Sided

Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 1574 I3.5ACME	MTTISC1574I35ACME	3.5	0.285	1.575	0.787	0.248	•
MT TISC 1574 I3ACME	MTTISC1574I3ACME	3	0.333	1.575	0.787	0.248	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading

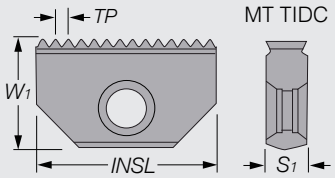
MT TIDC

Internal

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TP	INSL	W_1	S_1	AC22
MT TIDC 551 I2.50ISO	MTTIDC551I250ISO	2.50	0.551	0.311	0.126	•
MT TIDC 551 I2.00ISO	MTTIDC551I200ISO	2.00	0.551	0.311	0.126	•
MT TIDC 551 I1.75ISO	MTTIDC551I175ISO	1.75	0.551	0.311	0.126	•
MT TIDC 551 I1.50ISO	MTTIDC551I150ISO	1.50	0.551	0.311	0.126	•
MT TIDC 551 I1.25ISO	MTTIDC551I125ISO	1.25	0.551	0.311	0.126	•
MT TIDC 551 I1.00ISO	MTTIDC551I100ISO	1.00	0.551	0.311	0.126	•
MT TIDC 551 I0.75ISO	MTTIDC551I075ISO	0.75	0.551	0.311	0.126	•
MT TIDC 551 I0.50ISO	MTTIDC551I050ISO	0.50	0.551	0.311	0.126	•
MT TIDC 826 I3.50ISO	MTTIDC826I350ISO	3.50	0.827	0.496	0.189	•
MT TIDC 826 I3.00ISO	MTTIDC826I300ISO	3.00	0.827	0.496	0.189	•
MT TIDC 826 I2.50ISO	MTTIDC826I250ISO	2.50	0.827	0.496	0.189	•
MT TIDC 826 I2.00ISO	MTTIDC826I200ISO	2.00	0.827	0.496	0.189	•
MT TIDC 826 I1.75ISO	MTTIDC826I175ISO	1.75	0.827	0.496	0.189	•
MT TIDC 826 I1.50ISO	MTTIDC826I150ISO	1.50	0.827	0.496	0.189	•
MT TIDC 826 I1.00ISO	MTTIDC826I100ISO	1.00	0.827	0.496	0.189	•
MT TIDC 1118 I5.00ISO	MTTIDC1118I500ISO	5.00	0.181	0.657	0.220	•
MT TIDC 1118 I4.50ISO	MTTIDC1118I450ISO	4.50	0.181	0.657	0.220	•
MT TIDC 1118 I4.00ISO	MTTIDC1118I400ISO	4.00	0.181	0.657	0.220	•
MT TIDC 1118 I3.50ISO	MTTIDC1118I350ISO	3.50	0.181	0.657	0.220	•
MT TIDC 1118 I3.00ISO	MTTIDC1118I300ISO	3.00	0.181	0.657	0.220	•
MT TIDC 1118 I2.00ISO	MTTIDC1118I200ISO	2.00	0.181	0.657	0.220	•
MT TIDC 1118 I1.50ISO	MTTIDC1118I150ISO	1.50	0.181	0.657	0.220	•
MT TIDC 1574 I6.00ISO	MTTIDC1574I600ISO	6.00	1.575	0.819	0.252	•
MT TIDC 1574 I5.50ISO	MTTIDC1574I550ISO	5.50	1.575	0.819	0.252	•
MT TIDC 1574 I5.00ISO	MTTIDC1574I500ISO	5.00	1.575	0.819	0.252	•
MT TIDC 1574 I4.50ISO	MTTIDC1574I450ISO	4.50	1.575	0.819	0.252	•
MT TIDC 1574 I4.00ISO	MTTIDC1574I400ISO	4.00	1.575	0.819	0.252	•
MT TIDC 1574 I3.50ISO	MTTIDC1574I350ISO	3.50	1.575	0.819	0.252	•
MT TIDC 1574 I3.00ISO	MTTIDC1574I300ISO	3.00	1.575	0.819	0.252	•
MT TIDC 1574 I2.00ISO	MTTIDC1574I200ISO	2.00	1.575	0.819	0.252	•
MT TIDC 1574 I1.50ISO	MTTIDC1574I150ISO	1.50	1.575	0.819	0.252	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

ISO Threading

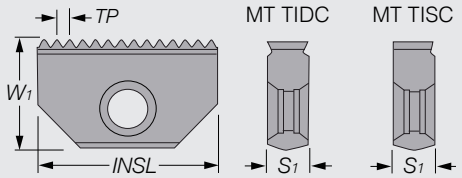
MT TIDC/TISC

External

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TP	INSL	W_1	S_1	AC22
MT TIDC 551 E2.50ISO	MTTIDC551E250ISO	2.50	0.551	0.311	0.126	•
MT TIDC 551 E2.00ISO	MTTIDC551E200ISO	2.00	0.551	0.311	0.126	•
MT TIDC 551 E1.75ISO	MTTIDC551E175ISO	1.75	0.551	0.311	0.126	•
MT TIDC 551 E1.50ISO	MTTIDC551E150ISO	1.50	0.551	0.311	0.126	•
MT TIDC 551 E1.25ISO	MTTIDC551E125ISO	1.25	0.551	0.311	0.126	•
MT TIDC 551 E1.00ISO	MTTIDC551E100ISO	1.00	0.551	0.311	0.126	•
MT TIDC 551 E0.75ISO	MTTIDC551E075ISO	0.75	0.551	0.311	0.126	•
MT TIDC 826 E3.00ISO	MTTIDC826E300ISO	3.00	1.181	0.657	0.220	•
MT TIDC 826 E2.50ISO	MTTIDC826E250ISO	2.50	0.827	0.504	0.189	•
MT TIDC 826 E2.00ISO	MTTIDC826E200ISO	2.00	0.827	0.496	0.189	•
MT TIDC 826 E1.50ISO	MTTIDC826E150ISO	1.50	0.827	0.496	0.189	•
MT TIDC 826 E1.00ISO	MTTIDC826E100ISO	1.00	0.827	0.496	0.189	•
MT TIDC 1118 E4.00ISO	MTTIDC1118E400ISO	4.00	1.181	0.657	0.220	•
MT TIDC 1118 E3.50ISO	MTTIDC1118E350ISO	3.50	1.181	0.657	0.220	•
MT TIDC 1118 E3.00ISO	MTTIDC1118E300ISO	3.00	1.181	0.657	0.220	•
MT TIDC 1118 E2.00ISO	MTTIDC1118E200ISO	2.00	1.181	0.657	0.220	•
MT TIDC 1118 E1.50ISO	MTTIDC1118E150ISO	1.50	1.181	0.657	0.220	•
MT TIDC 1574 E6.00ISO	MTTIDC1574E600ISO	6.00	1.575	0.819	0.252	•
MT TIDC 1574 E5.00ISO	MTTIDC1574E500ISO	5.00	1.575	0.819	0.252	•
MT TIDC 1574 E4.00ISO	MTTIDC1574E400ISO	4.00	1.575	0.819	0.252	•
MT TIDC 1574 E3.00ISO	MTTIDC1574E300ISO	3.00	1.575	0.819	0.252	•
MT TIDC 1574 E2.00ISO	MTTIDC1574E200ISO	2.00	1.575	0.819	0.252	•
MT TIDC 1574 E1.50ISO	MTTIDC1574E150ISO	1.50	1.575	0.819	0.252	•

Single-Sided

Internal

Description	EDP Code	TP	L	W	S1	AC22
MT TISC 472 I1.75ISO	MTTISC472I175ISO	1.75	0.472	0.256	0.114	•
MT TISC 472 I1.50ISO	MTTISC472I150ISO	1.50	0.472	0.256	0.114	•
MT TISC 472 I1.25ISO	MTTISC472I125ISO	1.25	0.472	0.256	0.114	•
MT TISC 472 I1.00ISO	MTTISC472I100ISO	1.00	0.472	0.256	0.114	•
MT TISC 472 I0.75ISO	MTTISC472I075ISO	0.75	0.472	0.256	0.114	•
MT TISC 472 I0.50ISO	MTTISC472I050ISO	0.50	0.472	0.256	0.114	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

NPS Threading

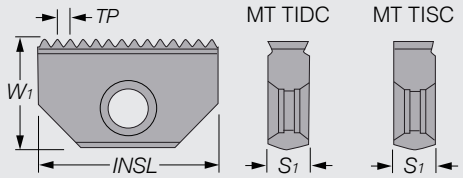
MT TIDC/TISC

Internal/External

Full Profile

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 551 18NPS	MTTIDC55118NPS	18	0.055	0.551	0.295	0.122	•
MT TIDC 551 14NPS	MTTIDC55114NPS	14	0.071	0.551	0.295	0.122	•
MT TIDC 826 14NPS	MTTIDC82614NPS	14	0.071	0.827	0.472	0.185	•
MT TIDC 826 11.5NPS	MTTIDC826115NPS	11.5	0.086	0.827	0.472	0.185	•
MT TIDC 1118 11.5NPS	MTTIDC1118115NPS	11.5	0.086	1.181	0.657	0.220	•
MT TIDC 1118 8NPS	MTTIDC11188NPS	8	0.125	1.181	0.657	0.220	•
MT TIDC 1574 11.5NPS	MTTIDC1574115NPS	11.5	0.086	1.575	0.787	0.248	•
MT TIDC 1574 8NPS	MTTIDC15748NPS	8	0.125	1.575	0.787	0.248	•

Single-Sided

Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 18NPS	MTTISC47218NPS	18	0.055	0.472	0.256	0.114	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

NPSF Threading

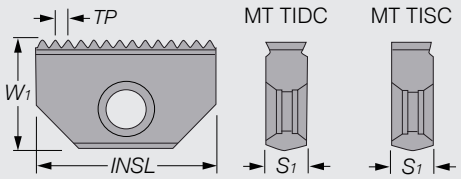
MT TIDC/TISC

Internal/External

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 551 18NPSF	MTTIDC55118NPSF	18	0.055	0.551	0.311	0.126	•
MT TIDC 551 14NPSF	MTTIDC55114NPSF	14	0.071	0.551	0.311	0.126	•
MT TIDC 826 14NPSF	MTTIDC82614NPSF	14	0.071	0.827	0.496	0.187	•
MT TIDC 826 11.5NPSF	MTTIDC826115NPSF	11.5	0.086	0.827	0.496	0.187	•
MT TIDC 1118 11.5NPSF	MTTIDC1118115NPSF	11.5	0.086	1.181	0.657	0.220	•
MT TIDC 1118 8NPSF	MTTIDC11188NPSF	8	0.125	1.181	0.657	0.220	•
MT TIDC 1574 11.5NPSF	MTTIDC1574115NPSF	11.5	0.086	1.575	0.819	0.250	•
MT TIDC 1574 8NPSF	MTTIDC15748NPSF	8	0.125	1.575	0.819	0.250	•

Single-Sided

Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 18NPSF	MTTISC47218NPSF	18	0.055	0.472	0.256	0.114	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

PG Threading

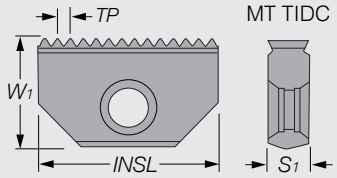
MT TIDC

Internal/External

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 551 18PG	MTTIDC55118PG	18	0.055	0.551	0.311	0.126	•
MT TIDC 826 18PG	MTTIDC82618PG	18	0.055	0.827	0.496	0.189	•
MT TIDC 826 16PG	MTTIDC82616PG	16	0.062	0.827	0.496	0.189	•
MT TIDC 1118 16PG	MTTIDC111816PG	16	0.062	1.181	0.657	0.220	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

UN Threading

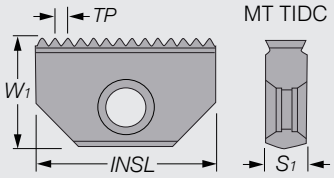
MT TIDC

Internal

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 551 I32UN	MTTIDC551I32UN	32	0.031	0.551	0.311	0.126	•
MT TIDC 551 I28UN	MTTIDC551I28UN	28	0.035	0.551	0.311	0.126	•
MT TIDC 551 I27UN	MTTIDC551I27UN	27	0.037	0.551	0.311	0.126	•
MT TIDC 551 I24UN	MTTIDC551I24UN	24	0.041	0.551	0.311	0.126	•
MT TIDC 551 I20UN	MTTIDC551I20UN	20	0.050	0.551	0.311	0.126	•
MT TIDC 551 I18UN	MTTIDC551I18UN	18	0.055	0.551	0.311	0.126	•
MT TIDC 551 I16UN	MTTIDC551I16UN	16	0.062	0.551	0.311	0.126	•
MT TIDC 551 I14UN	MTTIDC551I14UN	14	0.071	0.551	0.311	0.126	•
MT TIDC 551 I12UN	MTTIDC551I12UN	12	0.083	0.551	0.311	0.126	•
MT TIDC 551 I11UN	MTTIDC551I11UN	11	0.090	0.551	0.311	0.126	•
MT TIDC 551 I10UN	MTTIDC551I10UN	10	0.100	0.551	0.311	0.126	•
MT TIDC 826 I24UN	MTTIDC826I24UN	24	0.041	0.827	0.496	0.189	•
MT TIDC 826 I20UN	MTTIDC826I20UN	20	0.050	0.827	0.496	0.189	•
MT TIDC 826 I18UN	MTTIDC826I18UN	18	0.055	0.827	0.496	0.189	•
MT TIDC 826 I16UN	MTTIDC826I16UN	16	0.062	0.827	0.496	0.189	•
MT TIDC 826 I14UN	MTTIDC826I14UN	14	0.071	0.827	0.496	0.189	•
MT TIDC 826 I12UN	MTTIDC826I12UN	12	0.083	0.827	0.486	0.189	•
MT TIDC 826 I10UN	MTTIDC826I10UN	10	0.100	0.827	0.496	0.189	•
MT TIDC 826 I8UN	MTTIDC826I8UN	8	0.125	0.827	0.496	0.189	•
MT TIDC 826 I7UN	MTTIDC826I7UN	7	0.142	0.827	0.496	0.189	•
MT TIDC 1118 I20UN	MTTIDC1118I20UN	20	0.050	1.181	0.657	0.220	•
MT TIDC 1118 I18UN	MTTIDC1118I18UN	18	0.055	1.181	0.657	0.220	•
MT TIDC 1118 I16UN	MTTIDC1118I16UN	16	0.062	1.181	0.657	0.220	•
MT TIDC 1118 I14UN	MTTIDC1118I14UN	14	0.071	1.181	0.657	0.220	•
MT TIDC 1118 I12UN	MTTIDC1118I12UN	12	0.083	1.181	0.657	0.220	•
MT TIDC 1118 I10UN	MTTIDC1118I10UN	10	0.100	1.181	0.657	0.220	•
MT TIDC 1118 I8UN	MTTIDC1118I8UN	8	0.125	1.181	0.657	0.220	•
MT TIDC 1118 I6UN	MTTIDC1118I6UN	6	0.166	1.181	0.657	0.220	•
MT TIDC 1118 I5UN	MTTIDC1118I5UN	5	0.200	1.181	0.657	0.220	•
MT TIDC 1574 I16UN	MTTIDC1574I16UN	16	0.062	1.575	0.819	0.252	•
MT TIDC 1574 I14UN	MTTIDC1574I14UN	14	0.071	1.575	0.819	0.252	•
MT TIDC 1574 I12UN	MTTIDC1574I12UN	12	0.083	1.575	0.819	0.252	•
MT TIDC 1574 I10UN	MTTIDC1574I10UN	10	0.100	1.575	0.819	0.252	•
MT TIDC 1574 I8UN	MTTIDC1574I8UN	8	0.125	1.575	0.819	0.252	•
MT TIDC 1574 I6UN	MTTIDC1574I6UN	6	0.166	1.575	0.819	0.252	•
MT TIDC 1574 I4.5UN	MTTIDC1574I4.5UN	4.5	0.222	1.575	0.819	0.252	•
MT TIDC 1574 I4UN	MTTIDC1574I4UN	4	0.250	1.575	0.819	0.252	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

UN Threading

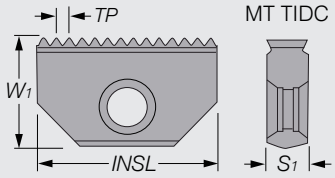
MT TIDC

External

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 551 E32UN	MTTIDC551E32UN	32	0.031	0.551	0.311	0.126	•
MT TIDC 551 E28UN	MTTIDC551E28UN	28	0.035	0.551	0.311	0.126	•
MT TIDC 551 E24UN	MTTIDC551E24UN	24	0.041	0.551	0.311	0.126	•
MT TIDC 551 E20UN	MTTIDC551E20UN	20	0.050	0.551	0.311	0.126	•
MT TIDC 551 E18UN	MTTIDC551E18UN	18	0.055	0.551	0.311	0.126	•
MT TIDC 551 E16UN	MTTIDC551E16UN	16	0.062	0.551	0.311	0.126	•
MT TIDC 551 E14UN	MTTIDC551E14UN	14	0.071	0.551	0.311	0.126	•
MT TIDC 551 E12UN	MTTIDC551E12UN	12	0.083	0.551	0.311	0.126	•
MT TIDC 826 E24UN	MTTIDC826E24UN	24	0.041	0.827	0.496	0.189	•
MT TIDC 826 E20UN	MTTIDC826E20UN	20	0.050	0.827	0.496	0.189	•
MT TIDC 826 E18UN	MTTIDC826E18UN	18	0.055	0.827	0.496	0.189	•
MT TIDC 826 E16UN	MTTIDC826E16UN	16	0.062	0.827	0.496	0.189	•
MT TIDC 826 E14UN	MTTIDC826E14UN	14	0.071	0.827	0.496	0.189	•
MT TIDC 826 E12UN	MTTIDC826E12UN	12	0.083	0.827	0.496	0.189	•
MT TIDC 826 E10UN	MTTIDC826E10UN	10	0.100	0.827	0.496	0.189	•
MT TIDC 1118 E20UN	MTTIDC1118E20UN	20	0.050	1.181	0.657	0.220	•
MT TIDC 1118 E18UN	MTTIDC1118E18UN	18	0.055	1.181	0.657	0.220	•
MT TIDC 1118 E16UN	MTTIDC1118E16UN	16	0.062	1.181	0.657	0.220	•
MT TIDC 1118 E14UN	MTTIDC1118E14UN	14	0.071	1.181	0.657	0.220	•
MT TIDC 1118 E12UN	MTTIDC1118E12UN	12	0.083	1.181	0.657	0.220	•
MT TIDC 1118 E10UN	MTTIDC1118E10UN	10	0.100	1.181	0.657	0.220	•
MT TIDC 1118 E8UN	MTTIDC1118E8UN	8	0.125	1.181	0.657	0.220	•
MT TIDC 1118 E6UN	MTTIDC1118E6UN	6	0.166	1.181	0.657	0.220	•
MT TIDC 1574 E16UN	MTTIDC1574E16UN	16	0.062	1.575	0.819	0.252	•
MT TIDC 1574 E14UN	MTTIDC1574E14UN	14	0.071	1.575	0.819	0.252	•
MT TIDC 1574 E12UN	MTTIDC1574E12UN	12	0.083	1.575	0.819	0.252	•
MT TIDC 1574 E10UN	MTTIDC1574E10UN	10	0.100	1.575	0.819	0.252	•
MT TIDC 1574 E8UN	MTTIDC1574E8UN	8	0.125	1.575	0.819	0.252	•
MT TIDC 1574 E6UN	MTTIDC1574E6UN	6	0.166	1.575	0.819	0.252	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

UN Threading

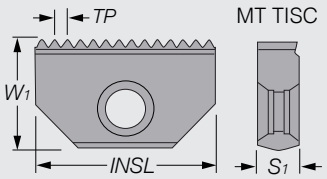
MT TISC

Internal

Single-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 I32UN	MTTISC472I32UN	32	0.031	0.472	0.256	0.114	•
MT TISC 472 I28UN	MTTISC472I28UN	28	0.035	0.472	0.256	0.114	•
MT TISC 472 I24UN	MTTISC472I24UN	24	0.041	0.472	0.256	0.114	•
MT TISC 472 I20UN	MTTISC472I20UN	20	0.050	0.472	0.256	0.114	•
MT TISC 472 I18UN	MTTISC472I18UN	18	0.055	0.472	0.256	0.114	•
MT TISC 472 I16UN	MTTISC472I16UN	16	0.062	0.472	0.256	0.114	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

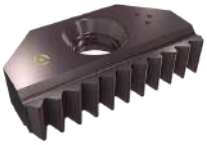
Whitworth Threading

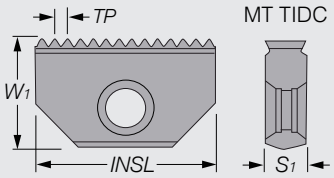
MT TIDC/TISC

internal/External

Double-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIDC 551 24W	MTTIDC55124W	24	0.041	0.551	0.311	0.126	•
MT TIDC 551 20W	MTTIDC55120W	20	0.050	0.551	0.311	0.126	•
MT TIDC 551 19W	MTTIDC55119W	19	0.052	0.551	0.311	0.126	•
MT TIDC 551 16W	MTTIDC55116W	16	0.062	0.551	0.311	0.126	•
MT TIDC 551 14W	MTTIDC55114W	14	0.071	0.551	0.311	0.126	•
MT TIDC 826 20W	MTTIDC82620W	20	0.050	0.827	0.496	0.189	•
MT TIDC 826 19W	MTTIDC82619W	19	0.052	0.827	0.496	0.189	•
MT TIDC 826 16W	MTTIDC82616W	16	0.062	0.827	0.496	0.189	•
MT TIDC 826 14W	MTTIDC82614W	14	0.071	0.827	0.496	0.189	•
MT TIDC 826 11W	MTTIDC82611W	11	0.090	0.827	0.496	0.189	•
MT TIDC 1118 16W	MTTIDC111816W	16	0.062	1.181	0.657	0.220	•
MT TIDC 1118 14W	MTTIDC111814W	14	0.071	1.181	0.657	0.220	•
MT TIDC 1118 11W	MTTIDC111811W	11	0.090	1.181	0.657	0.220	•
MT TIDC 1574 11W	MTTIDC157411W	11	0.090	1.575	0.819	0.252	•
MT TIDC 1547 8W	MTTIDC15748W	8	0.125	1.575	0.819	0.252	•

Single-Sided

Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 19W	MTTISC47219W	19	0.052	0.472	0.256	0.114	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

American Buttress Threading

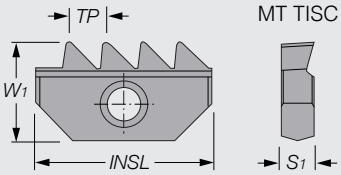
MT TISC

Internal

Single-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 826 16ABUT	MTTISC82616ABUT	16	0.062	0.827	0.472	0.185	•
MT TISC 826 12ABUT	MTTISC82612ABUT	12	0.083	0.827	0.472	0.185	•
MT TISC 826 10ABUT	MTTISC82610ABUT	10	0.100	0.827	0.472	0.185	•
MT TISC 826 8ABUT	MTTISC8268ABUT	8	0.125	0.827	0.472	0.185	•
MT TISC 1118 16ABUT	MTTISC111816ABUT	16	0.062	1.181	0.657	0.220	•
MT TISC 1118 12ABUT	MTTISC111812ABUT	12	0.083	1.181	0.657	0.220	•
MT TISC 1118 10ABUT	MTTISC111810ABUT	10	0.100	1.181	0.657	0.220	•
MT TISC 1118 8ABUT	MTTISC11188ABUT	8	0.125	1.181	0.657	0.220	•
MT TISC 1118 6ABUT	MTTISC11186ABUT	6	0.166	1.181	0.657	0.220	•
MT TISC 1118 4ABUT	MTTISC11184ABUT	4	0.250	1.181	0.657	0.220	•
MT TISC 1574 4ABUT	MTTISC15744ABUT	4	0.250	1.575	0.787	0.248	•

BSPT Threading

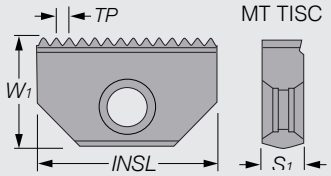
MT TISC

Internal/External

Single-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 19BSPT	MTTISC47219BSPT	19	0.052	0.472	0.256	0.114	•
MT TISC 551 19BSPT	MTTISC55119BSPT	19	0.052	0.551	0.311	0.126	•
MT TISC 551 14BSPT	MTTISC55114BSPT	14	0.071	0.551	0.311	0.126	•
MT TISC 826 14BSPT	MTTISC82614BSPT	14	0.071	0.827	0.496	0.189	•
MT TISC 826 11BSPT	MTTISC82611BSPT	11	0.090	0.827	0.496	0.189	•
MT TISC 1118 11BSPT	MTTISC111811BSPT	11	0.090	1.181	0.657	0.220	•
MY TISC 1574 11BSPT	MTTISC157411BSPT	11	0.090	1.575	0.819	0.252	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

NPT Threading

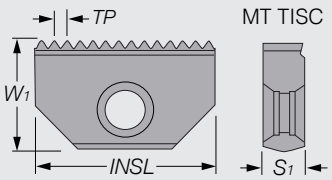
MT TISC

Internal/External

Single-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 18NPT	MTTISC47218NPT	18	0.055	0.472	0.256	0.114	•
MT TISC 551 18NPT	MTTISC55118NPT	18	0.055	0.551	0.311	0.126	•
MT TISC 551 14NPT	MTTISC55114NPT	14	0.071	0.551	0.311	0.126	•
MT TISC 826 14NPT	MTTISC82614NPT	14	0.071	0.827	0.496	0.189	•
MT TISC 826 11.5NPT	MTTISC82611.5NPT	11.5	0.086	0.827	0.496	0.189	•
MT TISC 1118 11.5NPT	MTTISC111811.5NPT	11.5	0.086	1.181	0.657	0.220	•
MT TISC 1118 8NPT	MTTISC11188NPT	8	0.125	1.181	0.657	0.220	•
MT TISC 1574 11.5NPT	MTTISC157411.5NPT	11.5	0.086	1.575	0.819	0.252	•
MT TISC 1574 8NPT	MTTISC15748NPT	8	0.125	1.575	0.819	0.252	•

NPTF Threading

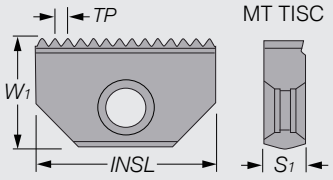
MT TISC

Internal/External

Single-Sided

See page 72-75 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TISC 472 18NPTF	MTTISC47218NPTF	18	0.055	0.472	0.256	0.114	•
MT TISC 551 18NPTF	MTTISC55118NPTF	18	0.055	0.551	0.311	0.126	•
MT TISC 551 14NPTF	MTTISC55114NPTF	14	0.071	0.551	0.311	0.126	•
MT TISC 826 14NPTF	MTTISC82614NPTF	14	0.071	0.827	0.496	0.189	•
MT TISC 826 11.5NPTF	MTTISC82611.5NPTF	11.5	0.086	0.827	0.496	0.189	•
MT TISC 1118 11.5NPTF	MTTISC111811.5NPTF	11.5	0.086	1.181	0.657	0.220	•
MT TISC 1118 8NPTF	MTTISC11188NPTF	8	0.125	1.181	0.657	0.220	•
MT TISC 1574 11.5NPTF	MTTISC157411.5NPTF	11.5	0.086	1.575	0.819	0.252	•
MT TISC 1574 8NPTF	MTTISC15748NPTF	8	0.125	1.575	0.819	0.252	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

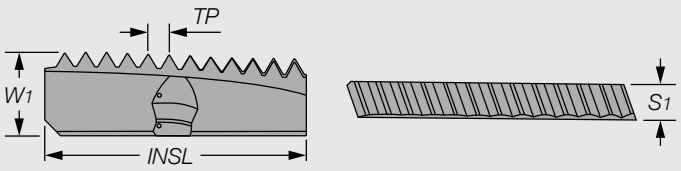
Helical BSPT Threading

MT TIH

Internal/External

See page 71 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIH 905 11 BSPT	MTTIH90511BSPT	11	0.090	1.063	0.315	0.138	•
MT TIH 1259 11 BSPT	MTTIH125911BSPT	11	0.090	1.260	0.354	0.157	•
MT TIH 1771 11 BSPT	MTTIH177111BSPT	11	0.090	1.475	0.469	0.197	•
MT TIH 2480 11 BSPT	MTTIH248011BSPT	11	0.090	1.496	0.469	0.197	•

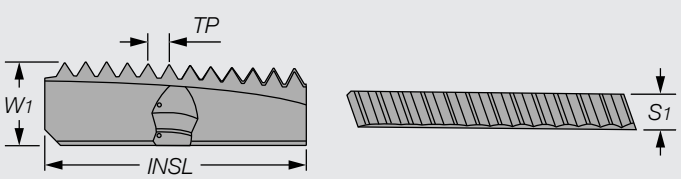
Helical ISO Threading

MT TIH

External

See page 71 for related tools





Description	EDP Code	TP	INSL	W_1	S_1	AC22
MT TIH 905 E 3.0 ISO	MTTIH905E30ISO	3.0	1.063	0.315	0.138	•
MT TIH 905 E 2.0 ISO	MTTIH905E20ISO	2.0	1.063	0.315	0.138	•
MT TIH 905 E 1.5 ISO	MTTIH905E15ISO	1.5	1.063	0.315	0.138	•
MT TIH 905 E 1.0 ISO	MTTIH905E10ISO	1.0	1.063	0.315	0.138	•
MT TIH 1259 E 4.0 ISO	MTTIH1259E40ISO	4.0	1.260	0.354	0.157	•
MT TIH 1259 E 3.0 ISO	MTTIH1259E30ISO	3.0	1.260	0.354	0.157	•
MT TIH 1259 E 2.0 ISO	MTTIH1259E20ISO	2.0	1.260	0.354	0.157	•
MT TIH 1259 E 1.5 ISO	MTTIH1259E15ISO	1.5	1.260	0.354	0.157	•
MT TIH 1771 E 2.0 ISO	MTTIH1771E20ISO	2.0	1.475	0.469	0.197	•
MT TIH 1771 E 1.5 ISO	MTTIH1771E15ISO	1.5	1.475	0.469	0.197	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

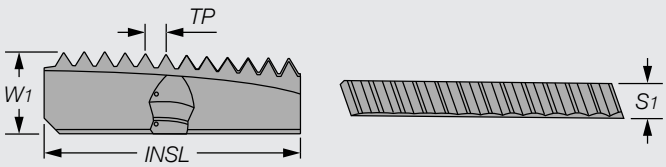
Helical ISO Threading

MT TIH

Internal

See page 71 for related tools





Description	EDP Code	TP	INSL	W_1	S_1	AC22
MT TIH 905 I 4.0 ISO	MTTIH905I40ISO	4.0	1.063	0.315	0.138	•
MT TIH 905 I 3.5 ISO	MTTIH905I35ISO	3.5	1.063	0.315	0.138	•
MT TIH 905 I 3.0 ISO	MTTIH905I30ISO	3.0	1.063	0.315	0.138	•
MT TIH 905 I 2.0 ISO	MTTIH905I20ISO	2.0	1.063	0.315	0.138	•
MT TIH 905 I 1.5 ISO	MTTIH905I15ISO	1.5	1.063	0.315	0.138	•
MT TIH 905 I 1.0 ISO	MTTIH905I10ISO	1.0	1.063	0.315	0.138	•
MT TIH 1259 I 5.0 ISO	MTTIH1259I50ISO	5.0	1.260	0.354	0.157	•
MT TIH 1259 I 4.5 ISO	MTTIH1259I45ISO	4.5	1.260	0.354	0.157	•
MT TIH 1259 I 4.0 ISO	MTTIH1259I40ISO	4.0	1.260	0.354	0.157	•
MT TIH 1259 I 3.5 ISO	MTTIH1259I35ISO	3.5	1.260	0.354	0.157	•
MT TIH 1259 I 3.0 ISO	MTTIH1259I30ISO	3.0	1.260	0.354	0.157	•
MT TIH 1259 I 2.0 ISO	MTTIH1259I20ISO	2.0	1.260	0.354	0.157	•
MT TIH 1259 I 1.5 ISO	MTTIH1259I15ISO	1.5	1.260	0.354	0.157	•
MT TIH 1259 I 1.0 ISO	MTTIH1259I10ISO	1.0	1.260	0.354	0.157	•
MT TIH 1771 45 I 6.0 ISO	MTTIH177145I60ISO	6.0	1.457	0.469	0.197	•
MT TIH 1771 I 5.5 ISO	MTTIH1771I55ISO	5.5	1.457	0.469	0.197	•
MT TIH 1771 I 5.0 ISO	MTTIH1771I50ISO	5.0	1.457	0.469	0.197	•
MT TIH 1771 I 4.5 ISO	MTTIH1771I45ISO	4.5	1.457	0.469	0.197	•
MT TIH 1771 I 4.0 ISO	MTTIH1771I40ISO	4.0	1.457	0.469	0.197	•
MT TIH 1771 I 3.5 ISO	MTTIH1771I35ISO	3.5	1.457	0.469	0.197	•
MT TIH 1771 I 3.0 ISO	MTTIH1771I30ISO	3.0	1.457	0.469	0.197	•
MT TIH 1771 I 2.0 ISO	MTTIH1771I20ISO	2.0	1.457	0.469	0.197	•
MT TIH 1771 I 1.5 ISO	MTTIH1771I15ISO	1.5	1.457	0.469	0.197	•
MT TIH 2480 I 6.0 ISO	MTTIH2480I60ISO	6.0	1.496	0.469	0.197	•
MT TIH 2480 I 4.0 ISO	MTTIH2480I40ISO	4.0	1.496	0.469	0.197	•
MT TIH 2480 I 3.0 ISO	MTTIH2480I30ISO	3.0	1.496	0.469	0.197	•
MT TIH 2480 I 2.0 ISO	MTTIH2480I20ISO	2.0	1.496	0.469	0.197	•
MT TIH 2480 I 1.5 ISO	MTTIH2480I15ISO	1.5	1.496	0.469	0.197	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

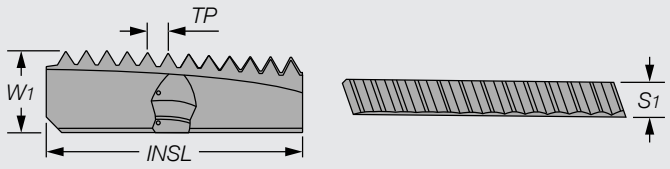
Helical NPT Threading

MT TIH

Internal/External

See page 71 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIH 905 11.5 NPT	MTTIH905115NPT	11.5	0.086	1.063	0.315	0.138	•
MT TIH 1259 11.5 NPT	MTTIH1259115NPT	11.5	0.086	1.260	0.354	0.157	•
MT TIH 1771 11.5 NPT	MTTIH1771115NPT	11.5	0.086	1.457	0.469	0.197	•
MT TIH 1771 8 NPT	MTTIH17718NPT	8	0.125	1.475	0.469	0.197	•
MT TIH 2480 11.5 NPT	MTTIH2480115NPT	11.5	0.086	1.496	0.469	0.197	•
MT TIH 2480 8 NPT	MTTIH24808NPT	8	0.125	1.496	0.469	0.197	•

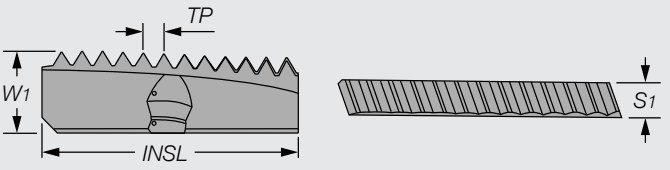
Helical NPT Threading

MT TIH

Internal/External

See page 71 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIH 905 11.5 NPTF	MTTIH905115NPTF	11.5	0.086	1.063	0.315	0.138	•
MT TIH 1259 11.5 NPTF	MTTIH1259115NPTF	11.5	0.086	1.260	0.354	0.157	•

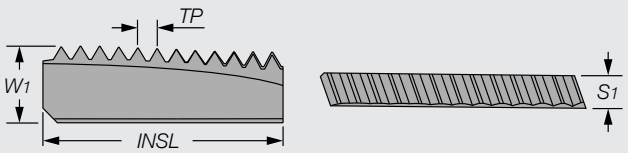
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Helical UN Threading

MT TIH — External

See page 71 for related tools





Description	EDP Code	TPI	INSL	W_1	S_1	AC22
MT TIH 905 E 20 UN	MTTIH905E20UN	20	1.063	0.315	0.138	•
MT TIH 905 E 18 UN	MTTIH905E18UN	18	1.063	0.315	0.138	•
MT TIH 905 E 16 UN	MTTIH905E16UN	16	1.063	0.315	0.138	•
MT TIH 905 E 14 UN	MTTIH905E14UN	14	1.063	0.315	0.138	•
MT TIH 905 E 12 UN	MTTIH905E12UN	12	1.063	0.315	0.138	•
MT TIH 905 E 10 UN	MTTIH905E10UN	10	1.063	0.315	0.138	•
MT TIH 905 E 8 UN	MTTIH905E8UN	8	1.063	0.315	0.138	•
MT TIH 905 E 7 UN	MTTIH905E7UN	7	1.063	0.315	0.138	•
MT TIH 1259 E 24 UN	MTTIH1259E24UN	24	1.260	0.354	0.157	•
MT TIH 1259 E 20 UN	MTTIH1259E20UN	20	1.260	0.354	0.157	•
MT TIH 1259 E 18 UN	MTTIH1259E18UN	18	1.260	0.354	0.157	•
MT TIH 1259 E 16 UN	MTTIH1259E16UN	16	1.260	0.354	0.157	•
MT TIH 1259 E 12 UN	MTTIH1259E12UN	12	1.260	0.354	0.157	•
MT TIH 1259 E 6 UN	MTTIH1259E6UN	6	1.260	0.354	0.157	•
MT TIH 1259 E 8 UN	MTTIH1259E8UN	8	1.260	0.354	0.157	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

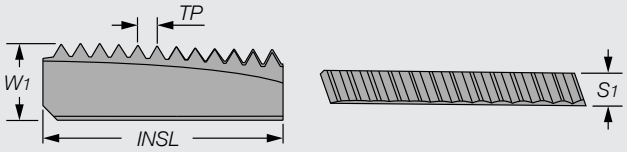
Helical UN Threading

MT TIH

Internal

See page 71 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIH 905 I 32 UN	MTTIH905I32UN	32	0.031	1.063	0.315	0.138	•
MT TIH 905 I 24 UN	MTTIH905I24UN	24	0.041	1.063	0.315	0.138	•
MT TIH 905 I 20 UN	MTTIH905I20UN	20	0.050	1.063	0.315	0.138	•
MT TIH 905 I 18 UN	MTTIH905I18UN	18	0.055	1.063	0.315	0.138	•
MT TIH 905 I 16 UN	MTTIH905I16UN	16	0.062	1.063	0.315	0.138	•
MT TIH 905 I 14 UN	MTTIH905I14UN	14	0.071	1.063	0.315	0.138	•
MT TIH 905 I 12 UN	MTTIH905I12UN	12	0.083	1.063	0.315	0.138	•
MT TIH 905 I 10 UN	MTTIH905I10UN	10	0.100	1.063	0.315	0.138	•
MT TIH 905 I 8 UN	MTTIH905I8UN	8	0.125	1.063	0.315	0.138	•
MT TIH 905 I 7 UN	MTTIH905I7UN	7	0.142	1.063	0.315	0.138	•
MT TIH 1259 I 20 UN	MTTIH1259I20UN	20	0.050	1.260	0.354	0.157	•
MT TIH 1259 I 18 UN	MTTIH1259I18UN	18	0.055	1.260	0.354	0.157	•
MT TIH 1259 I 16 UN	MTTIH1259I16UN	16	0.062	1.260	0.354	0.157	•
MT TIH 1259 I 12 UN	MTTIH1259I12UN	12	0.083	1.260	0.354	0.157	•
MT TIH 1259 I 8 UN	MTTIH1259I8UN	8	0.125	1.260	0.354	0.157	•
MT TIH 1259 I 6 UN	MTTIH1259I6UN	6	0.166	1.260	0.354	0.157	•
MT TIH 1259 I 5 UN	MTTIH1259I5UN	5	0.200	1.260	0.354	0.157	•
MT TIH 1771 I 16 UN	MTTIH1771I16UN	16	0.062	1.457	0.469	0.197	•
MT TIH 1771 I 12 UN	MTTIH1771I12UN	12	0.083	1.457	0.469	0.197	•
MT TIH 1771 I 8 UN	MTTIH1771I8UN	8	0.125	1.457	0.469	0.197	•
MT TIH 1771 I 6 UN	MTTIH1771I6UN	6	0.166	1.457	0.469	0.197	•
MT TIH 1771 I 4.5 UN	MTTIH1771I4.5UN	4.5	0.222	1.457	0.469	0.197	•
MT TIH 1771 I 4 UN	MTTIH1771I4UN	4	0.250	1.457	0.469	0.197	•
MT TIH 2480 I 16 UN	MTTIH2480I16UN	16	0.062	1.496	0.469	0.197	•
MT TIH 2480 I 12 UN	MTTIH2480I12UN	12	0.083	1.496	0.469	0.197	•
MT TIH 2480 I 8 UN	MTTIH2480I8UN	8	0.125	1.496	0.469	0.197	•
MT TIH 2480 I 6 UN	MTTIH2480I6UN	6	0.166	1.496	0.469	0.197	•
MT TIH 2480 I 4 UN	MTTIH2480I4UN	4	0.250	1.496	0.469	0.197	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

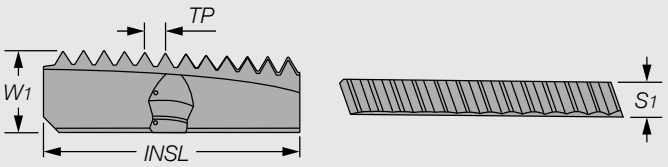
Helical Whitworth Threadmilling

MT TIH

Internal/External

See page 71 for related tools





Description	EDP Code	TPI	TP	INSL	W_1	S_1	AC22
MT TIH 905 14W	MTTIH90514W	14	0.071	1.063	0.315	0.138	•
MT TIH 905 11W	MTTIH90511W	11	0.090	1.063	0.315	0.138	•
MT TIH 1259 14W	MTTIH125914W	14	0.071	1.260	0.354	0.157	•
MT TIH 1259 11W	MTTIH125911W	11	0.090	1.260	0.354	0.157	•
MT TIH 1771 11W	MTTIH177111W	11	0.090	1.457	0.469	0.197	•
MT TIH 2480 11W	MTTIH248011W	11	0.090	1.496	0.469	0.197	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

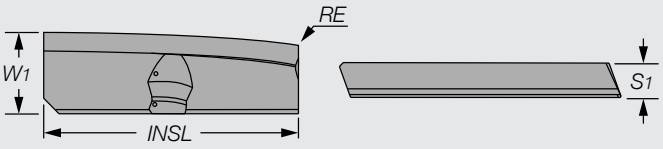
Helical Threadmilling

MT TIH

Long edge finishing insert

See page 71 for related tools





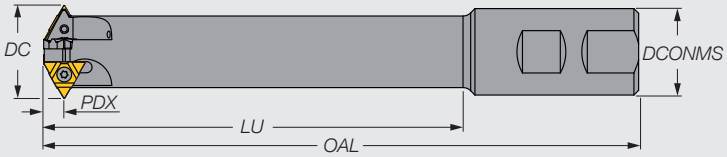
Description	EDP Code	INSL	W_1	S_1	RE	AC22
MT TIH 905F R1.0	MTTIH905FR10	1.063	0.315	0.138	0.039	•
MT TIH 905F R0.5	MTTIH905FR05	1.063	0.315	0.138	0.019	•
MT TIH 905F R0.2	MTTIH905FR02	1.063	0.315	0.138	0.007	•
MT TIH 1259F R1.0	MTTIH1259FR10	1.260	0.354	0.157	0.039	•
MT TIH 1259F R0.5	MTTIH1259FR05	1.260	0.354	0.157	0.019	•
MT TIH 1259F R0.2	MTTIH1259FR02	1.260	0.354	0.157	0.007	•
MT TIH 1771F R2.0	MTTIH1771FR20	1.457	0.469	0.197	0.078	•
MT TIH 1771F R1.5	MTTIH1771FR15	1.457	0.469	0.197	0.059	•
MT TIH 1771F R1.0	MTTIH1771FR10	1.457	0.469	0.197	0.039	•
MT TIH 1771F R0.5	MTTIH1771FR05	1.457	0.469	0.197	0.019	•
MT TIH 1771F R0.2	MTTIH1771FR02	1.457	0.469	0.197	0.007	•
MT TIH 2480F R2.0	MTTIH2480FR20	1.496	0.469	0.197	0.078	•
MT TIH 2480F R1.5	MTTIH2480FR15	1.496	0.469	0.197	0.059	•
MT TIH 2480F R1.0	MTTIH2480FR10	1.496	0.469	0.197	0.039	•
MT TIH 2480F R0.5	MTTIH2480FR05	1.496	0.469	0.197	0.019	•
MT TIH 2480F R0.2	MTTIH2480FR02	1.496	0.469	0.197	0.007	•

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Indexable Helical Threading Endmills

MTSR





Description	EDP Code	DC	DCONMS	LU	OAL	PDX	NOF
MTSR 0580 M11U	MTSR0580M11U	0.580	0.625	2.16	5.90	0.20	1
MTSR 0810 M11U	MTSR0810M11U	0.810	1.000	2.56	5.90	0.20	2
MTSR 0905 M11U	MTSR0905M11U	0.905	1.000	3.46	5.90	0.20	3
MTSR 0925 Q11	MTSR0925Q11	0.925	0.750	-	7.50	0.04	3
MTSR 1220 R16	MTSR1220R16	1.220	1.000	-	8.86	0.07	3
MTSR 1400 R16U	MTSR1400R16U	1.400	1.250	6.10	8.66	0.30	4

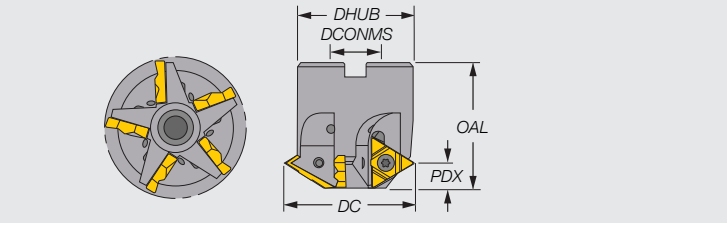
METRIC

Description	EDP Code	DC	DCONMS	LU	OAL	PDX	NOF
MTSR 0009 H12	MTSR0009H12	9.50	20.00	14.00	85.00	12.0	1
MTSR 0021 H21	MTSR0021H21	21.00	20.00	40.00	94.00	21.0	1
MTSR 0023 M11U	MTSR0023M11U	23.00	25.00	88.00	150.00	5.0	3
MTSR 0023 Q11	MTSR0023Q11	23.50	20.00	-	190.00	1.0	3
MTSR 0031 R16	MTSR0031R16	31.00	25.00	-	225.00	1.8	3
MTSR 0035 R16U	MTSR0035R16U	35.50	32.00	155.00	220.00	7.6	4

Shell Mill

MTSR





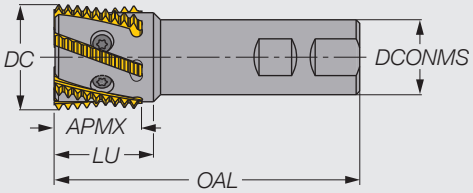
Description	EDP Code	DC	DCONMS	OAL	NOF	TPIX (TPI MAX)	TPIN (TPI MIN)	DHUB
MTSR 1710 B16U-5	MTSR1710B16U5	1.71	0.50	1.50	5	8	4	1.390

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Endmill for Helical Threading Inserts

MTSRH





Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU
MTSRH 091H23-2	MTSRH091H232	0.91	1.00	1.063	4.50	2	2.00
MTSRH 126H32-5	MTSRH126H325	1.26	1.25	1.260	5.00	5	2.36
MTSRH 177H45-6-N	MTSRH177H456	1.77	1.25	1.457	5.00	6	-
MTSRH 32-5-N	MTSRH325N	1.26	1.26	1.2598	5.118	5	2.3622

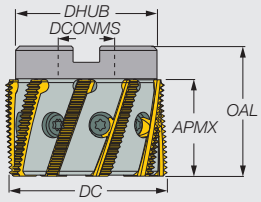
METRIC

Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU
MTSRH 23-2	MTSRH232	23.0	25.0	27.0	110.0	2	50.0

Shell Mill for Helical Threading Inserts

MTSRH





Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU	DHUB
MTSRH 248H63-9-N	MTSRH248H639	2.48	0.75	1.496	1.968	9	2.03	2.03

METRIC

Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU	DHUB
MTSRH 32-5M	MTSRH325M	32.0	16.0	32.0	52.0	5	26.0	
MTSRH 45-6M-N	MTSRH456M	45.0	22.0	37.0	60.0	6	38.0	
MTSRH 63-9-N	MTSRH639N	63.0	22.0	38.0	50.0	9	-	51.56

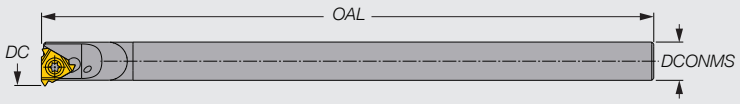
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Indexable Threading Endmill

MTET

Carbide Cylindrical Shank with coolant hole





Description	EDP Code	DC	DCONMS	OAL	NOF
MTET D.35-1-C.25C-08	MTETD.351C.25C08	0.35	0.250	4.13	1
MTET D.50-1-C.38C-11	MTETD.501C.38C11	0.25	0.375	6.00	1

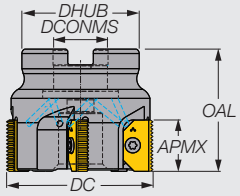
METRIC

Description	EDP Code	DC	DCONMS	OAL	NOF
MTET D13.2-1-C10C-11	MTETD13.21C10C11	13.2	10.00	150.00	1
MTET D7.0-1-C5C-06	MTETD7.01C5C06	7.0	5.00	63.00	1
MTET D8.8-1-C6C-08	MTETD8.81C6C08	8.8	100.00	100.00	1

Multi-Insert Shell Mill

MTF (METRIC)





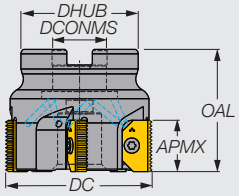
Description	EDP Code	DC	DCONMS	APMX	OAL	NOF
MTF D063-4-22-30	MTFD06342230	63.00	22.00	30.00	50.00	4
MTF D063-5-22-21	MTFD06352221	63.00	22.00	21.00	50.00	5
MTF D080-4-27-30	MTFD08042730	80.00	27.00	30.00	50.00	4
MTF D080-4-27-40	MTFD08042740	80.00	27.00	40.00	60.00	4
MTF D100-4-32-30	MTFD10043230	100.00	32.00	30.00	50.00	4
MTF D100-4-32-40	MTFD10043240	100.00	32.00	40.00	60.00	4
MTF D100-8-32-30	MTFD10083230	100.00	32.00	30.00	50.00	8

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Multi-Insert Shell Mills

MTF





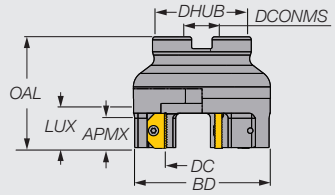
Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	DHUB
MTF D2.50-4-.75-30	MTFD2.504.7530	2.50	0.750	1.181	2.00	4	1.850
MTF D2.50-5-.75-21	MTFD2.505.7521	2.50	0.750	0.827	2.00	5	1.693
MTF D3.15-4-1.00-40	MTFD3.1541.0040	3.15	1.000	1.575	2.50	4	2.250
MTF D3.94-8-1.25-30	MTFD3.9481.2530	3.94	1.250	1.181	2.362	8	2.874
MTF D4.00-4-1.25-30	MTFD4.0041.2530	4.00	1.250	1.181	2.000	4	2.874
MTF D4.00-4-1.25-40	MTFD4.0041.2540	4.00	1.250	1.575	2.500	4	2.874
MTF D4.00-8-1.25-30	MTFD4.0081.2530	4.00	1.250	1.181	2.000	8	2.874

Multi-Tooth Shell Mill

MTFLE

External





Description	EDP Code	DC	DCONMS	BD	OAL	LUX	APMX	DHUB
MTFLE D0.75-3-0.75-21	MTFLED0.7530.7521	0.750	0.750	2.250	2.500	1.11	0.827	1.850
MTFLE D0.75-4-0.75-21	MTFLED0.7540.7521	0.750	0.750	2.250	2.500	1.11	0.827	1.850
MTFLE D1.19-3-0.75-21	MTFLED1.1930.7521	1.190	0.750	2.690	2.500	1.11	0.827	2.080
MTFLE D1.75-4-1.00-21	MTFLED1.7541.021	1.750	1.000	3.260	2.750	1.18	0.827	2.320

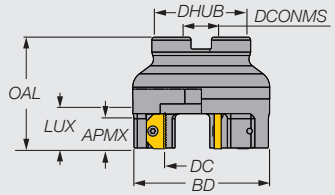
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Multi-Tooth Shell Mill

MTFLE (METRIC)

External





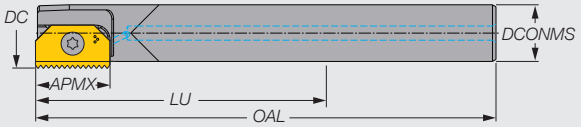
Description	EDP Code	DC	DCONMS	BD	OAL	LUX	APMX	DHUB
MTFLE D20-3-22-21	MTFLED2032221	20.00	22.00	58.20	63.00	27.00	21.00	48.00
MTFLE D20-4-22-21	MTFLED2042221	20.00	22.00	58.20	63.00	27.00	21.00	48.00
MTFLE D30-3-22-21	MTFLED3032221	30.00	22.00	68.20	63.00	27.00	21.00	48.00
MTFLE D45-4-27-21	MTFLED4542721	45.00	27.00	83.20	67.00	27.00	21.00	60.00

Indexable Threading Endmills

MTE

Carbide Shank





Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU
MTE D0.39-1-C.312C-12	MTED0.391C.312C12	0.39	0.312	0.472	5.125	1	3.25
MTE D0.50-1-C.375C-14	MTED0.501C.375C14	0.50	0.375	0.551	6.126	1	4.85
MTE D0.62-1-C.500C-14	MTED0.621C.500C14	0.62	0.500	0.551	7.05	1	5.77
MTE D0.82-1-C.625-21-B	MTED0.821C.625C21B	0.82	0.625	0.827	8.12	1	6.65

METRIC

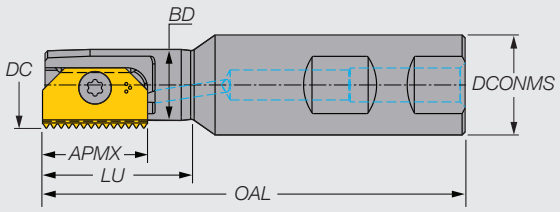
Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU
MTE D09.9-1-C08C-12	MTED09.91C08C12	13.7	8	14.0	110.0	1	94.0
MTE D13.7-1-C10C-14	MTED13.71C10C14	13.7	10	14.0	110.0	1	77.0
MTE D13.7-1-C10C-14-B	MTED13.71C10C14B	13.7	10	14.0	153.5	1	120.0
MTE D15.2-1-C12C-14	MTED15.21C12C14	15.2	12	14.0	182.3	1	139.0
MTE D21-1-C16C-21	MTED211C16C21	21.0	16	21.0	130.0	1	86.6
MTE D21-1-C16C-21-B	MTED211C16C21B	21.0	16	21.0	206.3	1	163.0
MTE D27-1-C20C-30	MTED271C20C30	27.0	20	30.0	263.0	1	204.0

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Indexable Threading Endmills

MTE





Description	EDP Code	DC	DCONMS	APMX	OAL	NOF	LU	BD
MTE D0.375-1-W0.75-12	MTED0.3751W0.7512	0.375	0.750	0.472	3.35	1	0.60	0.300
MTE D0.39-1-W0.75-12	MTED0.391W0.7512	0.390	0.750	0.472	3.35	1	0.64	0.300
MTE D0.50-1-W0.75-14	MTED0.501W0.7514	0.500	0.750	0.551	2.95	1	0.70	0.370
MTE D0.54-1-W0.75-14	MTED0.541W0.7514	0.540	0.750	0.551	2.98	1	0.77	0.380
MTE D0.57-1-W0.75-14	MTED0.571W0.7514	0.570	0.750	0.551	3.20	1	1.00	0.410
MTE D0.67-1-W0.75-14	MTED0.671W0.7514	0.670	0.750	0.551	3.35	1	1.18	0.512
MTE D0.79-1-W0.75-21	MTED0.791W0.7521	0.790	0.750	0.827	3.70	1	1.57	0.590
MTE D0.79-2-W0.75-14	MTED0.792W0.7514	0.790	0.750	0.551	3.66	2	1.54	0.630
MTE D0.94-1-W0.75-21	MTED0.941W0.7521	0.940	0.750	0.827	5.00	1	2.83	-
MTE D1.16-1-W1.00-30	MTED1.161W1.0030	1.156	1.000	1.181	4.25	1	1.96	0.874
MTE D1.18-2-W1.00-21	MTED1.182W1.0021	1.156	1.000	1.181	4.25	1	1.96	0.874
MTE D1.25-1-W1.00-30	MTED1.251W1.0030	1.250	1.000	1.181	6.00	1	3.58	-
MTE D1.50-1-W1.25-30	MTED1.501W1.2530	1.500	1.250	1.181	6.00	1	3.58	-
MTE D1.56-2-W1.25-30	MTED1.562W1.2530	1.560	1.250	1.181	5.125	2	2.84	1.180
MTE D1.75-1-W1.50-40	MTED1.751W1.5040	1.750	1.500	1.575	6.00	1	3.31	1.380
MTE D2.00-2-W1.50-40	MTED2.002W1.5040	2.00	1.500	1.575	6.00	2	3.35	1.480

METRIC

MTE D09.5-1-W20-12	MTED09.51W2012	9.50	20.00	12.00	85.00	1	15.50	7.50
MTE D09.9-1-W20-12	MTED09.91W2012	9.90	20.00	12.00	85.00	1	16.00	7.50
MTE D12.2-1-W20-14	MTED12.21W2014	12.20	20.00	14.00	75.00	1	20.00	8.75
MTE D14.5-1-W20-14	MTED14.51W2014	14.50	20.00	14.00	85.00	1	27.10	10.80
MTE D17.0-1-W20-14	MTED17.01W2014	17.00	20.00	14.00	85.00	1	30.00	12.80
MTE D18-1-W20-21	MTED181W2021	18.50	20.00	21.00	85.00	1	30.00	14.20
MTE D20.0-2-W20-14	MTED20.02W2014	20.00	20.00	14.00	93.00	2	41.00	16.00
MTE D21-1-W20-21	MTED211W2021	21.00	20.00	21.00	94.00	1	40.00	15.90
MTE D25-1-W20-21	MTED251W2021	25.00	20.00	21.00	115.00	1	61.00	20.00
MTE D29-1-W25-30	MTED291W2530	29.00	25.00	30.00	110.00	1	50.00	22.20
MTE D30-2-W25-21	MTED302W2521	30.00	25.00	21.00	108.00	2	-	-
MTE D31-1-W25-30	MTED311W2530	31.00	25.00	30.00	150.00	1	90.00	25.00
MTE D38-1-W32-30	MTED381W3230	38.00	32.00	30.00	150.00	1	86.00	32.00
MTE D40-2-W32-30	MTED402W3230	40.00	32.00	30.00	130.00	2	70.00	30.00
MTE D48-1-W40-40	MTED481W4040	48.00	40.00	40.00	153.00	1	78.00	35.00
MTE D48-1-W40-40B	MTED481W4040B	48.00	40.00	40.00	210.00	1	138.00	36.50
MTE D50-2-W40-40	MTED502W4040	50.00	40.00	40.00	153.00	2	78.00	38.00

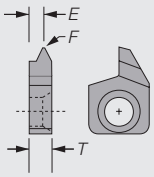
MICROCUT
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Bantam Series Threadmilling 60° V

BNVR

Circular Interpolating - Threadmilling



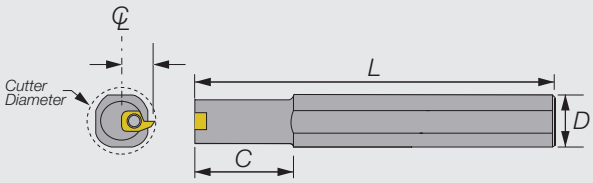


Description	EDP Code	TPI	F	E	T	GP22R	GP4R
BNVR-60	9BNV60R	18-40	.003F	.095	.137	•	•

BBC

Circular Interpolating - Threadmilling & Groovemilling





Description	EDP Code	Stk	Material	Insert	L	D	C	Min. Dia.	Cutter Dia	Screw
BBC-516S	9BC516S	•	Steel	BN_R/L	5.000	.500	1.250	.800	.516	TS25
BBC-516HM	9BC516HM	•	Heavy Metal	BN_R/L	5.000	.500	1.500	.800	.516	TS25

*TS25 screw uses K2 wrench

SPARE PARTS

Description	Screw	Wrench
BBC...	TS25	T-8 TORX

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ADVANTAGES: Some of the many advantages include:

- Right or left-handed threads can be produced using the same tooling, and typically, there is no need to change the tool for production of different thread diameters. One tool can be used to machine parts of various thread diameters.
- Long thread lengths can be produced in one pass while maintaining a reduced load on the machine spindle.
- Highly efficient at machining difficult to cut materials.
- Allows for threading next to the bottom of blind hole with no thread relief required.
- Yields excellent thread surface finish.
- Excellent repeatability when changing/replacing cutter.
- Easy and efficient machining of asymmetric parts in CNC milling machining centers regardless of size.

TOOL-FLO offers a wide range of cutter diameters for all types of threads.

The principle of thread milling production is based on the following: The cutter is located parallel to the part axis along the required thread. The cutter rotates around itself and enters the part radially or tangentially until reaching the required depth depending on the thread type.

Simultaneously, rotary motion of the cutter around its axis moves spirally along the whole length of the thread. The cutter movement along the thread length while completing one revolution around the part is equal to the pitch of the thread.



MTTHREAD

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TOOL-FLO offers a wide range of thread milling cutters that provide solutions for both external and internal threading according to most standards.

The design of the **TOOL-FLO** cutter for thread milling operations contain:

- Solid carbide tools
- Tools with indexable inserts

Products are available in both single-tooth and multi-tooth configurations. Thread profiles are divided into full and partial profile tools. Similar to common milling tools, thread milling cutters are available with either a shell mill (with a central bore) or an endmill (with shank) configuration. **TOOL-FLO**'s products for thread milling operations can be divided into two main groups, each containing several families / lines:

SOLID CARBIDE THREADMILLS

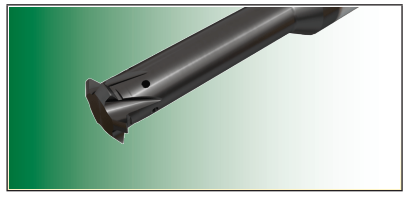
MTEC, MTECB MTECZ, MTECQ



MTECS, MTECSH



MTECI-A60

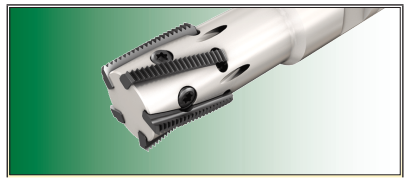


INDEXABLE MILLTHREAD

MTE



MTSRH



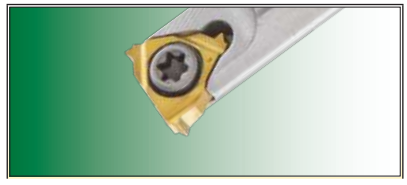
MTSR



MTSR-U



MTET



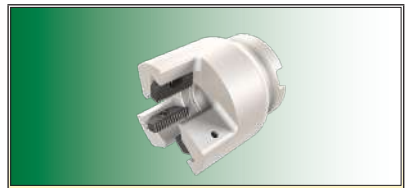
MTF-MULTI



MTSRH



MTFLE



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Solid Carbide Theadmills

TOOL-FLO offers a line of solid carbide endmills for thread milling operations. These tools, with diameters from 0.72 mm to 20 mm by metric system or from 0.045 inch to 0.75 inch by imperial and United States customary systems and varied in form, are intended for machining all types of materials such as: steel, stainless steel, cast iron, etc. The tools differ in cutting geometry, helix angle, number of flutes, length, and grades.

TOOL-FLO catalogs and leaflets contain detailed guidelines for using the solid carbide endmills in thread milling. Commonly, tool selection and cutting data depend on application requirements and workpiece material. Cutting tool manufacturers, from small shops to world-known companies, produce solid carbide endmills of the same sizes that often seem like copies of each other. However, despite a formal resemblance, there is a great difference in performance and tool life of the cutters. The reason lies in carbide grades, grinding technology and cutting geometry features.



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SOLIDTHREAD – Designation Code Key

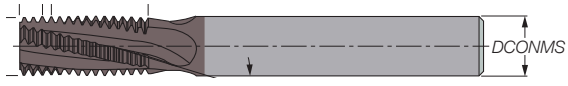
MTEC	B	10	10	D	24	1.0	ISO	AC22
	1	2	3	4	5	6	7	8

MTEC – mill thread endmill carbide

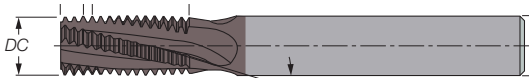
1. Endmill type

☐	—	without coolant channel
B	—	central coolant channel
BA	—	tailored design for aluminum
Z	—	coolant holes in flutes
Q	—	central coolant hole and reduced neck diameter
S	—	for small internal threads for general use
SH	—	for small internal threads in hard materials
I	—	single-point design of cutting head

2. Shank diameter (DCONMS)



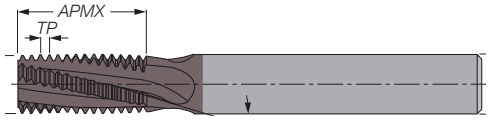
3. Cutting diameter (Dc)



4. No. of flutes

C	—	flutes 3
D	—	flutes 4
E	—	flutes 5
F	—	flutes 6

5. Length of thread (APMX)



6. Thread pitch
value by number

for metric threading in mm
for inch threading in TPI

7. Thread standard

ISO	—	ISO metric
UN	—	unified
W	—	whitworth
BSPT	—	british standard pipe thread
NPT	—	national pipe thread

8. Grade

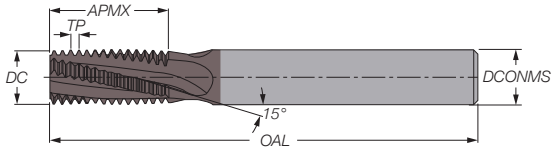
AC22, ZA212

Main Advantages

In most cases the complete thread length can be generated with one axial pass.
Reduced cutting time as a result of a large number of flutes relative to the endmill diameter.
Thread relief in the bottom of a blind hole is not required.
Same endmill can be used for right and left-hand threads.
Excellent surface finish.
Same endmill can be used for a variety of materials.

MTTHREAD
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MTEC

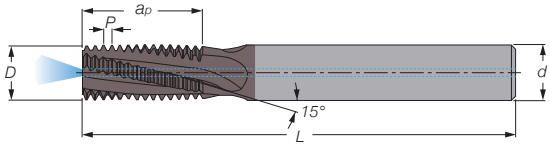


MTEC (Carbide Thread Mills) – Solid carbide thread mills without coolant channels. Suitable for both internal and external thread milling, this family contains flute geometries and grade/coating combinations which can be used in thread production of all types of materials unless excessively gummy/sticky.

MTEC endmills are available with cutting diameter inch sizes ranging from 0.087 to 0.76 or metric sizes ranging from 2.2mm to 20mm. This product family offers solutions with full profiles for most popular thread standards.



MTECB



MTECB (Carbide Thread Mills w/Coolant) – This family of solid carbide thread mills with coolant holes are recommended for internal thread milling in blind holes and usually can also be used for production of external thread milling.

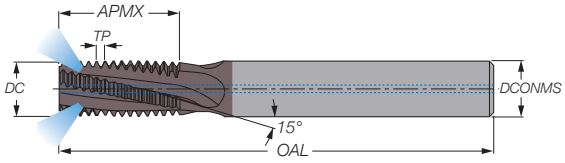
The coolant hole geometry has been shown to improve tool life in all thread milling applications. In blind holes where the chips of especially soft materials such as stainless steel and high-temp alloys tend to be re-cut and stick to the machined area, the coolant stream coming from the bottom in an upward direction flushes the shavings out of the hole efficiently.

MTECB endmills are available with cutting diameter inch sizes ranging from 0.181 to 0.75 or metric sizes ranging from 3.1mm up to 20mm. The MTECB family also contains solutions with full profiles for most popular thread standards.



MTTHREAD
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MTECZ



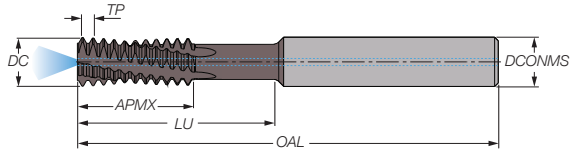
MTECZ (Mill Thread Endmills Carbide Z) - These are internal solid carbide thread mills with internal coolant holes directed to the cutting edges along the flutes. The endmills should be used on machines with coolant through the spindle, for applications of through hole, where the tools with frontal coolant ports (MTECB) are inefficient. The **MTECZ** family of products also can be used for the production of internal threads in blind holes, and for external thread milling applications.

The coolant hole geometry considerably improves tool life as the coolant stream efficiently flushes chips from the cutting area, particularly in soft materials (stainless steel and high-temp alloys) where the shavings tend to be re-cut and stick to the machined area.

MTECZ endmills are available with cutting diameters ranging in size 0.264 to 0.63 inches, or from 4.6 mm up to 16 mm. This product family offers full profile solutions for most popular thread standards.



MTECQ



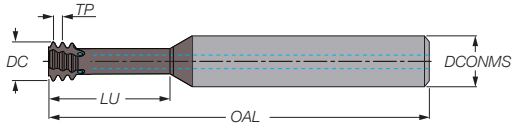
MTECQ (Mill Thread Endmills Carbide Q) – Solid carbide thread mills with coolant holes and reduced neck diameters between the cutting zone and the shank. This product family is recommended for internal deep thread milling and is capable of machining thread lengths up to 3.2 x. DC (thread length = 3.2 x cutting diameter of endmill).

The coolant holes markedly increase tool life in blind holes where the chips of especially sticky materials such as stainless steel and high-temp alloys tend to be re-cut and stick to the machined area. The coolant stream coming from the bottom in an upward direction efficiently flushes the shavings out of the hole.

MTECQ endmills are available with cutting diameters of 12 mm up to 20 mm and offer full profile solutions for ISO standard forms.



MTECS



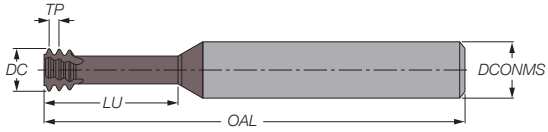
MTECS (Mill Thread Endmills Carbide Short) – Solid carbide thread mills for the production of small internal threads as well as external geometries with BSP/BSF forms. These thread mills feature a short 3-tooth cutting zone with three flutes and additional clearance on the neck between the cutting zone and the shank.

This unique tool design produces very accurate profiles while being highly efficient. The very short cutting zone results in lower cutting forces which minimizes tool deflection. This allows for threads which maintain high levels parallelism for the entire length of cut.

MTECS endmills are available with cutting diameters ranging in size 0.045 to 0.449 inches, or 0.72mm up to 12. The MTECS family of products contain full profile solutions for most popular thread standards.



MTECSH





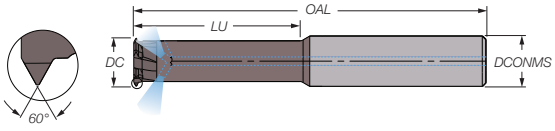
MTECSH (Carbide Thread Mills for Hard Material) – These shorter solid endmills designed for left-hand cut (CNC code M04) are specifically tailored for the production of small internal threads in hard materials. These thread mills feature a short 3-tooth cutting geometry with three flutes, and additional clearance on the neck between the cutting zone and the shank.

This family is suitable for machining hardened materials up to HRC 62. In addition to hardened steels, these thread mills also yield high performance on titanium, nickel-based alloys and stainless steel when used at high speeds and medium feed rates. The short cutting profile of the MTECSH family of tools reduces cutting forces, thus enabling them to machine materials with a higher tensile strength and hardness using relatively high parameters. By designing these tools for left-hand cutting, this enables climb milling, and allows for use in blind holes. The same tool can be used for producing right-hand and left-hand threads.

This unique design produces very precise thread profiles while maintaining an elevated level of performance. The low cutting forces resulting from the 3-tooth profile minimizes deflection ensuring that the threads maintain parallelism for the entire length.

MTECSH endmills are available with cutting diameters in inch sizes ranging from 0.057 to 0.362, or metric sizes ranging from 0.72mm up to 12mm. This line offers contains solutions with full profiles for most popular thread standards.

MTECI







MTECI solid carbide thread mills with coolant exits on the neck are designed for use on the production of internal and external small threads. These thread mills feature a single point cutting edge with additional clearance on the neck between the cutting zone and the shank. This family can machine thread lengths up to 5X DC thread length = 5X cutting diameter of endmill.

MTECI products are recommended for deep internal threads or where long reaches are required on external applications. This family can also machine threads near thin walls. The unique profile and neck designs produce very precise thread profiles while maintaining elevated levels of performance. The low cutting forces resulting from the single-tooth profile minimizes deflection ensuring that the threads maintain parallelism for the entire length. MTECI endmills are available with cutting diameters ranging in size from 0.72mm up to 16mm and offers partial profile solutions of 60° geometries and full profile solutions for ISO thread standards.

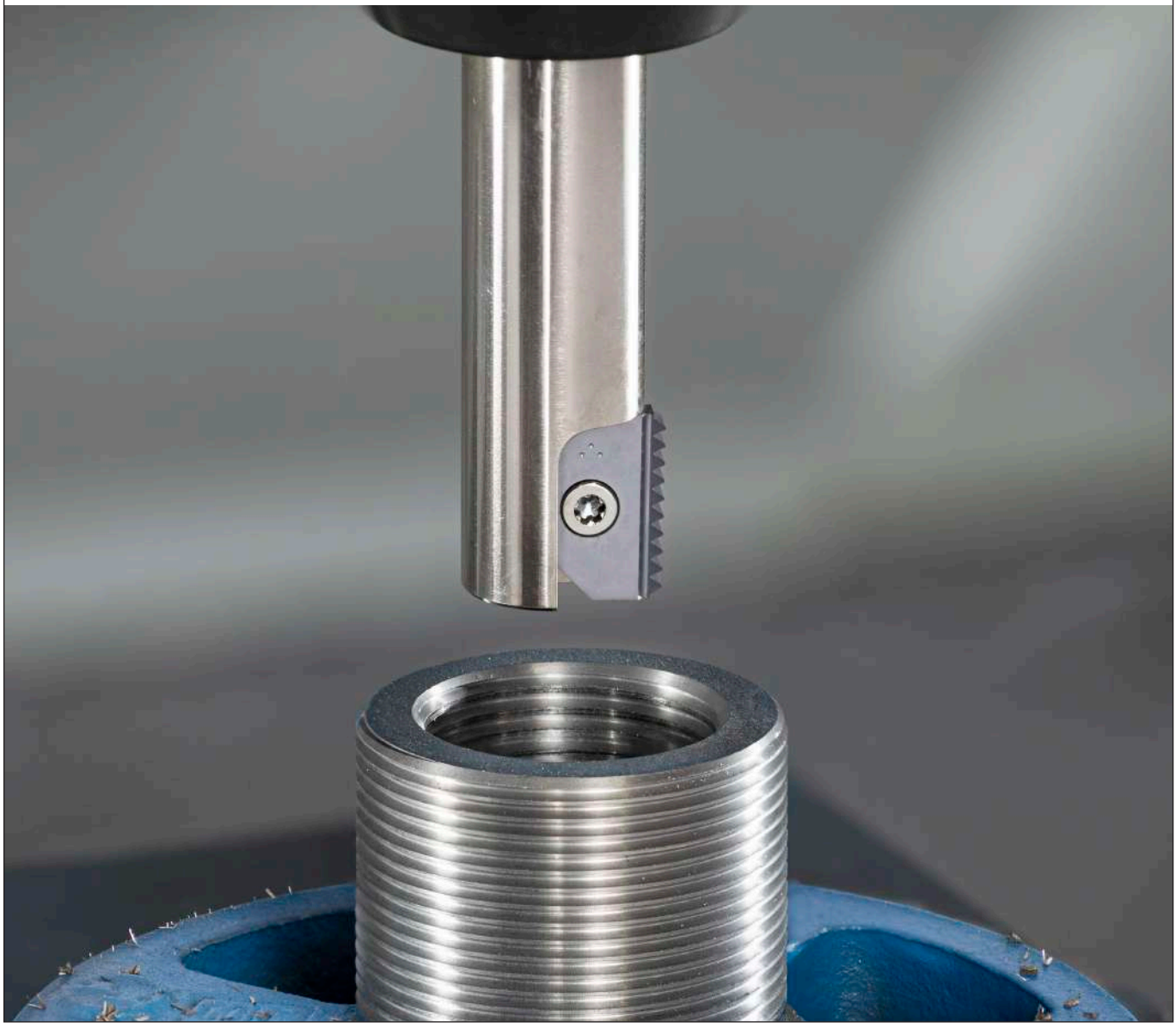
MTTHREAD
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Indexable Carbide Theadmills

MILLTHREAD family is an indexable solution for thread milling applications.
The main features of this indexable solution are cost effectiveness and functionality.

The advantages of indexable thread mills are well documented and continue to prove themselves in a wide array of applications.

The **MILLTHREAD** family includes 5 lines of indexable cutters: MTE, MTF, MTFLE, MTSRH, MTSRH (shell mill).
Each line contains both tool holders and indexable inserts. All tool holders offer internal coolant, precision pocket geometry for consistent insert positioning, and a user-friendly clamping mechanism. TOOL-FLO offers a wide range of inserts which encompasses the most popular thread standards. Suitable for producing threads in different materials, the MILLTHREAD family lines offers solutions for both internal and external, right-hand and left-hand threading.



MTTHREAD
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MTE/MTF Endmill and Shell Mill for Indexable Inserts

MTE type Endmill

MTE endmills can be produced from steel or solid carbide. The solid carbide shanks expand the overhang range and provide improved performance due to their high rigidity.



Endmill (MTE) and shell mill (MTF) are tools for indexable inserts used for thread milling applications. These tools can mount various inserts with different thread profiles, meaning that one tool is suitable for the production of a wide range of thread standards. The same tool can be used for production of external and internal (except the MTFLE which is dedicated for external applications), right-hand and left-hand threads. All tools in this line have internal coolant directed to the cutting area.

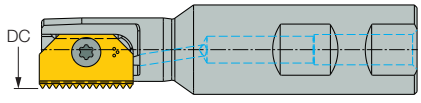


MTE – Designation Code Key:

MTE	D09.5	-	1	-	W	20	-	12
	1		2		3	4		5

MTE – endmills for indexable inserts

1. Cutting diameter (DC)



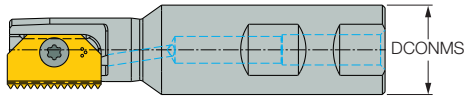
2. Number of flutes

3. Shank type

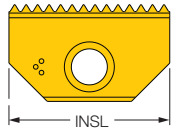
C - cylindrical shank

W - weldon shank

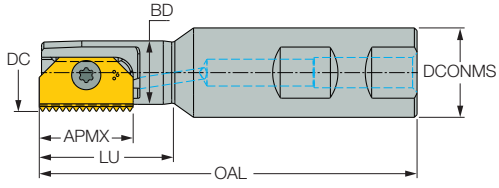
4. Shank diameter (DCONMS)



5. Insert size (INSL)



Basic dimensions of MTE tools:



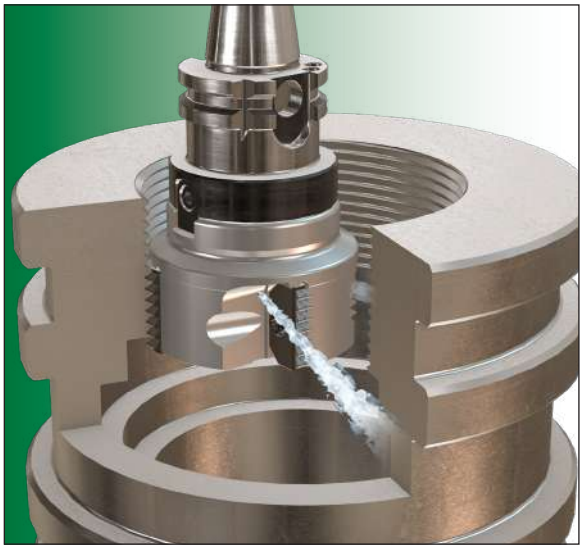
DC — cutting diameter
APMX — maximum depth of cut
OAL — overall length
DCONMS — connection diameter machine size
LU — usable length
BD — body diameter

MTTHREAD
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Shell Mill MTF Type

MTF shell mills are recommended for large thread diameters. This type of tool is suitable for thread production where long overhang is required. The pockets for inserts are produced with high accuracy and uniformity, meaning there is no need to select or adjust inserts for thread milling operations. All MTF tools are designed to be mounted on standard shell mill adapters.



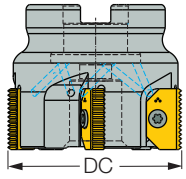


MTF – Designation Code Key:

MTF	D080	-	4	-	27	-	30
	1		2		3		4

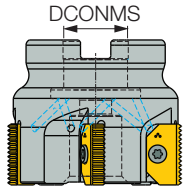
MTF – shell mills for indexable inserts

1. Cutting diameter (DC)

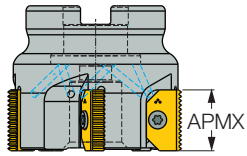


2. Number of flutes

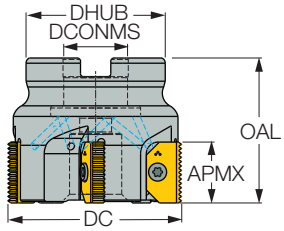
3. Connection diameter (DCONMS)



4. Depth of cut (APMX)



Basic dimensions of MTE tools:



DC	—	cutting diameter
APMX	—	maximum depth of cut
OAL	—	overall length
DCONMS	—	connection diameter machine size
DHUB	—	flange diameter

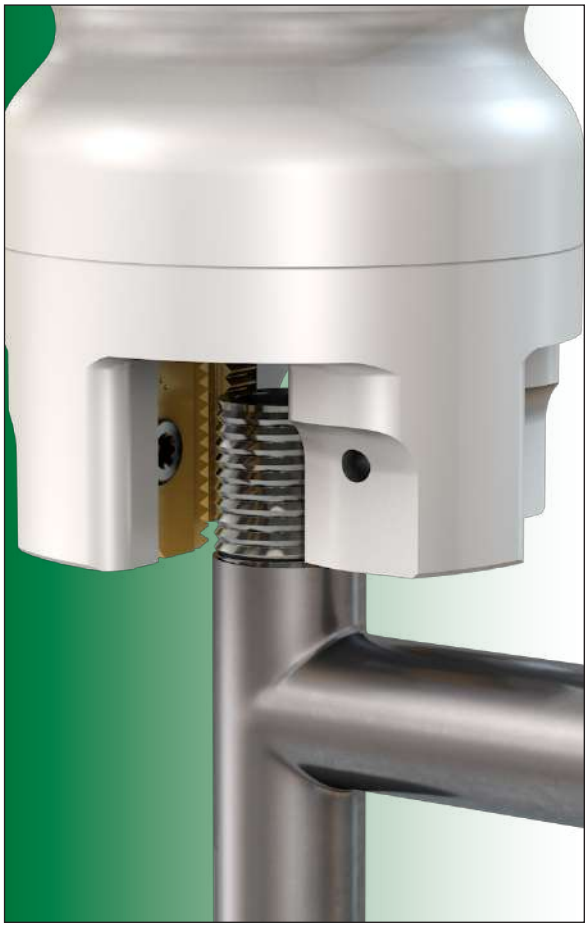
MTTHREAD
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MTFLE Shell Mill for Indexable Inserts

MTFLE is a multi-flute shell mill design specifically engineered for the thread milling of external threads. These tools can mount various inserts with different thread profiles, meaning that one tool is suitable for the production of a wide range of thread standards. The same tool can be used for producing right-hand and left-hand threads.

All **MTFLE** tools have internal coolant directed to the cutting area and the design is suitable for applications where a long overhang is required. The pockets for inserts are produced with high accuracy and uniformity, meaning there is no need to select or adjust inserts for thread milling operations.

All **MTFLE** tools are designed to be mounted on standard shell mill adapters. The multi-flute configuration enables a significant reduction in thread production time compared to alternative methods.

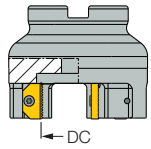


MTFLE – Designation Code Key:

MTFLE	D20	-	3	-	22	-	21
	1		2		3		4

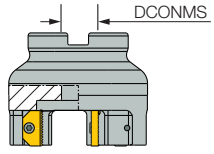
MTFLE - shell mills for indexable inserts for external threading

1. Cutting diameter (DC)

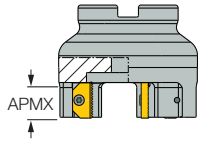


2. Number of flutes

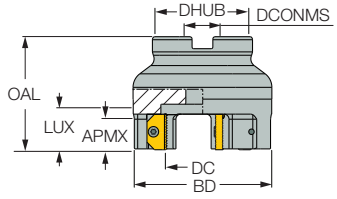
3. Connection diameter (DCONMS)



4. Depth of cut (APMX)



Basic dimensions of MTE tools:



DC — cutting diameter
APMX — maximum depth of cut
OAL — overall length
DCONMS — connection diameter machine size
DHUB — flange diameter
LUX — maximum usable length

MTTHREAD
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MTSRH Endmill and Shell Mill for Helical Indexable Inserts

Endmills and shell mills for helical indexable inserts are the ultimate solution for rapid and efficient thread milling. The helical inserts engage with the workpiece more smoothly and, when compared with straight, negative axial tools, exert lower cutting forces and reduced vibration.

MTSRH tools are available with internal coolant channels directed to the cutting area and can be used for the production of internal or external threads. Depending on the tool diameter, the MTSRH product can carry up to 9 inserts, which enables machining at very high feed rates while maintaining a high-quality surface finish. A simple and very convenient screw clamping mechanism makes insert indexing fast, accurate, and user-friendly.



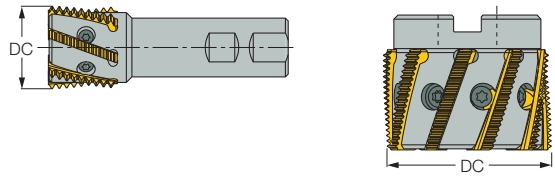


MTSRH – Designation Code Key:

MTSRH	45	-	6
	1		2

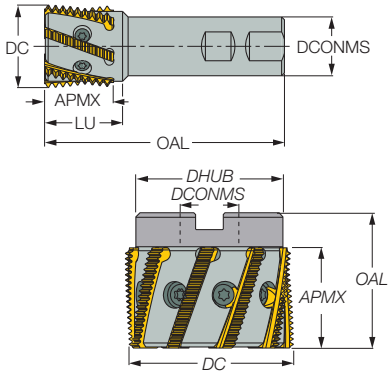
MTSRH – endmills and shell mills for helical indexable inserts

1. Cutting diameter (DC)



2. Number of flutes

Basic dimensions of MTSRH tools:



DC	—	cutting diameter
APMX	—	maximum depth of cut
OAL	—	overall length
DCONMS	—	connection diameter machine size
LU	—	usable length
DHUB	—	hub diameter

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

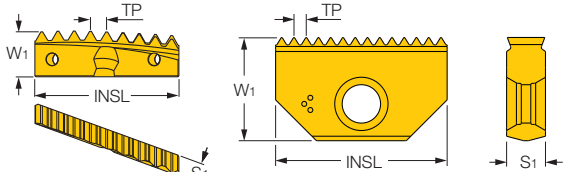
Indexable Inserts for Thread Milling

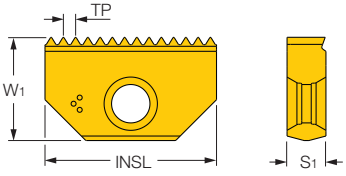
Indexable inserts for thread milling are available for both internal and external applications and can be used for generating either right or left-hand geometries. These inserts are offered with full profile configurations for most popular thread standards. A built-in deflector provides excellent chip control and ground profiles achieve high accuracy and surface quality. These products are made from grade AC22, which is PVD TiAlN coated for optimal performance when milling stainless steel, high temperature alloys, and other alloy steels.

TOOL-FLO offers three types of indexable thread milling inserts:
MT TISC – single-sided indexable thread milling inserts.
MT TIDC – double-sided indexable thread milling inserts
MT TIH – helical indexable thread milling inserts.
MT TIH-F inserts may also be used for high shoulder finish milling applications or for machining various specially tailored profiles.

TOOL-FLO can also provide special profile inserts on request.

Basic dimensions of thread milling inserts:





W1 — insert width
TP — thread pitch
INSL — insert length
S1 — insert thickness

MT TISC and MT TIDC – Designation Code Key:

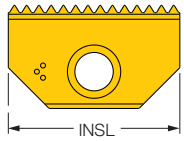
MT	TIDC	21	04	I	1.5	ISO	AC22
	1	2	3	4	5	6	7

MT – MILLTHREAD family

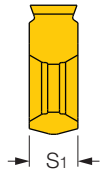
1. Number of cutting edges

TISC — single-sided
TIDC — double-sided

2. Insert length (INSL)



3. Insert thickness (S1)



4. Thread gender

I — internal thread
E — external thread

5. Pitch value by number:

1.0 – 6.0 mm
4 - 32 TPI

6. Thread standard

ISO — ISO metric
UN — unified
W — whitworth
BSPT — BSPT
NPT — national pipe thread
NPTF — national pipe taper fuel (dry seal)

7. Grade AC22

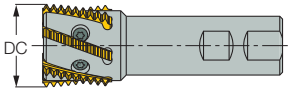
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

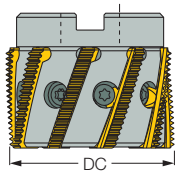
MTH – Designation Code Key:

MT TIH	45	I	1.5	ISO	AC22
	1	2	3	4	5

MT TIH – MILLTHREAD, helical indexable inserts

1. Tool cutting diameter (DC)





2. Thread gender

I — internal thread
E — external thread

3. Pitch value by number:

1.0 – 6.0 mm
4 - 32 TPI

4. Thread standard

ISO — ISO Metric
UN — unified
W — whitworth
BSPT — british BSPT
NPT — national pipe thread
NPTF — national pipe taper fuel (dry seal)

5. Grade AC22

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

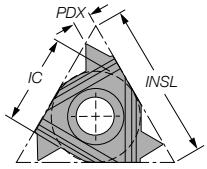
MT LD – Designation Code Key:

MT LD	1155	D	AC22
1	2	3	4

MT LD 11U55D AC22

1. MT LD - Triangular mill thread insert

2. Insert length (INSL)



INSL (mm)	IC (Inch)
06	5⁄32
08	3⁄16
11	1⁄4
16	3⁄8
22	1⁄2
27	5⁄8

3. Threading standard

60 – partial profile 60°

55 – partial profile 55°

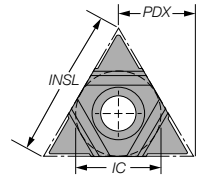
4. Grade AC22

MT LD	11	U	55D	AC22
1	2	3	4	5

MT LD 11U55D AC22

1. MT LD - Triangular mill thread insert

2. Insert length (INSL)



INSL (mm)	IC (Inch)
06	5⁄32
08	3⁄16
11	1⁄4
16	3⁄8
22	1⁄2
27	5⁄8

3. U-type thread milling inserts

4. Threading standard

60 – partial profile 60°

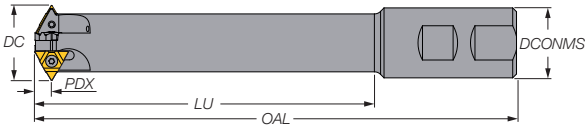
55 – partial profile 55°

5. Grade AC22

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

MTSR	0023	M	11	U
1	2	3	4	5

1. MTSR indexable multi-insert threading endmills



2. Cutting diameter

3. Tool length

M – mm 150
R – mm 200

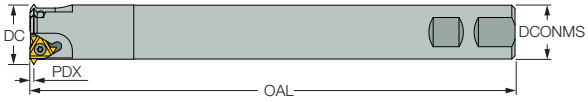
4. Insert size

INSL (mm)	IC (Inch)
06	5⁄32
08	3⁄16
11	1⁄4
16	3⁄8
22	1⁄2
27	5⁄8

U-type thread milling inserts

MTSR	0023	Q	11
1	2	3	4

1. MTSR indexable multi-insert threading endmills



2. Cutting diameter

3. Tool length

Q – mm 190
R – mm 225

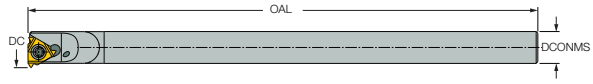
4. Insert size

INSL (mm)	IC (Inch)
11	1⁄4
16	3⁄8

U-type thread milling inserts

MTET	D7.0	1	C	5	C	06
1	2	3	4	5	6	7

1. MTSR single point Indexable Threading Endmills



2. Cutting diameter

3. Number of pockets

4. C cylindrical shank

5. DCONMS diameter

6. Shank material

C – carbide
S – steel

7. Insert size

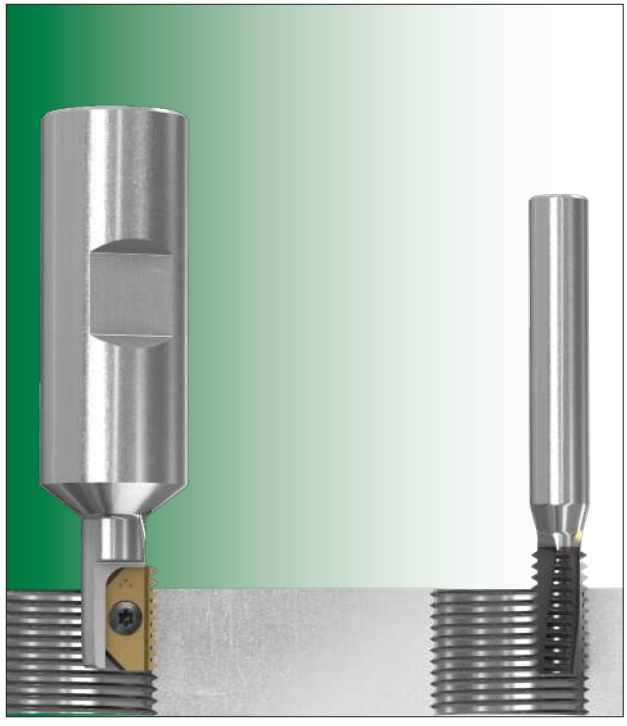
INSL (mm)	IC (Inch)
06	5⁄32
08	3⁄16
11	1⁄4

Indexable Thread Milling Tools vs. Solid Tools

The range of capabilities of thread milling tools can be increased significantly by using indexable inserts. The indexable inserts can be made of various grades and coatings to yield optimal results according to your specific application. The selection of a suitable insert depends on a variety of factors such as: cutting parameters, thread form, and the type of material being machined.

Indexable inserts contain the following advantages over solid tools: Quick change of cutting edge - If the cutting edge is damaged or worn, it is not necessary to replace the entire tool but only the indexable insert. Wide range of application - By changing inserts, a variety of threads in various materials can be produced using only one tool body. Low cost – Using inserts can significantly reduce costs since the insert is less costly than a solid tool.

Solid tools are advantageous when it comes to small threads and thread diameters. The main advantages of solid tools include: Higher productivity - The number of cutting edges that can be placed on solid tool for small and medium diameters is typically greater than the number of inserts that can be mounted in a small or medium tool. Thus, solid tools typically yield higher productivity on smaller parts. Internal threads in small diameters – Internal threading in small diameters (less than Ø0.375 inches or Ø9.5mm) is not possible with indexable inserts.



Straight vs. Helical Cutting Shape

The table below describes the differences between the use of tools with helical cutting edges vs. tools with straight cutting edges.

Straight Cutting Edges



Radial cutting forces act on a plane. The same size insert can fit to several cutter diameters.
Double-sided inserts - available with two cutting edges.

Helical Cutting Edges

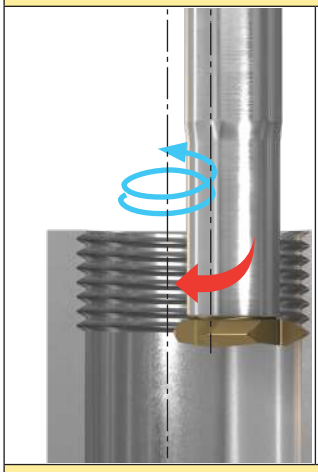
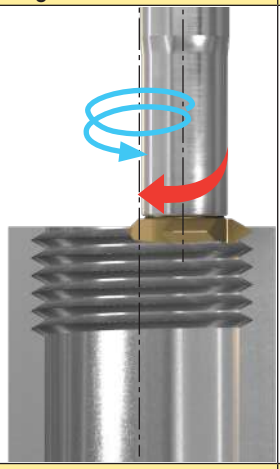
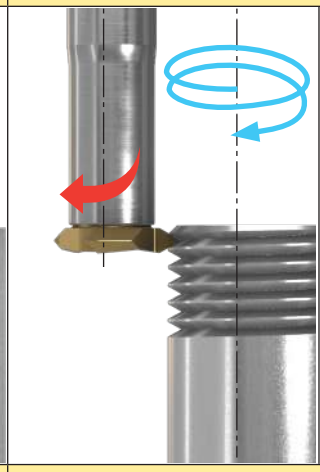
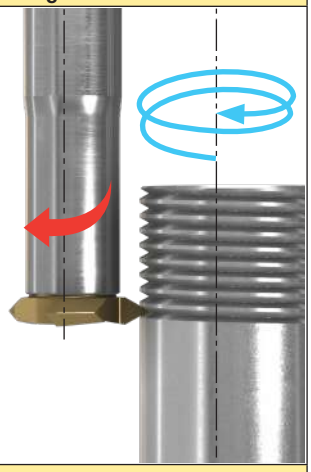
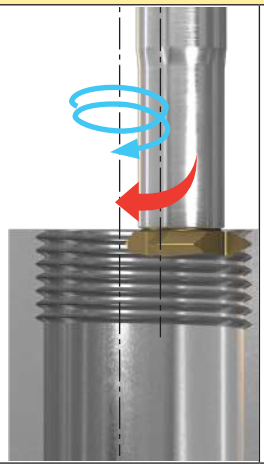
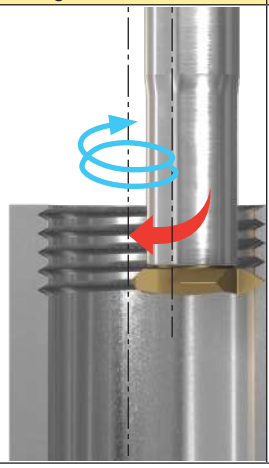
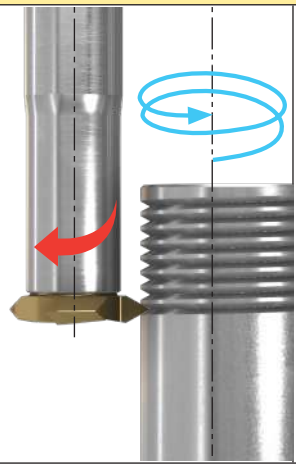
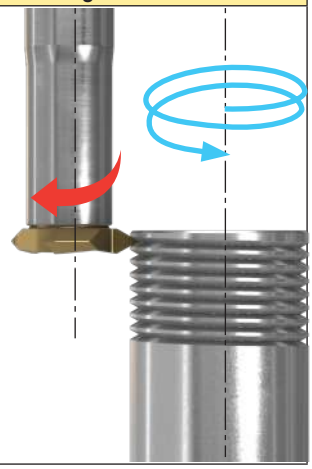


Radial cutting forces are distributed along a helical curve. Each insert size is dedicated to a specific cutter diameter.
Single-sided inserts - available with one cutting edge only.
Reduces vibration.

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Thread Milling Methods

There are several methods used for thread milling operations. The cutter typically rotates clockwise, except in special cases where the tool rotates counterclockwise. The spiral movement of the cutter can be clockwise or counterclockwise, and the tool can produce a thread by top-down or bottom-up. The combination of these movements/directions depends on the type of thread required to produce. (i.e. left-hand or right-hand threads)

Internal		External	
Right-hand threading	Left-hand threading	Right-hand threading	Left-hand threading
* Climb milling		Climb milling	
			
Conventional milling		Conventional milling	
			

First choice *

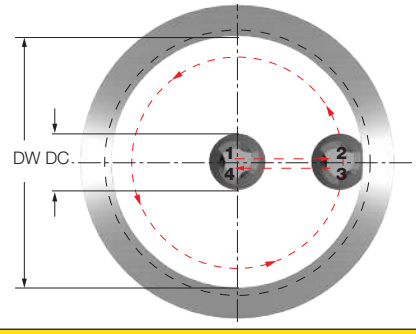
Entering the Workpiece

If a sudden load is applied to the cutter when it enters the workpiece and as a result the cutter may be broken, or a mark will remain on the workpiece. However, when tool entry is smooth, then the load on the tool can increase gradually and the surface will remain “clean”. There are three ways to initially enter the workpiece: radial entry, tangential entering by arc, tangential entering by line.

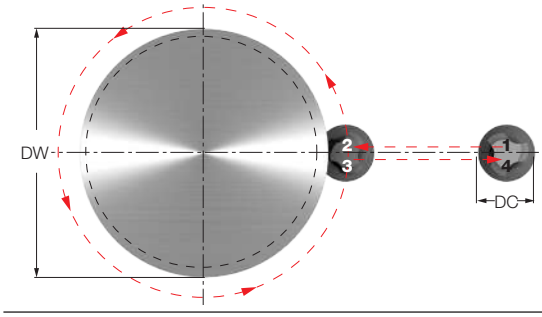
Radial Entry

The cutter enters the workpiece in a straight line to the center workpiece axis. This is the easiest method, but also the least recommended because of the sudden and abrupt load it creates on the tool.

Internal Threading



External Threading

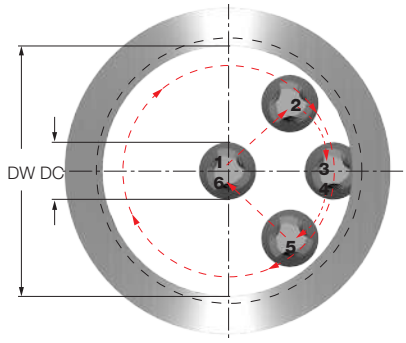


DW - workpiece diameter
DC - cutter diameter
1-2: straight line entry
2-3: helical movement during one full orbit (360°)
3-4: straight line exit

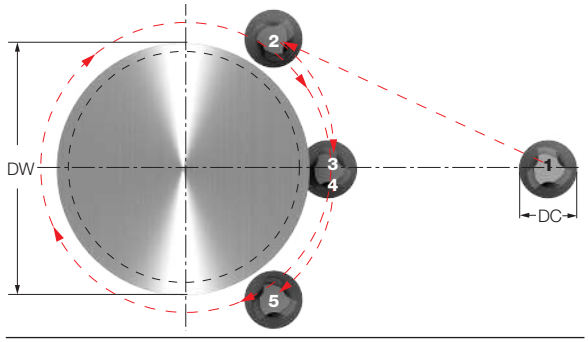
Tangential Entering by Arc (recommended)

In this method, the tool enters the material in an arc movement, and at the end of the thread, the tool also exits in a similar arc movement away from the material. This method is recommended because the load on the tool increases gradually, reducing the adverse effects typical with high levels of impact.

Internal Threading



External Threading

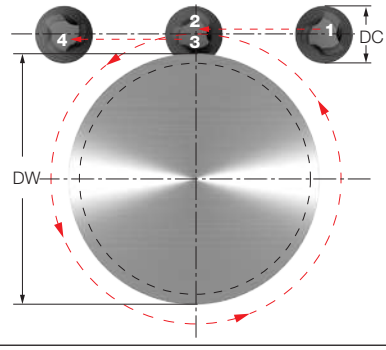


DW - workpiece diameter
DC - cutter diameter
1-2: rapid approach
2-3: tangential entry by arc
3-4: helical movement during one full orbit (360°)
4-5: tangential exit by arc
5-6: rapid return

Tangential Entering by Line

This method is very simple, with all of the same advantages of the tangential entering by arc method, but is used only for external threading applications.

External Threading

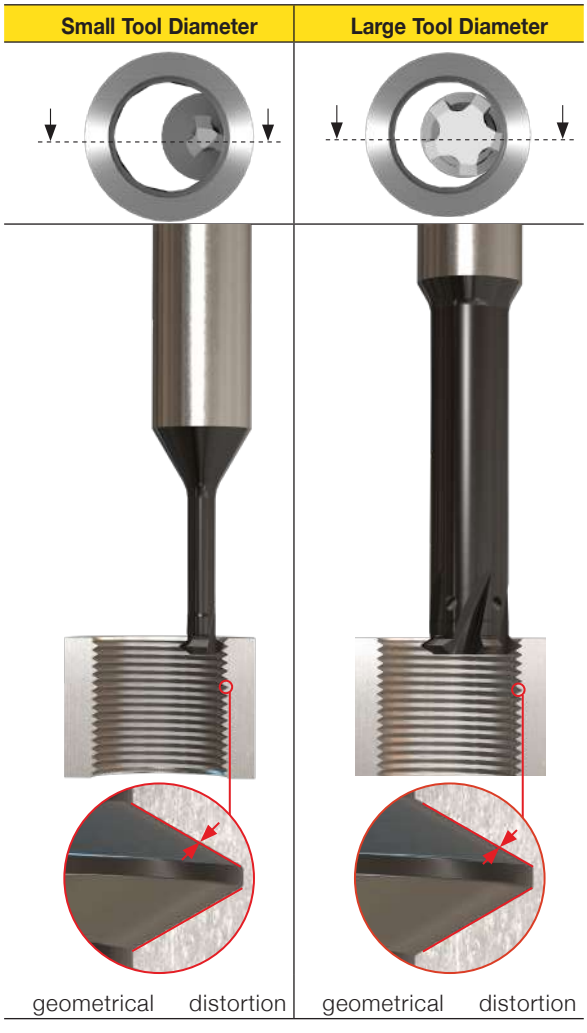


DW - workpiece diameter
DC - cutter diameter
1-2: tangential line entry
2-3: helical movement during one full orbit (360°)
3-4: tangential line exit

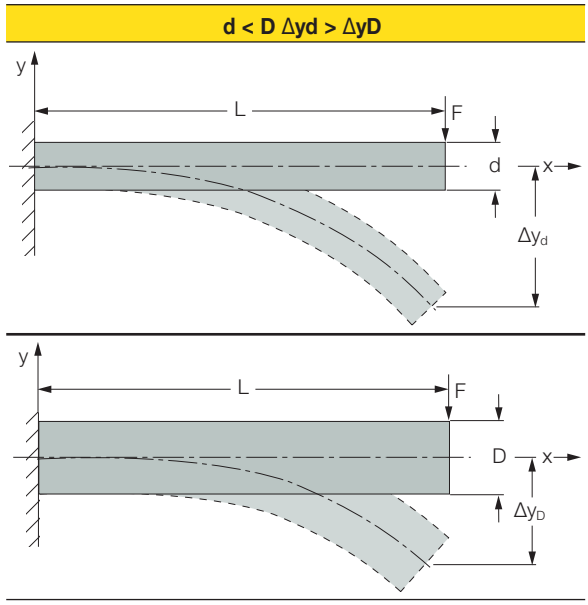
MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Selecting Endmill Outer Diameter for Best Effect

A thread milling endmill is designed with annular cutting edges without any helix angle. Thread milling is performed when the axis of the cutter and the axis of thread direction are parallel to each other. An incompatibility in the direction of the cutting edges with the threading direction causes geometrical distortions during thread machining. The geometrical distortion of the thread profile increases as the thread pitch increases and the endmill diameter increases, which can be explained by an increase in the contact angle of the endmill with the workpiece. Therefore, if the endmill. diameter is smaller, then the thread profile is more accurate.



At the same time, a larger diameter endmill usually produces an increase in rigidity which can result in a more stable machining process. This may be necessary in certain applications such as when high amounts of overhang/reach, or resistance to vibrations are needed. A large tool diameter can significantly improve productivity as it allows for machining in more severe cutting conditions. Therefore, to create the most efficient thread milling process it may be necessary to increase the diameter of the tool while taking into consideration the restrictions of the thread profile accuracy.



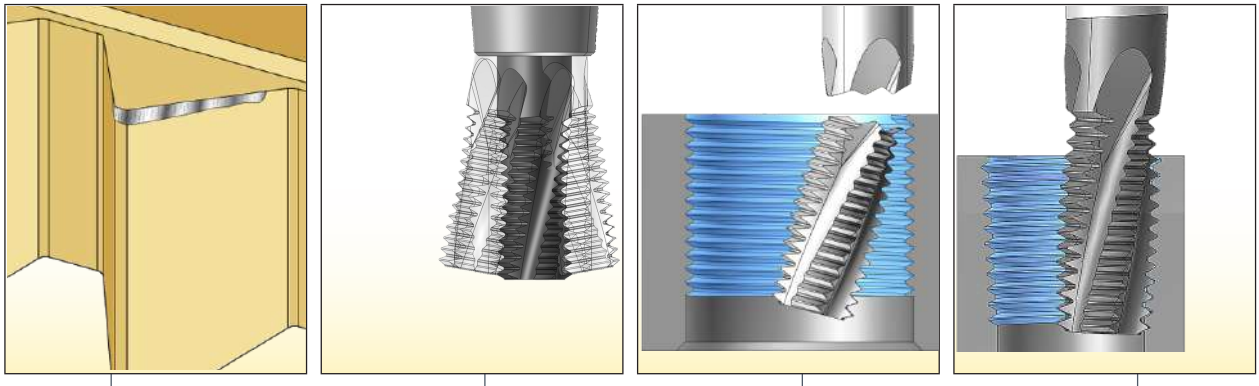
L- tool overhang
F-bending force
D;d=tool diaameters
Δy=max. deflection in bending

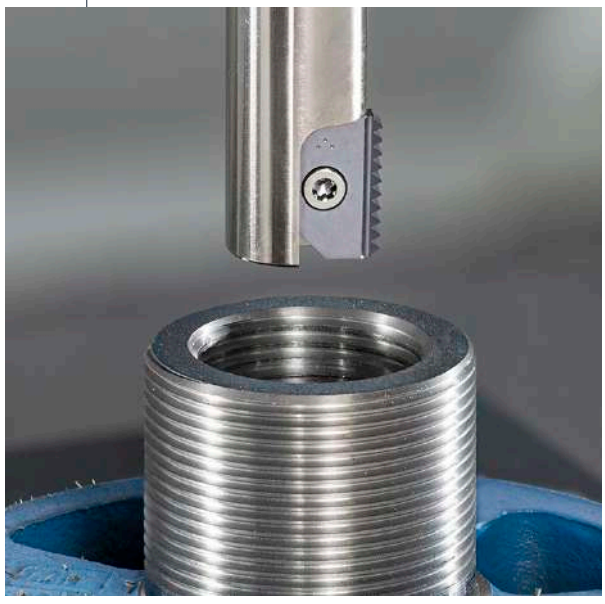
Based on the analysis performed of selecting initial outer diameter of the endmill, the following conclusions can be assumed:
For internal thread milling, in most cases the initial endmill diameter is recommended to be up to 70% of the thread major diameter.
For external thread milling, in most cases the initial endmill diameter can be over 70% of the thread major diameter.

MTTHREAD
THE ZENITH OF PRECISION MACHINING!

Depth Per Pass and Number of Radial Passes

The parameters of depth per pass and number of passes play a very important role in thread production. These parameters have a direct effect on cutting edge wear, tool life, thread surface quality, and thread production stability. The depth per pass, and number of passes depend on the type/condition of equipment, tool overhang, machine stability, workpiece material, cutter geometry, and the thread depth required.







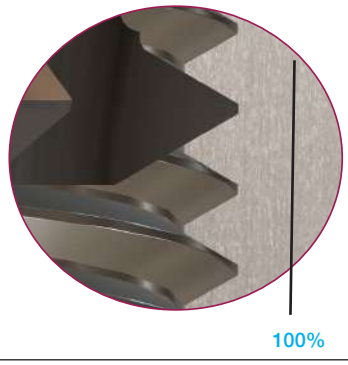
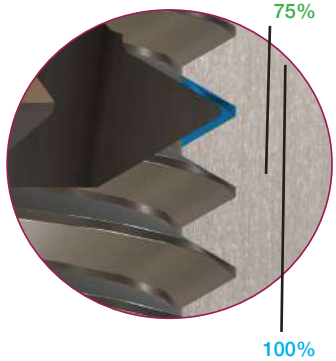
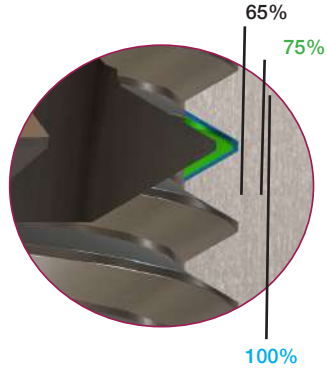
Number of Radial Passes

In order to produce a thread in some cases, one radial pass is sufficient. However, in other cases a number of radial passes may be required.

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Depth Per Pass

Based on the number of passes, the table below presents TOOL-FLO's recommendations for depth per pass which is expressed as a percentage according to the total amount of material that is to be removed.

	Number of Radial Passes		
depth per pass			
	1 pass	2 passes	3 passes
			

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How to Choose the Correct Solution?

A major consideration when selecting the desired solution is the cost per unit for the part that is machined by the tool. Although the tooling cost share in total cost per unit is minor, the tool's indirect influence on cost per unit can be considerable. The tool, even though it is a small part of manufacturing process, can sometimes present an obstacle to increasing speed and reducing machining time. Therefore, tools with the highest efficiency should be used for better productivity and, as a result, lower cost per part. Tool selection should be considered by applying the analysis below: Application – Tool Configuration – Tool Material – Economical Consideration.

Application

- gender of thread
- ↓
- thread profile/ thread standard / pitch or tpi
- ↓
- depth of thread
- ↓
- machining diameter
- ↓
- coolant
- ↓
- tool adaptor
- ↓

Tool Configuration

- machining load / application stability
- ↓

Tool Material

- grade
- ↓

Economical Consideration

- economical efficiency

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Application	
Gender of Thread	Is external or internal threading required?
↓	
Thread Profile/ Thread Standard / Pitch or TPI	Is full profile or partial profile required? What is the thread profile (square, triangular, trapezoidal or the other)? What is the thread standard? What is the thread pitch / TPI?
↓	
Depth of thread	What is the depth of thread?
↓	
Machining Diameter	What is the machining diameter?
↓	
Coolant	What type of coolant is available (external / internal coolant?
↓	
Tool Adaptor	What type of tool adaptor is available?
Tool Configuration	
Machining Load / Application Stability	Are there geometrical limitations in the part that requires small cutting forces, such as thin walls, high overhang?
Tool Material	
Grade	Which cutting tool grade is most suitable for threading?
Economical Consideration	
Economical Efficiency	Which tool should be used; indexable insert, indexable head or solid cutter? What are the number of cutting edges?

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Application	
Gender of Thread	Is external or internal threading required

TOOL-FLO product families offer solutions for both external and internal threading according to most standards

Dividing TOOL-FLO families per gender of thread is shown in table below

Thread Milling		Application		
		Internal Threading		External Threading
Family	Subfamily	Through Hole	Blind Hole	
SOLIDTHREAD	MTECS	V	•	º
	MTECSH	V	•	º
	MTEC	V	•	º
	MTECB	•	V	º
	MTECZ	V	V	V
	MTECQ	•	V	º
MILLTHREAD	MTE	V	•	º
	MTF	V	•	º
	MTFLE	---	---	V
	MTSRH endmill	V	•	º
	MTSRH shell mill	V	•	º
	(MTSR M.I. S.P.(endmill	V	V	•
	(MTSR M.I. S.P.-U (endmill	V	º	•
	MTET single point	V	V	º
	(MTSR -U (shell mill	V	º	•

Guide Lines	Sign
(Recommended (1st choice	V
(Suitable (2nd choice	•
(Can be selected (optional	º

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Application	
Thread Profile / Standard based on Pitch / TPI	Is full profile or partial profile required? What is the thread profile (square, triangular, trapezoidal or other)? What is the thread standard? What is the thread pitch / TPI?

Depending on the answers to the questions in this section, it is possible to check which of the families meet the thread profile / standard based on pitch / TPI requirements.

Available Standards - Full and Partial Profile - Solution for Internal Threading

Thread Milling		Pitch - mm											
Family	Subfamily	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.75	0.80	1.00	1.25
SOLIDTHREAD	MTECS	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO MJ	ISO	ISO MJ	ISO MJ	ISO MJ
	MTECSH			ISO	ISO	ISO	ISO	ISO	ISO		ISO	ISO	ISO
	MTEC						ISO		ISO	ISO	ISO	ISO	ISO
	MTECB						ISO		ISO	ISO	ISO	ISO	ISO
	MTECZ											ISO	ISO
	MTECQ											ISO	
	MTECI			partial profile - 60°									
MILLTHREAD	MTE						ISO			ISO		ISO	ISO
	MTF											ISO	
	MTSRH endmill											ISO	
	MTSRH shell mill											ISO	
	MTSR M.I. S.P. (endmill)											partial profile - 60°	
	MTET single point						ISO		ISO	ISO	ISO	ISO	ISO
	MTET single point						partial profile - 60°						

Available Standards - Full and Partial Profile - Solution for Internal Threading

Thread Milling		Pitch (mm)										
Family	Subfamily	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
SOLIDTHREAD	MTECS	ISO	ISO MJ	ISO	ISO							
	MTECSH	ISO	ISO	ISO								
	MTEC	ISO	ISO	ISO	ISO	ISO						
	MTECB	ISO	ISO	ISO	ISO	ISO						
	MTECZ	ISO	ISO	ISO								
	MTECQ	ISO		ISO			ISO					
	MTECI	partial profile - 60°		partial profile - 60°								
MILLTHREAD	MTE	ISO	ISO	ISO	ISO							
	MTF	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO
	MTSRH endmill	ISO		ISO		ISO	ISO	ISO	ISO	ISO	ISO	ISO
	MTSRH shell mill	ISO		ISO		ISO	ISO	ISO	ISO	ISO	ISO	ISO
	MTSR M.I. S.P.(endmill)			partial profile - 60°								
	MTSR M.I. S.P.-U(endmill)				partial profile - 60°							
	MTET single point	ISO		ISO								
	MTET single point	partial profile - 60°										

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Available Standards - Full and Partial Profile - Solution for External Threading

Thread Milling		Pitch (mm)											
Family	**Subfamily**	**0.35**	**0.40**	**0.45**	**0.50**	**0.60**	**0.70**	**0.75**	**0.80**	**1.00**	**1.25**	**1.50**	**1.75**
SOLIDTHREAD	MTEC									ISO	ISO	ISO	ISO
	MTECI	partial profile - 60°											
MILLTHREAD	MTE							ISO		ISO	ISO	ISO	ISO
	MTF									ISO		ISO	
	MTFLE									ISO		ISO	
	MTSRH endmill									ISO		ISO	
	MTSRH shell mill											ISO	
	MTET single point	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO	ISO
	MTET single point				partial profile - 60°								
	MTSR M.I.S.P (endmill)									partial profile - 60°			

Available Standards - Full and Partial Profile - Solution for External Threading

Thread Milling		Pitch (mm)										
Family	**Subfamily**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**	**3.50**	**4.00**	**4.50**	**5.00**	**5.50**	**6.00**	**8.00**
SOLIDTHREAD	MTEC	ISO	ISO	ISO									
	MTECI	partial profile - 60°		partial profile - 60°									
MILLTHREAD	MTE	ISO	ISO	ISO	ISO	ISO	ISO	ISO		ISO			
	MTF	ISO		ISO	ISO	ISO	ISO	ISO		ISO			
	MTFLE	ISO		ISO	ISO	ISO							
	MTSRH endmill	ISO		ISO		ISO		ISO					
	MTSRH shell mill	ISO		ISO		ISO		ISO					
	MTET single point	ISO	ISO										
	MTET single point	partial profile - 60°											
	MTSR M.I. S.P. (endmill)				ISO	ISO	ISO						
	MTSR M.I. S.P.-U (endmill)				partial profile - 60°								
	MTSR -U (shell mill)					partial profile - 60°							

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Available Standards - Full and Partial Profile - Solution for Internal Threading											
Thread Milling		TPI									
Family	Subfamily	80	72	56	48	40	36	32	28	27	24
SOLIDTHREAD	MTECS	UN	UN	UN	UN	UN	UN	UN UNJ	UN whitworth UNJ		UN UNJ
	MTECSH	UN		UN	UN	UN		UN	UN		UN
	MTEC							UN	UN whitworth, BSPT	NPT NPTF	UN
	MTECB							UN	UN whitworth	NPT	UN
	MTECZ								whitworth	NPTF	
	MTECQ										
MILLTHREAD	MTE							UN	UN	UN	UN whitworth
	MTF										UN
	MTSRH endmill							UN			UN
	MTSRH shell mill							UN	UN		UN
	MTET single point				partial profile - 60°						
	MTET single point						UN	UN	UN whitworth NPT BSPT NPTF		UN
	MTSR M.I. S.P. (endmill)										partial profile - 60°

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Available Standards - Full and Partial Profile - Solution for Internal Threading

Thread Milling		TPI									
Family	**Subfamily**	**20**	**19**	**18**	**16**	**14**	**13**	**12**	**11.5**	**11**	**10**
SOLIDTHREAD	MTECS	UN UNJ	whitworth	UN UNJ	UN UNJ	UN whitworth	UN UNJ			UN	
	MTECSH	UN		UN	UN	UN	UN			UN	
	MTEC	UN	whitworth BSPT	UN NPT NPTF	UN	UN whitworth BSPT NPT NPTF	UN	UN	NPT	UN whitworth BSPT	UN
	MTECB	UN	whitworth	UN NPT	UN	UN whitworth NPT	UN			UN whitworth	UN
	MTECZ	UN	whitworth	UN NPTF	UN	whitworth					UN
	MTECQ										
MILLTHREAD	MTE	UN whitworth	whitworth BSPT	UN NPT NPTF NPS NPSF PG	UN whitworth ABUT PG	UN whitworth NPT NPTF BSPT NPS NPSF		UN ABUT ACME	NPT NPTF NPS NPSF	UN whitworth BSPT	UN ABUT ACME
	MTF	UN whitworth	whitworth	UN PG	UN whitworth ABUT PG	UN whitworth NPT NPTF BSPT NPS NPSF		UN ABUT ACME	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT ACME
	MTSRH endmill	UN		UN	UN	UN whitworth		UN	NPT NPTF	whitworth BSPT	UN
	MTSRH shell mill	UN		UN	UN	whitworth		UN	NPT NPTF	whitworth BSPT	
	MTSR M.I.S.P.-U (endmill)	partial profile - 55°/partial profile - 60°									
	MTSR M.I.S.P. (endmill)	partial profile - 55°/partial profile - 60°									
	MTET single point	UN	whitworth BSPT	UN NPT NPTF	UN	UN whitworth NPT BSPT NPTF	UN	UN		UN	
	MTET single point	partial profile - 55°/partial profile - 60°									

Available Standards - Full and Profile - Solution for External Threading

Thread Milling		TPI								
Family	**Subfamily**	**14**	**12**	**11.5**	**11**	**10**	**8**	**7**	**6**	**4**
SOLIDTHREAD	MTECS	whitworth								
	MTECSH									
	MTEC	whitworth BSPT NPT NPTF		NPT	whitworth BSPT		NPT			
	MTECB	whitworth NPT			whitworth					
	MTECZ	whitworth								
	MTECQ									

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Available Standards - Full and Profile - Solution for External Threading

Thread Milling		TPI								
Family	**Subfamily**	**14**	**12**	**11.5**	**11**	**10**	**8**	**7**	**6**	**4**
SOLIDTHREAD	MTECS	whitworth								
	MTECSH									
	MTEC	whitworth BSPT NPT NPTF		NPT	whitworth BSPT		NPT			
	MTECB	whitworth NPT			whitworth					
	MTECZ	whitworth								
	MTECQ									
MILLTHREAD	MTE	UN whitworth NPT NPTF BSPT NPS NPSF	UN ABUT	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT	UN whitworth NPT NPTF NPS NPSF ABUT		UN ABUT	ABUT
	MTF	UN whitworth NPT NPTF BSPT NPS NPSF	UN ABUT	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT	UN whitworth NPT NPTF NPS NPSF ABUT		UN ABUT	ABUT
	MTFL	UN whitworth NPT NPTF BSPT NPS NPSF	UN ABUT	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT	ABUT			
	MTSRH endmill	UN whitworth	UN	NPT NPTF	whitworth BSPT	UN	UN NPT	UN		
	MTSRH shell mill	whitworth	UN	NPT NPTF	whitworth BSPT		UN NPT		UN	
	MTET single point	whitworth								
	MTSR M.I.S.P. (endmill)	partial profile - 60°/partial profile - 55°						partial 60		
	MTSR M.I.S.P.-U (endmill)				partial profile - 55°	partial profile - 60°/partial profile - 55°				
	MTSR-U (shell mill)						partial profile - 60°			
	MTSR-U (shell mill)								partial profile - 55°	

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Available Standards - Full and Partial Profile - Solution for External Threading									
Thread Milling		TPI							
Family	Subfamily	32	28	27	24	20	19	18	16
SOLIDTHREAD	MTECS		whitworth				whitworth		
	MTECSH								
	MTEC		whitworth BSPT	NPT NPTF			whitworth BSPT	NPT NPTF	
	MTECB		whitworth	NPT			whitworth	NPT	
	MTECZ		whitworth	NPTF			whitworth	NPTF	
	MTECQ								
MILLTHREAD	MTE	UN	UN		UN whitworth	UN whitworth	whitworth BSPT	UN NPT NPTF NPS NPSF PG	UN whitworth ABUT PG
	MTF				UN	UN whitworth	whitworth	UN PG	UN whitworth ABUT PG
	MTFL				UN	UN whitworth	whitworth	UN PG	UN whitworth ABUT PG
	MTSRH endmill				UN	UN		UN	UN
	MTSRH shell mill				UN	UN		UN	UN
	MTSR M.I. S.P.				UN	UN	UN	UN	UN
	MTET single point	UN	UN	UN	UN	UN	UN	UN	UN

Available Standards - Full and Partial Profile - Solution for External Threading

Thread Milling	TPI									
Family	Subfamily	14	12	11.5	11	10	8	7	6	4
SOLIDTHREAD	MTECS	whitworth								
	MTECSH									
	MTEC	whitworth BSPT NPT NPTF		NPT	whitworth BSPT		NPT			
	MTECB	whitworth NPT			whitworth					
	MTECZ	whitworth								
	MTECQ									
MILLTHREAD	MTE	UN whitworth NPT NPTF BSPT NPS NPSF	UN ABUT	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT	UN whitworth NPT NPTF NPS NPSF ABUT		UN ABUT	ABUT
	MTF	UN whitworth NPT NPTF BSPT NPS NPSF	UN ABUT	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT	UN whitworth NPT NPTF NPS NPSF ABUT		UN ABUT	ABUT
	MTFL	UN whitworth NPT NPTF BSPT NPS NPSF	UN ABUT	NPT NPTF NPS NPSF	whitworth BSPT	UN ABUT	ABUT			
	MTSRH endmill	UN whitworth	UN	NPT NPTF	whitworth BSPT	UN	UN NPT	UN		
	MTSRH shell mill	whitworth	UN	NPT NPTF	whitworth BSPT		UN NPT		UN	
	MTET single point	whitworth								
	M.I. S.P. (endmill)	partial profile - 55°/partial profile - 60°						partial profile - 60°		
	M.I. S.P.-U (endmill)	partial profile - 55°				partial profile - 60°/ partial profile - 55°				
	MTSR -U (shell Mill)						partial profile - 60°/ partial profile - 55°			

Application

Depth of Thread	What is the depth of thread?

The tables below define the possible maximum thread depth that can be produced with each thread milling family / line, according to thread standard.

Maximum Thread Depth - Full and Partial Profile - ISO standard - Solution for Internal Threading

Thread Milling		Pitch (mm)											
Family	Subfamily	0.25	0.3	0.35	0.4	0.45	0.5	0.6	0.7	0.75	0.8	1	1.25
SOLIDTHREAD	MTECS	3	4	4.8	6	7.5	20	10.5	16.7	25	16	20	24
	MTECSH			4.8	6	7.5	9.5	7.5	12.5		16	20	24
	MTEC						10.3		7.4	10	9.2	16.5	19.4
	MTECB						10.3		7.4	24.4	9.2	24.5	19.4
	MTECZ											16.5	19.4
	MTECQ											21	
	MTECI			5.2	28	12.5	39						
MILLTHREAD	MTE						182			182		206	182
	MTF											50	
	MTSRH endmill											130	
	MTSRH shell mill											52	
	MTET single point						63/100						

Maximum Thread Depth - Full and Partial Profile - ISO standard - Solution for Internal Threading

Thread Milling		Pitch (mm)										
Family	Subfamily	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6	8
SOLIDTHREAD	MTECS	31.5	26	50	43								
	MTECSH	23	26	35									
	MTEC	33.8	28.9	41	48.8	58.5							
	MTECB	33.8	28.9	39	48.8	58.5							
	MTECZ	33.8	28.9	27									
	MTECQ	18		34			28						
	MTECI	39	50										
MILLTHREAD	MTE	263	206	263	206	263	263	263	263	263	210	210	
	MTF	65	50	65	50	65	65	65	65	65	65	65	
	MTSRH endmill	130		130		130	130	130	130	130	130	130	
	MTSRH shell mill	60		60		60	60	60	60	60	60	60	
	MTSR M.I. S.P.	190			225								
	MTET single point	100/150		150									
	MTSR M.I. S.P.-U				150			150/220	220				

Maximum Thread Depth - Full and Partial Profile - MJ standard - Solution for Internal Threading

Thread Milling		Pitch (mm)											
Family	Subfamily	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.75	0.80	1.00	1.25
SOLIDTHREAD	MTECS								10		12.5	15	20
	MTECI			5.2			28				12.5	39	

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Cutting Conditions

Recommended initial cutting conditions are shown in the tables below In any case the better to use our program MillThread Advisor for correct process and cutting conditions reconsiderations

Machining Data for Solid Carbide Threading Endmills with small diameter, short solid carbide thread mills

ISO	Materials	Cutting Speed, m/min	Feed mm/tooth for Diameter - mm												
			Ø1.5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø15
P	low & medium carbon steels	60-120	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
P	high carbon steels	60-90	0.04	0.05	0.06	0.08	0.09	0.1	0.12	0.13	0.14	0.14	0.16	0.17	0.18
P	alloy steels, treated steels	50-80	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
P	cast steels	70-90	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
M	stainless steels	60-90	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13
S	nickel alloys, titanium alloys	20-40	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
K	cast iron	40-80	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
N	aluminum	80-150	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
N	synthetics, duroplastics, thermoplastics	50-200	0.1	0.11	0.12	0.14	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.2	0.2

ISO	Materials	Cutting Speed, ft/min	Feed (inch/tooth) for Diameter - inch)												
			Ø.06	Ø.08	Ø.12	Ø.16	Ø.20	Ø.24	Ø.28	Ø.31	Ø.35	Ø.39	Ø.47	Ø.55	Ø.59
P	low & medium carbon steels	200-390	.0018	.0021	.0028	.0035	.0043	.0050	.0057	.0060	.0062	.0064	.0067	.0070	.0071
P	high carbon steels	200-300	.0016	.0019	.0024	.0030	.0035	.0041	.0046	.0050	.0054	.0057	.0062	.0067	.0069
P	alloy steels, treated steels	160-260	.0015	.0017	.0019	.0021	.0024	.0026	.0028	.0033	.0037	.0041	.0047	.0052	.0055
P	cast steels	230-300	.0015	.0017	.0019	.0021	.0024	.0026	.0028	.0033	.0037	.0041	.0047	.0052	.0055
M	stainless steels	200-300	.0011	.0013	.0016	.0019	.0022	.0025	.0026	.0031	.0035	.0038	.0044	.0049	.0051
S	nickel alloys, titanium alloys	70-130	.0011	.0013	.0015	.0017	.0020	.0022	.0024	.0025	.0026	.0027	.0029	.0031	.0031
K	cast iron	130-260	.0018	.0021	.0028	.0035	.0043	.0050	.0057	.0060	.0062	.0064	.0067	.0070	.0071
N	aluminum	260-490	.0018	.0021	.0028	.0035	.0043	.0050	.0057	.0060	.0062	.0064	.0067	.0070	.0071
N	synthetics, duroplastics, thermoplastics	160-660	.0038	.0042	.0049	.0056	.0063	.0070	.0073	.0074	.0075	.0075	.0077	.0078	.0078

Machining Data for Solid Carbide Thread Mills for Small Internal Threads in Hard Materials

ISO	Material	Hardness HRC	Cutting Speed m/min	Feed mm/tooth for Cutting Diameter (mm)								
				1.5	2	3	4	5	6	7	8	9
H	hardened steels	45-50	60-70	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08
H		51-55	50-60	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07
H		56-62	40-50	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06

ISO	Material	Hardness HRc	Cutting Speed SFM	Feed (IPT) for Cutting Diameter (D)								
				.06	.08	.12	.16	.2	.24	.28	.31	.35
H	hardened steels	45-50	200-230	.0016	.0016	.002	.002	.0024	.0024	.0028	.0028	.0031
H		51-55	160-200	.0012	.0012	.0016	.0016	.002	.002	.0024	.0024	.0028
H		56-62	130-160	.0008	.0008	.0012	.0012	.0016	.0016	.002	.002	.0024

Machining Data for Indexable Insert Threading Tools

ISO	Material		Condition	Tensile Strength N/] [mm²]	Tensile Strength [Ksp]	Hardness HB	Material (No. (1	Indexable Cutting Speed for AC22 m/min	Indexable Cutting Speed for AC22 SFM
P	non-alloy steel and cast steel, free cutting steel	C 0.25%>	annealed	420	61	125	1	100-200	330-655
		C 0.25%≤	annealed	650	94	190	2	95-190	310-625
		C 0.55%>	quenched and tempered	850	123	250	3	90-180	295-590
		C 0.55%≤	annealed	750	109	220	4	90-170	295-560
			quenched and tempered	1000	145	300	5	80-150	260-490
	low alloy and cast steel (less than 5% of alloying elements)		annealed	600	87	200	6	120-170	395-560
			quenched and tempered	930	135	275	7	115-160	375-525
				1000	145	300	8	105-150	345-490
				1200	174	350	9	90-140	295-460
	high alloyed steel, cast steel and tool steel		annealed	680	99	200	10	90-170	295-560
			quenched and tempered	1100	160	325	11	75-145	245-475
	stainless steel and cast steel		ferritic / martensitic	680	99	200	12	110-170	360-560
			martensitic	820	119	240	13	100-160	330-525
M	stainless steel and cast steel		austenitic, duplex	600	87	180	14	90-145	295-475
K	gray cast iron (GG)		ferritic / pearlitic			180	17	65-135	215-445
			pearlitic / martensitic			260	18	65-110	215-360
	nodular cast iron (GGG)		ferritic			160	15	65-135	215-445
			pearlitic			250	16	60-100	195-330
	malleable cast iron		ferritic			130	19	65-135	215-445
			pearlitic			230	20	60-120	195-395
N	aluminum-wrought alloys		not hardenable			60	21	110-260	360-855
			hardenable			100	22	110-200	360-655
	aluminum-cast alloys	Si 12%≥	not hardenable			75	23	145-350	475-1150
			hardenable			90	24	145-275	475-900
		Si 12%<	high temperature			130	25	95-225	310-740
	copper alloys	Pb 1%<	free cutting			110	26	145-350	475-1150
			brass			90	27	145-350	475-1150
			electrolytic copper			100	28	145-350	475-1150
	non metallic		duroplastics, fiber plastics			70 Shore D	29	90-370	295-1215
			hard rubber			55 Shore D	30	80-330	260-1085
S	high temperature alloys	Fe based	annealed			200	31	20-60	65-195
			hardened			280	32	20-50	65-165
		Ni or Co based	annealed			250	33	20-30	65-100
			hardened			350	34	10-20	35-65
			cast			320	35	15-25	50-80
	titanium alloys		pure	400	58	190	36	30-90	100-295
			alpha+beta alloys, hardened	1050	152	310	37	20-70	65-230
H	hardened steel		hardened			55 HRC	38	25-60	80-195
			hardened			60 HRC	39	20-40	65-130
	chilled cast iron		cast			400	40	25-60	80-195
	cast iron		hardened			55 HRC	41	20-50	65-165

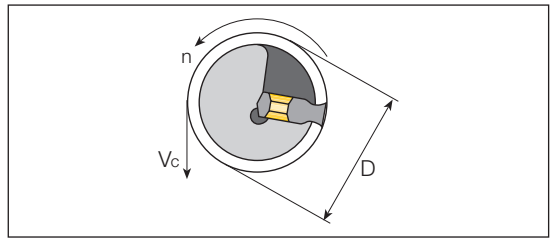
Calculating RPM:

metric example: V=120 m/min, D=30 mm

$$n = \frac{Vc \times 1000}{\pi x D} = \frac{120 \times 1000}{3.14 x 30} = 1274 \text{ RPM}$$

inch example: V= 410 SFM, D=1.5 inch

$$n = \frac{Vc \times 12}{\pi x D} = \frac{410 \times 12}{3.14 x 1.5} = 1045 \text{ RPM}$$



Feed: mm/tooth 0.05-0.15
inch/tooth 0.002-0.006

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Machining Data for Solid Carbide Threading Endmills

ISO	Material	Condition	Tensile Strength [N/mm²]	Hardness HB	Material No. [1]	Cutting Speed ((m/min	Cutting Diameter / Feed mm/tooth											
						AC22	2	3	4	6	8	10	12	14	16	20	25	30
P	non-alloy steel and cast steel, free cutting steel 0.25%> C	annealed	420	125	1	100-250	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
P	non-alloy steel and cast steel, free cutting steel 0.25%≤ C	annealed	650	190	2	80-210	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
P	non-alloy steel and cast steel, free cutting steel 0.55%> C	quenched and tempered	850	250	3	65-170												
P	non-alloy steel and cast steel, free cutting steel 0.55%≤ C	annealed	750	220	4	110-180	0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
P	non-alloy steel and cast steel, free cutting steel 0.55%≤ C	quenched and tempered	1000	300	5	95-160	0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
P	low alloy and cast steel (less than 5% of alloying elements)	annealed	600	200	6	90-160	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	low alloy and cast steel (less than 5% of alloying elements)	quenched and tempered	930	275	7	65-200	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	low alloy and cast steel (less than 5% of alloying elements)	quenched and tempered	1000	300	8	70-210	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	low alloy and cast steel (less than 5% of alloying elements)	quenched and tempered	1200	350	9	95-160	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	high alloyed steel, cast steel and tool steel	annealed	680	200	10	130-170	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	high alloyed steel, cast steel and tool steel	quenched and tempered	1100	325	11	75-100	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	stainless steel and cast steel	ferritic / martensitic	680	200	12	110-170	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
P	stainless steel and cast steel	martensitic	820	240	13	70-155	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
M	stainless steel and cast steel	austenitic, duplex	600	180	14	85-100	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
K	gray cast iron (GG)	ferritic / pearlitic		180	17	120-160	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
K	gray cast iron (GG)	pearlitic / martensitic		260	18	75-160	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
K	nodular cast iron (GGG)	ferritic		160	15	70-150	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
K	nodular cast iron (GGG)	pearlitic		250	16	110-140	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
K	malleable cast iron	ferritic		130	19	120-160	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
K	malleable cast iron	pearlitic		230	20	110-140	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.21	0.15	0.18	0.21
N	aluminum-wrought alloys	not hardenable		60	21	160-300	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
N	aluminum-wrought alloys	hardenable		100	22													
N	aluminum-cast alloys ≤12% Si	not hardenable		75	23	150-350	0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
N	aluminum-cast alloys ≤12% Si	hardenable		90	24													
N	aluminum-cast alloys >12% Si	high temperature		130	25	100-250	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.10	0.12
N	copper alloys >1% Pb	free cutting		110	26													
N	copper alloys	brass		90	27													
N	copper alloys	electrolytic copper		100	28													
N	non metallic	duroplastics, fiber plastics		70 Shore D	29	100-400	0.05	0.06	0.07	0.09	0.1	0.11	0.12	0.13	0.15	0.18	0.22	0.25
N	non metallic	hard rubber		55 Shore D	30													
S	high temperature alloys Fe based	annealed		200	31													
S	high temperature alloys Fe based	hardened		280	32													
S	high temperature alloys Ni or Co based	annealed		250	33	20-80	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
S	high temperature alloys Ni or Co based	hardened		350	34													
S	high temperature alloys Ni or Co based	cast		320	35													
S	titanium alloys	pure	400	190	36													
S	titanium alloys	alpha+beta alloys, hardened	1050	310	37	20-80	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
H	hardened steel	hardened		HRC 55	38	55-65												
H	hardened steel	hardened		HRC 60	39	45-55												
H	chilled cast iron	cast		400	40	90-105												
H	cast iron	hardened		HRC 55	41	55-65												

For cutters with long cutting flute, reduce feed rate by 40%

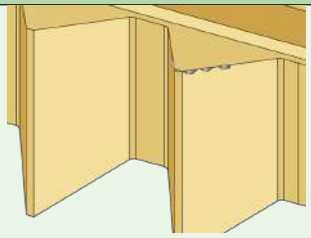
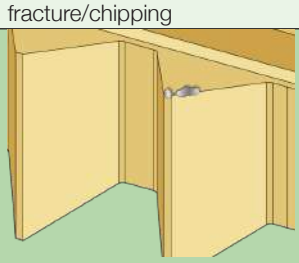
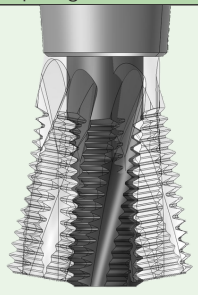
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Machining Data for Solid Carbide Threading Endmills

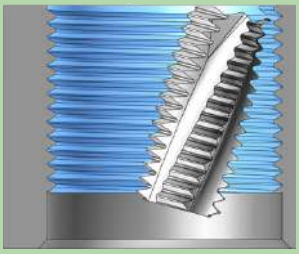
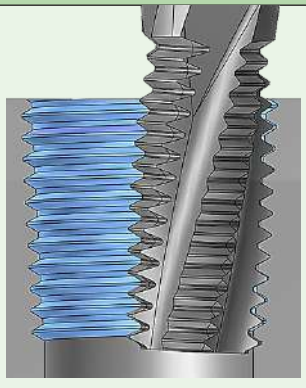
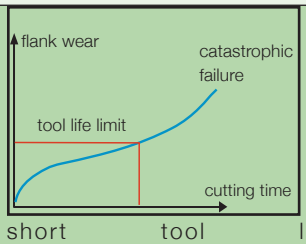
ISO	Material	Condition	Tensile Strength [Kspi]	Hardness HB	Material No. [1]	Cutting Speed (SFM)	Cutting Diameter / Feed (in/tooth)									
						AC22	3/32	1/8	5/32	1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4
P	non-alloy steel and cast steel, free cutting steel 0.25%> C	annealed	61	125	1	330-820	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
P	non-alloy steel and cast steel, free cutting steel 0.25%≤ C	annealed	94	190	2	260-690	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
P	non-alloy steel and cast steel, free cutting steel 0.55%> C	quenched and tempered	123	250	3	210-560											
P	non-alloy steel and cast steel, free cutting steel 0.55%≤ C	annealed	109	220	4	360-590	.0008	.0012	.0012	.0020	.0024	.0028	.0031	.0039	.0047	.0059	.0071
P	non-alloy steel and cast steel, free cutting steel 0.55%≤ C	quenched and tempered	145	300	5	310-520	.0008	.0012	.0012	.0020	.0025	.0028	.0031	.0039	.0047	.0059	.0071
P	low alloy and cast steel (less than 5% of alloying elements)	annealed	87	200	6	300-520	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	low alloy and cast steel (less than 5% of alloying elements)	quenched and tempered	135	275	7	210-660	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	low alloy and cast steel (less than 5% of alloying elements)	quenched and tempered	145	300	8	230-690	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	low alloy and cast steel (less than 5% of alloying elements)	quenched and tempered	174	350	9	310-520	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	high alloyed steel, cast steel and tool steel	annealed	99	200	10	430-560	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	high alloyed steel, cast steel and tool steel	quenched and tempered	160	325	11	250-330	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	stainless steel and cast steel	ferritic / martensitic	99	200	12	360-560	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
P	stainless steel and cast steel	martensitic	119	240	13	230-510	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
M	stainless steel and cast steel	austenitic, duplex	87	180	14	280-330	.0008	.0008	.0012	.0012	.0016	.0020	.0020	.0028	.0031	.0039	.0043
K	gray cast iron (GG)	ferritic / pearlitic		180	17	230-490	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
K	gray cast iron (GG)	pearlitic / martensitic		260	18	360-460	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
K	nodular cast iron (GGG)	ferritic		160	15	390-520	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
K	nodular cast iron (GGG)	pearlitic		250	16	250-520	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
K	malleable cast iron	ferritic		130	19	390-520	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
K	malleable cast iron	pearlitic		230	20	360-460	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
N	aluminum-wrought alloys	not hardenable		60	21	520-980	.0012	.0016	.0016	.0024	.0028	.0031	.0035	.0047	.0059	.0071	.0083
N	aluminum-wrought alloys	hardenable		100	22												
N	aluminum-cast alloys Si 12%≥	not hardenable		75	23												
N	aluminum-cast alloys Si 12%≥	hardenable		90	24												
N	aluminum-cast alloys Si 12%<	high temperature		130	25												
N	copper alloys Pb 1%<	free cutting		110	26												
N	copper alloys	brass		90	27												
N	copper alloys	electrolytic copper		100	28												
N	non metallic	duroplastics, fiber plastics		70 Shore D	29	330-460	.0020	.0024	0028	0035	.0039	.0043	.0047	.0059	.0071	.0087	.0110
N	non metallic	hard rubber		55 Shore D	30												
S	high temperature alloys Fe based	annealed		200	31												
S	high temperature alloys Fe based	hardened		280	32												
S	high temperature alloys Ni or Co based	annealed		250	33	70-260	.0008	.0008	.0008	.0012	.0012	.0012	.0012	.0016	.0016	.0020	.0020
S	high temperature alloys Ni or Co based	hardened		350	34												
S	high temperature alloys Ni or Co based	cast		320	35												
S	titanium alloys	pure	58	190	36												
S	titanium alloys	alpha+beta alloys, hardened	152	310	37	70-260	.0008	.0008	.0008	.0012	.0012	.0012	.0012	.0016	.0016	.0020	.0020
H	hardened steel	hardened		55 HRC	38	180-210											
H	hardened steel	hardened		60 HRC	39	150-180											
H	chilled cast iron	cast		400	40	300-340											
H	cast iron	hardened		55 HRC	41	180-210											

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Troubleshooting

Problem	Cause	Solution
 flank wear	high cutting speed chip too thin insufficient coolant	reduce cutting speed increase feed rate and reduce radial passes check coolant pressure / flow direction
 fracture/chipping	vibration high load on cutting edge	check stability reduce feed rate add radial passes
 build up edge	cutting speed too low insufficient coolant	increase cutting speed check coolant pressure / flow direction
 thread surface-chatter marks vibrations	feed rate is too high large profile thread length too long	reduce feed rate add passes add radial passes reduce overhang
 thread accuracy (go/nogo gauge)	tool deflection cnc program error	reduce feed rate add radial passes use zero compensation check cnc program

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Problem	Cause	Solution
  insert/tool breakage	high load on the cutting edge unproper cutting conditions chip evacuation cnc program error	add radial passes adjust cutting conditions add sufficient coolant check cnc program
 tapered thread	tool cutting load tool overhang	add radial passes and/or reduce cutting conditions clamp tool to the minimum overhang length
 short tool life	unsuitable cutting conditions vibrations	adjust feed/speed reduce overhang as short as possible check tool and workpiece clamping

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