FLOSWISS

MINIATURE TOOLS FOR SWISS MACHINES



Swiss Tooling:
Threading, Grooving, Front & Reverse Turning and Parting
for external machining!

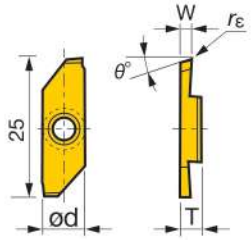
TOOLFLO

www.toolflo.com

INSERT

TFG (double ended parting insert with sharp edge)





Right hand (R) shown.

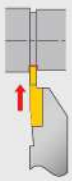
Designation	rε	Coated GP3S R	Coated GP3S L	Uncoated C3 R	Uncoated C3 L	ød	T	W+0.05 0	θ°	Max. groove depth
TFGR/L8070FA	0	•	•	•	•	8	3.97	0.7	15	4.5
TFGR/L8070FA-005	0.05	•				8	3.97	0.7	15	4.5
TFGR/L8100FA	0	•	•	•	•	8	3.97	1	15	6
TFGR/L8100FA-005	0.05	•				8	3.97	1	15	6
TFGR/L8100FA45	0	•		•		8	3.97	1	15	4.5
TFGR/L8100FA45-005	0.05	•				8	3.97	1	15	4.5
TFGR/L8150FA	0	•	•	•	•	8	3.97	1.5	15	6
TFGR/L8150FA-005	0.05	•				8	3.97	1.5	15	6
TFGR/L8150FA50	0	•		•		8	3.97	1.5	15	5
TFGR/L8150FA50-005	0.05	•				8	3.97	1.5	15	5
TFGR/L8180FA	0	•		•		8	3.97	1.8	15	6
TFGR/L8180FA-005	0.05	•				8	3.97	1.8	15	6
TFGR/L8200FA	0	•	•	•	•	8	3.97	2	15	6
TFGR/L8200FA-005	0.05	•				8	3.97	2	15	6
TFGR/L8200FN	0	•	•	•	•	8	3.97	2	0	6
TFGR/L8200FN-005	0.05	•				8	3.97	2	0	6

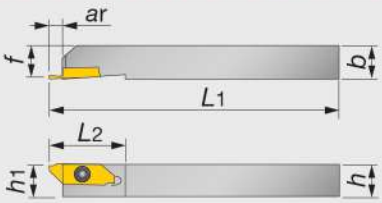
• : Stocked

TOOLHOLDER

TFHGR/L

Screw-on toolholder without offset for front / reverse turning & external grooving





Right hand (R) shown.

Designation	W	ar	h	b	L1	L2	h1	f	Insert
TFXGR/L1010K8-C	0.7 - 2	6.7	10	10	125	29	10	10	TF*R/L8...
TFXGR/L1212K8-C	0.7 - 2	6.7	12	12	125	29	12	12	TF*R/L8...
TFXGR/L1616K8	0.7 - 2	6.5	16	16	125	29	16	16	TF*R/L8...
TFXGR/L2020K8	0.7 - 2	6.5	20	20	125	29	20	20	TF*R/L8...
TFXGR/L2525K8	0.7 - 2	6.5	25	25	125	29	25	25	TF*R/L8...

- Can be wrenched also from the back with a double-head screw.
- This toolholders can be used for TFG insert (grooving), TFF insert (front-turning), TFK insert (reverse-turning).

SPARE PARTS





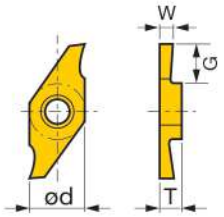
Designation	Clamping screw	Wrench	Wrench 1
TFXGR/L	CSTB-4SD	T-8F	(T-8L)

*Optional

INSERT

TFG (grooving insert with sharp edge)





Right hand (R) shown.

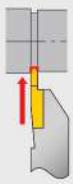
Designation	Coated GP3S R	Coated GP3S L	Uncoated C3 R	Uncoated C3 L	ød	T	$W^{+0.05}_{0}$	G	Max. groove depth
TFGR/L033F	•	•	•		7.94	3.18	0.33	0.8	0.7
TFGR/L050F	•	•	•		7.94	3.18	0.5	1.2	1.1
TFGR/L075F	•	•	•		7.94	3.18	0.75	2	1.9
TFGR/L095F	•	•	•		7.94	3.18	0.95	2	1.9
TFGR/L100F	•	•	•	•	7.94	3.18	1	6	5.5
TFGR/L125F	•	•	•		7.94	3.18	1.25	5.5	5
TFGR/L150F	•	•	•	•	7.94	3.18	1.5	6	5.5
TFGR/L200F	•	•	•		7.94	3.18	2	6	5.5

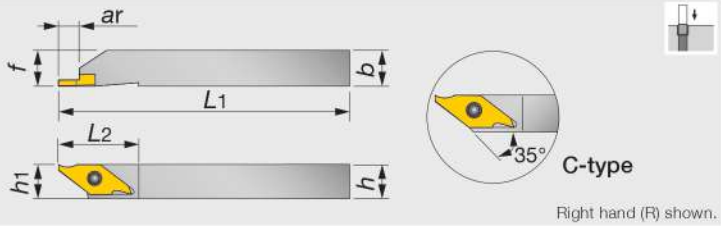
• : Stocked

TOOLHOLDER

TFVGR/L

External grooving toolholders





Right hand (R) shown.

Designation	W	ar	h	b	L_1	L_2	h_1	f	Insert
TFVGR/L1010K-C	0.33 - 2	6.2	10	10	125	23	10	10	TFGR/L...
TFVGR/L1212K-C	0.33 - 2	6.2	12	12	125	23	12	12	TFGR/L...
TFVGR/L1616K	0.33 - 2	6.2	16	16	125	23	16	16	TFGR/L...

• Recommend clamping torque: 2.3 N•m

SPARE PARTS





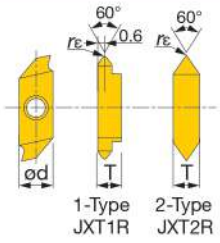
Designation	Clamping screw	Wrench	Wrench 1
TFVGR/L	CSTB-3S	T-9F	(T-8L)

*Optional

INSERT

TFT (threading insert - sharp edge)





Designation	rε	Coated	Uncoated	θ°	ød	T
		GP3S	C3			
TFT1R6000F	0.03	•	•	60	8	3.97
TFT2R6000F	0.03	•	•	60	8	3.97

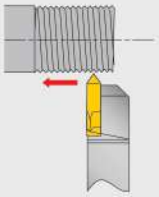
Machinable pitch range: 0.5 to 1 mm

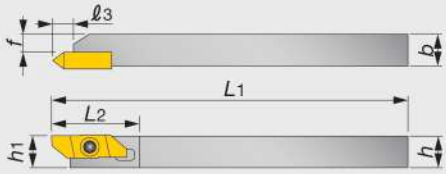
• : Stocked

TOOLHOLDER

TFHBR/L

External threading toolholders





C-type

Right hand (R) shown.

Designation	h	b	L1	L2	R	h1	f	Insert
TFXBR1010K8-C	10	10	125	29	6.4	10	5.7	TFT*R...
TFXBR1212K8-C	12	12	125	29	6.4	12	7.7	TFT*R...
TFXBR1616K8	16	16	125	29	6.4	16	11.7	TFT*R...
TFXBR2020K8	20	20	125	29	6.4	20	15.7	TFT*R...
TFXBR2525K8	25	25	125	29	6.4	25	20.7	TFT*R...

• Can be wrenched from back side with both end torx screw.
• This toolholder is compatible with TFB-type inserts and TFT-type inserts.

SPARE PARTS

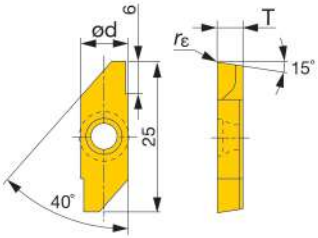
Designation	Clamping screw	Wrench	Wrench 1
TFXBR...	CSTB-4SD	T-8F	(T-8L)

*Optional

INSERT

TFF (front & reverse turning, sharp edge)





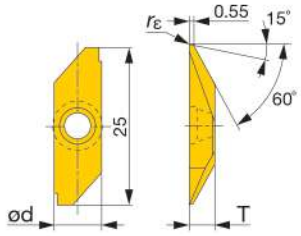
Right hand (R) shown.

Designation	rε	Coated GP3S R	Coated GP3S L	Uncoated C3 R	Uncoated C3 L	ød	T	Max. depth of cut
TFFR/L8000F	0.03	•		•		8	3.97	5.5
TFFR/L8010F	0.1	•		•		8	3.97	5.5

• : Stocked

TFR (reverse & front turning, sharp edge)





Right hand (R) shown.

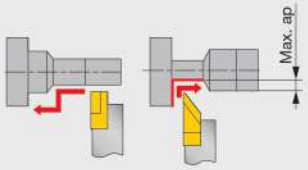
Designation	rε	Coated GP3S R	Coated GP3S L	Uncoated C3 R	Uncoated C3 L	ød	T	Max. depth of cut
TFRR/L8000F	0.03	•		•		8	3.97	5.5
TFRR/L8010F	0.1	•		•		8	3.97	5.5

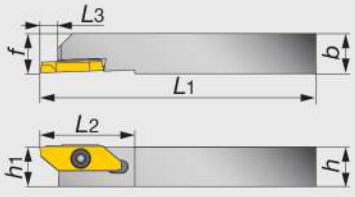
• : Stocked

TOOLHOLDER

TFXGR/L

Screw-on toolholder without offset for front / reverse turning & external grooving







Without offset

C-type

Right hand (R) shown.

Designation	h	b	L1	L2	L3	h1	f	Insert
TFXGR/L1010K8-C	10	10	125	29	6.7	10	10	TFFR/L8..., TFRR/L8...
TFXGR/L1212K8-C	12	12	125	29	6.7	12	12	TFFR/L8..., TFRR/L8...
TFXGR/L1616K8	16	16	125	29	6.5	16	16	TFFR/L8..., TFRR/L8...
TFXGR/L2020K8	20	20	125	29	6.5	20	20	TFFR/L8..., TFRR/L8...
TFXGR/L2525K8	25	25	125	29	6.5	25	25	TFFR/L8..., TFRR/L8...

- Can be wrenched also from the back with a double-head screw.
- This toolholders can be used for TFF insert (front-turning), TFR insert (reverse-turning), TFG insert (grooving)

SPARE PARTS





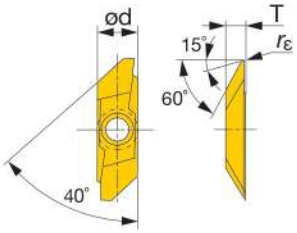
Designation	Clamping screw	Wrench	Wrench 1
TFHGR/L...	CSTB-4SD	T-8F	(T-8L)

*Optional

INSERT

TFB (back turning inserts - sharp edge)





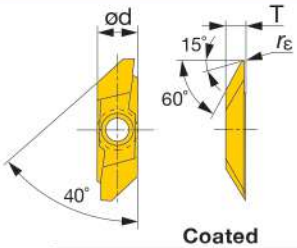
Right hand (R) shown.

Designation	rε	Coated GP3S		Uncoated C3		ød	T	Max. depth of cut
		R	L	R	L			
TFBR/L8000F	0.03	•	•	•	•	8	3.97	5.5
TFBR/L8005F	0.05	•	•	•	•	8	3.97	5.5
TFBR/L8010F	0.1	•	•	•	•	8	3.97	5.5
TFBR/L8015F	0.15	•	•	•	•	8	3.97	5.5

• : Stocked

TFB (back turning inserts - with honing)





Right hand (R) shown.

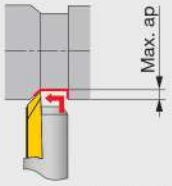
Designation	rε	Coated GP3S		ød	T	Max. depth of cut
		R	L			
TFBR/L8005	0.05	•	•	8	3.97	5.5
TFBR/L8010	0.1	•	•	8	3.97	5.5
TFBR/L8015	0.15	•	•	8	3.97	5.5

• : Stocked

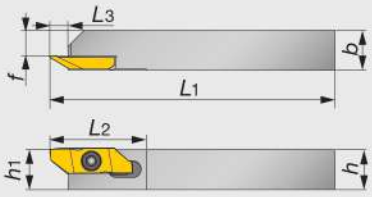
TOOLHOLDER

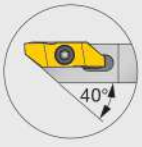
TFXBR/L

Screw-on toolholder for back turning and threading



Max. ap = 5.5 mm





C-type

Right hand (R) shown.

Designation	h	b	L1	L2	L3	h1	f	Insert
TFXBR/L1010K8-C	10	10	125	29	6.7	10	5.7	TFBR/L8..., TFT*R...
TFXBR/L1212K8-C	12	12	125	29	6.7	12	7.7	TFBR/L8..., TFT*R...
TFXBR/L1616K8	16	16	125	29	6.4	16	11.7	TFBR/L8..., TFT*R...
TFXBR/L2020K8	20	20	125	29	6.4	20	15.7	TFBR/L8..., TFT*R...
TFXBR/L2525K8	25	25	125	29	6.4	25	20.7	TFBR/L8..., TFT*R...

• Can be wrenched also from the back with a double-head screw.
• This toolholders can be used for TFB insert (back-turning), TFT insert (threading)

SPARE PARTS

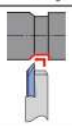




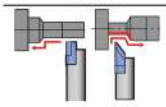
Designation	Clamping screw	Wrench
TFHBR/L...	CSTB-4SD	T-8F

Miniature External Turning - Quick Guide

Back Turning

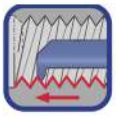
Style	Description	Type of insert: Positive	Type of insert: Negative	Shank Size	Clamping style
	**TFXBR/L** Insert type: TFBR/L8	√		10 - 25 mm	

Front & Reverse Turning

Style	Description	Type of insert: Positive	Type of insert: Negative	Shank Size	Clamping style
	**TFXGR/L** Insert type: TFFR/L8 TFRR/L8	√		10 - 25 mm	Screw-on clamping

STANDARD CUTTING CONDITIONS (TFG type insert)

ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Feed *f* (mm/rev)
P	General steel (C45, etc.)	GP3S	10 - 100	0.01 - 0.1
P	Free-cutting steel (11SMn28, etc.)	GP3S	10 - 100	0.01 - 0.1
M	Stainless steel (X10CrNiS18-9, etc.)	GP3S	10 - 100	0.01 - 0.1
N	Aluminium alloys, Brass (Si < 12%, C3604B / CW614N, etc.)	C3	10 - 200	0.01 - 0.1
S	Difficult-to-machine material, Titanium alloys (Ti-6Al-4V, etc.)	C3	10 - 30	0.01 - 0.1



Threading (metric thread)

ISO	Workpiece material	Grade	Cutting speed *Vc* (m/min)	Number of passes: Pitch (mm) 0.5	0.75	1	1.25	1.5
P	Low carbon steels (C15, C25 etc.)	GP3S	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
P	Carbon steels, Alloy steels (C55, 42CrMoS4 etc.)	GP3S	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
P	Prehardened steels (NAK80, PX5 etc.)	GP3S	40 - 140	6 - 8	8 - 10	10 - 12	12 - 15	15 - 18
M	Stainless steels (X5CrNi18-9, X5CrNiMo17-12-2 etc)	GP3S	40 - 140	8	10	12	15	18
K	Grey cast irons (250, 300 etc.)	GP3S	30 - 100	7	9	12	14	17
K	Ductile cast irons (400-15, 600-3 etc.)	GP3S	30 - 100	7	9	12	14	17
N	Aluminium alloys, copper alloys (Si < 12%)	GP3S	90 - 200	6	8	10	12	15

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