

PARTING & GROOVING



PARTING & GROOVING

contents



Tool Selection Guide

Holder Selection Guide	B4
------------------------	----

Insert Selection Guide	B10
------------------------	-----

Grades	B12
---------------	------------

Toolholders

Blade Designation System	B14
--------------------------	-----

Holder Designation System	B15
---------------------------	-----

T-CLAMP Holder	B16
----------------	-----

T-GROOVE Holder	B56
-----------------	-----

TOPCUT Holder	B57
---------------	-----

QUADRUSH Holder	B59
-----------------	-----

• For more technical information, see TaeguTec technical guide part TB

Guide to Icons



➤ Holder Page



➤ Sleeve Page



➤ Insert Page



➤ Components Page



➤ Cutting Condition Page



➤ Technical Guide Page



Inserts and Solid Bars

Insert Designation System	B62
T-CLAMP Insert	B64
T-GROOVE Insert	B78
TOPMICRO Designation System	B79
TOPMICRO Sleeve and Solid Bar	B80
TOPCUT Designation System	B91
TOPCUT Insert	B92
QUADRUSH Designation System	B95
QUADRUSH Insert	B96
Tailor-made Designation System	B103
Tailor-made Insert	B104
Recommended Cutting Conditions	B110









Tool Selection Guide

Parting and grooving holder

Series			T-CLAMP				
			TGB	TGB-MS	TGBR/L TGBR/L-DR/L	TGBFR/L	TGER/L
Pages			B16	B17	B18	B21	B22
Application	External	Parting	●	●	●		●
		Grooving	●	●	●		●
		Turning					
	Facing	Grooving				●	
		Turning					
	Internal	Grooving					
		Turning					
	Profiling						
	Threading						
	Undercut						

Tool Selection Guide











Parting and grooving holder

T-CLAMP		QOND-RUSH	T-CLAMP				
<u>TCER/L</u>	<u>TCFR/L</u>	<u>TQCR/L</u>	<u>C-ADAPTER</u>	<u>TTER/L-SH</u>	<u>TTER/L-D</u>	<u>TTER/L</u>	<u>TTSER/L</u>
							
E25	E26	E27	E30	E33	E34	E36	E38
●		●	●	●	●	●	○
●		●	●	●	●	●	●
●		○	●	●	●	●	●
	●		●				
	●		●				
●		○	●	●	●	●	○
●		○	●	●	●	●	○
			●				

● Recommended, ○ Suitable

Tool Selection Guide









Parting and grooving holder

Series			T-CLAMP					
			TGSFR/L	TGFR/L	TFR/L	TFR/L-RN	TGFR/L	
Pages			B39	B40	B41	B42	B44	
Application	External	Parting						
		Grooving		●	●			●
		Turning		●	○			○
	Facing	Grooving		○	●	●	●	●
		Turning		○	●	●	●	●
	Internal	Grooving						
		Turning						
	Profiling							
	Threading							
	Undercut							

Tool Selection Guide

Parting and grooving holder

T-CLAMP











<u>TTFPR/L</u>	<u>TGIFR/L</u>	<u>TFIR/L</u>	<u>TTIR/L</u>	<u>TTSIR/L</u>	<u>TGSIR/L</u>	<u>TGEUR/L</u>	<u>TGIUR/L</u>
							
B45	B46	B47	B48	B50	B51	B52	B53
●	●	●					
●	●	●					
			●	●	●		
			●	●	●		○
						●	●

● Recommended, ○ Suitable

Contents

Tool Selection Guide




Parting and grooving holder

Series			T-CLAMP <small>THE NEW</small>		T-GROOVE	TOPCUT	QUAD-BUCK	
			TTER/L-15A	TGIUR/L-15A	TTLEN	TTVER/L TTVBR/L	TQHR/L TQHPR/L	
Pages			B54	B55	B56	B57	B59	
Application	External	Parting					●	●
		Grooving				●	●	●
		Turning		●	●		●	○
	Facing	Grooving						
		Turning						
	Internal	Grooving						
		Turning						
	Profiling		●	●				○
	Threading						●	○
	Undercut							

● Recommended, ○ Suitable
















Tool Selection Guide

Internal application by diameter

Internal diameter (mm)	<i>TOPMICRO</i>	<i>TOPCAP</i>	TTSIR/L	TTIR/L
	0			
0.6	↓			
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12		↓		
12.5				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				↓
26				↓









Tool Selection Guide

Parting and grooving insert

				T-CLAMP				
				TDC TSC	TDJ TSJ	TDXU TDXT	TDT	TDT - RU TDT
Series								
Pages				B64	B66	B68	B69	B71
Application	External	Parting		●	●	○		
		Grooving		●	●	●	●	
		Turning				●	●	●
	Facing	Grooving		○	○	●	○	
		Turning				●	○	
	Internal	Grooving		○	○	●	○	
		Turning				●	○	
	Profiling						●	
	Threading						○	
	Undercut						○	

Tool Selection Guide




































Parting and grooving insert

T-CLAMP				T-GROOVE	TOPMICRO	TOPCUT	ORAS-RUCK
TDFI	TDIT	TDIM TDIP	TDA TSA	TGUX	MIN.	TV..	TQ..
							
B73	B73	B75	B77	B78	B81	B92	B96
○	○	○				●	●
○	○	●		●		●	●
○	○	●	●			●	●
●		○					
●		○					
	●	●			●		
	●	●			●		
			●		●		○
					●	●	●
	○						

● Recommended, ○ Suitable

Grades

Parting and grooving grades

Grades	ISO	Characteristics & applications
 TT6300 CVD coated	 — 	This grade has an extra thick CVD coating that guarantees excellent tool life especially when machining gray cast iron. Its surface has been treated after the coating process.
 TT6080 PVD coated	 —   — 	The latest PVD coating technology has been applied to substrate that has multi nano layers such as Multi Nano AlTiN/TiAlCrN/TiN. This ensures outstanding performance when machining ductile cast iron, as well as interrupted machining on gray cast iron. The surface has been treated after the coating process.
 TT5100 CVD coated	 —   — 	A CVD coated grade for machining carbon steels, alloy steels and stainless steels with outstanding tool life
 TT9080 PVD coated	 —   —   — 	In order to improve machining performance of the existing TT9030 grade for general turning, grooving profiling and parting applications on carbon steel, alloy steel and stainless steel, TaeguTec has applied the latest coating technology to the existing sub micron substrate. This grade has better wear resistance than the TT9030 while maintaining the same toughness levels.
 TT7220 PVD coated	 —   — 	A PVD coated grade for machining carbon steel and alloy steel
 TT8020 PVD coated	 —   —   — 	TaeguTec's toughest PVD grade for severely interrupted cutting, stainless steel and exotic alloy machining
 CT3000 Cermet	 —   —   — 	A tough new reinforced cermet grade with excellent wear resistance. Recommended for grooving, parting & turning alloy steels and stainless steels with good surface quality and long tool life

Parting & Grooving Toolholders



[Contents](#)

Blade Designation System

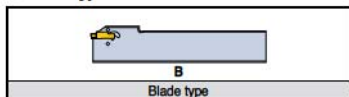


1 TaeguTec

2 Application type

G Grooving
T Turning

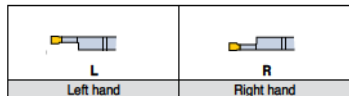
3 Holder type



4 Machining type

F Face grooving

5 Hand of holder



6 Blade height

 B1	26 = 26.0 mm 32 = 32.0 mm 45 = 45.0 mm 52 = 52.0 mm
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7 Insert size

 W	2 = 2.0 mm 3 = 3.0 mm 4 = 4.0 mm 5 = 5.0 mm 6 = 6.0 mm
-------	---

8 Special code

S Single type blade
MS Blade for multi spindle machine
CL Screw clamping

Holder Designation System



1 TaeguTec

2 Application type

- G Grooving
- T Turning

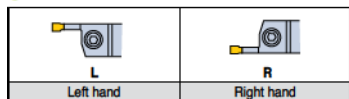
3 Machining type

- E External machining
- I Internal machining
- F Face machining

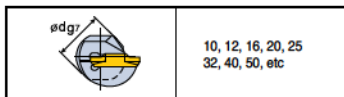
4 Holder shape

- U Undercutting
- P Perpendicular type

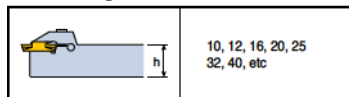
5 Hand of holder



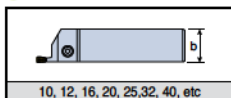
6 Shank diameter



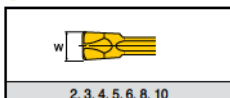
7 Shank height



8 Shank width



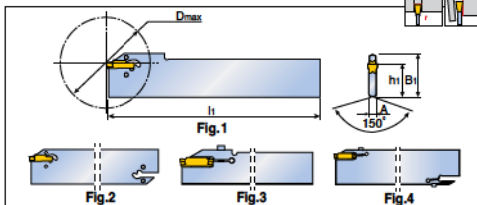
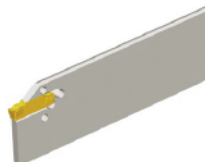
9 Insert size



10 Special code

- C With coolant hole
- T□ Overhang length
- SH Holder for swiss automatics
- RN Renewed type holder

Blades for parting and deep grooving



Designation	Insert seat size	Dimension (mm)							Block	Insert
		B1	l1	h1	A	Dmax	Fig.			
TGB 26-1.4S ⁽¹⁾	1	26	150	21.4	1.0 ⁽²⁾	26	1	TTBNU...26	TDC / J / T	
26-2S ⁽¹⁾	2	26	150	21.4	1.8 ⁽²⁾	40	1	TTBNU...26	TDXU / XT	
26-3S ⁽¹⁾	3	26	150	21.4	2.4	50	1	TTBNU...26	TSC / J	
26-4S ⁽¹⁾	4	26	150	21.4	3.2	80	1	TTBNU...26	⊗ E64-E73	
32-1.4	1	32	150	24.9	1.0 ⁽²⁾	26	2	TTBNU...32		
32-2	2	32	150	24.9	1.8 ⁽²⁾	50	2	TTBNU...32		
32-3	3	32	150	24.9	2.4	100	2	TTBNU...32		
32-4	4	32	150	24.9	3.2	100	2	TTBNU...32		
32-5	5	32	150	24.9	4.0	120	2	TTBNU...32		
32-6	6	32	150	24.9	5.2	120	2	TTBNU...32		
45-4	4	45	150	38.1	3.2	120	2	TTBNU...45		
32-8S-CL ⁽¹⁾	8	32	150	24.9	6.2	80	3	TTBNU...32		
52-8-CL	8	52	250	45.2	6.8	200	4	TTBNU...52		

- ⁽¹⁾ Single ended blade
- ⁽²⁾ Thickness at DOC area only. Overall thickness is 2.4mm

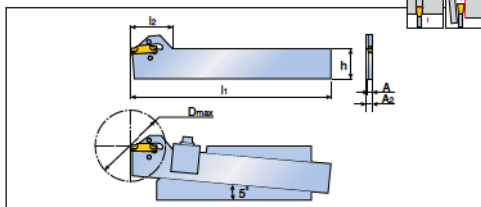
Spare parts


Designation	Extractor	Screw	Wrench	
TGB 26-1.4S / 32-1.4	EDG-23B	-	-	
TGB 26 / 32 / 45	EDG-33B	-	-	
TGB 32-8S-CL	-	SH M4x0.7x20-MO	L-W3	
TGB 52-8-CL	-	SH M4x0.7x20-MO	L-W3	

Components




- Extractor should be ordered separately



Designation	Insert seat size	Dimension (mm)						Insert
		h	l1	l2	A	A2	Dmax	
TGB 5-22-2-MS	2	22.2	150	32	1.8	3.2	42	TDC / J / T
5-22-3-MS	3	22.2	150	32	2.4	3.2	60	TDXU / XT
5-22-4-MS	4	22.2	150	32	3.2	3.2	80	TSC / J
								 B64-873

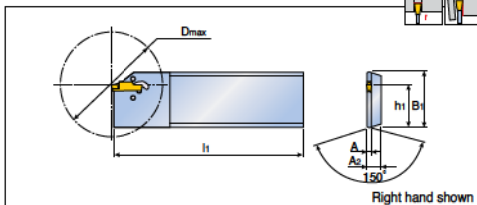
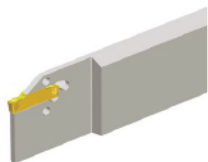
Spare parts


Designation	Extractor			
TGB-MS	 EDG-33B			



• Extractor should be ordered separately

Reinforced blades for parting and deep grooving



Designation	Insert seat size	Dimension (mm)						Block	Insert
		B1	l1	h1	A	A2	Dmax		
TGBR/L 32T24-2	2	32	110	24.9	1.8	8.0	42	TTBN/U..-32	TDC / J / T
32T33-3	3	32	110	24.9	2.4	8.0	60	TTBN/U..-32	TDXU / XT
32T41-4	4	32	110	24.9	3.2	10.0	80	TTBN/U..-32	TSC / J
									 E64-E73

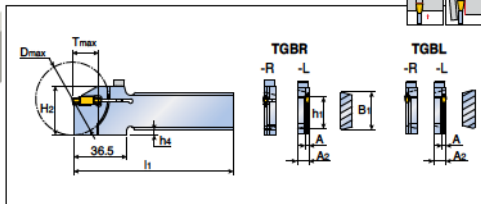
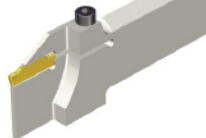
Spare parts

Designation	Extractor			
TGBR/L	EDG-33B			

Components • Extractor should be ordered separately



Reinforced type blades with screw clamping



Designation	Insert seat size	Dimension (mm)										Block	Insert
		B1	A	A2	li	h1	H2	h4	Tmax	Dmax			
TGBR 26-2-D50R ⁽¹⁾	2	26	1.8	8	110	21.4	33.7	3.6	18	50	TTBNU...26	TDC / J / T	
26-2-D50L ⁽²⁾	2	26	1.8	8	110	21.4	33.7	3.6	18	50	TTBNU...26	TDXU / XT	
TGBL 26-2-D50R ⁽²⁾	2	26	1.8	8	110	21.4	33.7	3.6	18	50	TTBNU...26	TSC / J	
26-2-D50L ⁽¹⁾	2	26	1.8	8	110	21.4	33.7	3.6	18	50	TTBNU...26	B64-B73	
TGBR 26-3-D50R ⁽¹⁾	3	26	2.4	8	110	21.4	33.7	3.6	18	50	TTBNU...26		
26-3-D50L ⁽²⁾	3	26	2.4	8	110	21.4	33.7	3.6	18	50	TTBNU...26		
TGBL 26-3-D50R ⁽²⁾	3	26	2.4	8	110	21.4	33.7	3.6	18	50	TTBNU...26		
26-3-D50L ⁽¹⁾	3	26	2.4	8	110	21.4	33.7	3.6	18	50	TTBNU...26		
TGBR 32-2-D50R ⁽²⁾	2	32	1.8	8	120	24.9	33.7	-	18	50	TTBNU...32		
32-2-D50L ⁽²⁾	2	32	1.8	8	120	24.9	33.7	-	18	50	TTBNU...32		
TGBL 32-2-D50R ⁽²⁾	2	32	1.8	8	120	24.9	33.7	-	18	50	TTBNU...32		
32-2-D50L ⁽²⁾	2	32	1.8	8	120	24.9	33.7	-	18	50	TTBNU...32		
TGBR 32-3-D50R ⁽²⁾	3	32	2.4	8	120	24.9	33.7	-	18	50	TTBNU...32		
32-3-D50L ⁽²⁾	3	32	2.4	8	120	24.9	33.7	-	18	50	TTBNU...32		
TGBL 32-3-D50R ⁽²⁾	3	32	2.4	8	120	24.9	33.7	-	18	50	TTBNU...32		
32-3-D50L ⁽²⁾	3	32	2.4	8	120	24.9	33.7	-	18	50	TTBNU...32		

- ⁽¹⁾ for Traub machines, model TNC 30, TNM 28, TNS 26/30/42/112, TNA 300, TNK 260
- ⁽²⁾ for Tornos Bechler, model Emco 2000/20, 2000/26
- ⁽³⁾ for Traub machines, model TNC 42/65, TNM 42/65, TNS 42/60/65, TNA 300/400

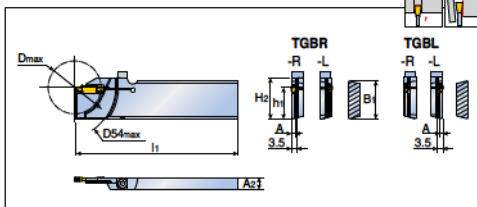
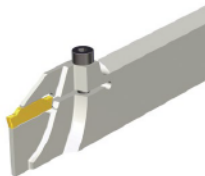
Spare parts

Designation	Screw	Wrench		
TGBR/L -DR/L	SH M4x0.7x16	L-W3		



TGBR/L -TI-D..R/L

Reinforced type blades with screw clamping for traub and index machines



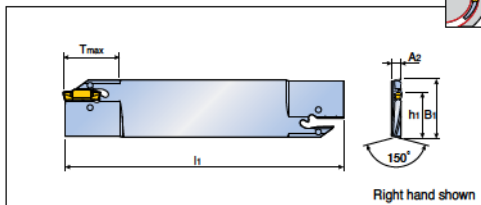
Designation	Insert seat size	Dimension (mm)								Block	Insert
		B1	A	A2	l1	h1	H2	Dmax			
TGBR/L 26-2TI-D36R	2	26	1.6	8	110	21.4	27.9	36	TTBNU...-26	TDC / J / T	
26-2TI-D36L	2	26	1.6	8	110	21.4	27.9	36	TTBNU...-26	TDXU / XT	
26-3TI-D36R	3	26	2.4	8	110	21.4	27.9	36	TTBNU...-26	TSC / J	
26-3TI-D36L	3	26	2.4	8	110	21.4	27.9	36	TTBNU...-26	B64-B73	

Spare parts

Designation	Screw	Wrench		
TGBR/L -TI-DR/L	SH M4x0.7x16	L-W3		

Components
T801-T802

Blades for face grooving



Designation	Insert seat size	Dimension (mm)							Block	Insert
		B ₁	l ₁	h ₁	A ₂	T _{max}	D _{min}	D _{max}		
TGBFR/L 32T20-40-60-3	3	32	150	24.9	5.2	20	40	60	TTBN/U...32	TDC / J / T TDXU / XT / FT TSC / J B64-B73
32T20-54-80-3	3	32	150	24.9	5.2	20	54	80	TTBN/U...32	
32T25-74-120-3	3	32	150	24.9	5.2	25	74	120	TTBN/U...32	
32T25-114-180-3	3	32	150	24.9	5.2	25	114	180	TTBN/U...32	
32T25-40-60-4	4	32	150	24.9	5.2	25	40	60	TTBN/U...32	
32T25-50-80-4	4	32	150	24.9	5.2	25	50	80	TTBN/U...32	
32T30-70-130-4	4	32	150	24.9	5.2	30	70	130	TTBN/U...32	
32T30-120-200-4	4	32	150	24.9	5.2	30	120	200	TTBN/U...32	
32T30-200-4	4	32	150	24.9	5.2	30	200	∞	TTBN/U...32	
32T32-60-95-5	5	32	150	24.9	5.2	32	60	95	TTBN/U...32	
32T35-85-140-5	5	32	150	24.9	5.2	35	85	140	TTBN/U...32	
32T35-130-250-5	5	32	150	24.9	5.2	35	130	250	TTBN/U...32	
32T35-250-5	5	32	150	24.9	5.2	35	250	∞	TTBN/U...32	
32T32-80-180-6	6	32	150	24.9	5.2	32	80	180	TTBN/U...32	
32T38-168-300-6	6	32	150	24.9	5.2	38	168	300	TTBN/U...32	
32T38-300-6	6	32	150	24.9	5.2	38	300	∞	TTBN/U...32	

• Please check insert min. dia for face grooving B43 page

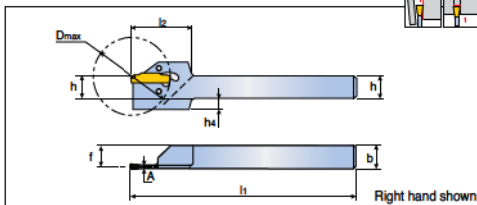
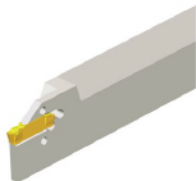
Spare parts

Designation	Extractor			
TGBFR/L	EDG-33B			



• Extractor should be ordered separately

Parting and deep grooving



Designation	Insert seat size	Dimension (mm)							Dmax		Insert
		h	b	l1	f	l2	A	h4	TDJ/C	TSJ/C	
TGER/L 2020-1.4T10	1	20	20	125	19.5	31	1.0	-	20	20	TDC/J/T
1010-2	2	10	10	150	9.1	31	1.8	8	33	33	TDXU/XT
1212-2	2	12	12	150	11.1	31	1.8	6	35	35	TSC/J
1616-2	2	16	16	150	15.1	31	1.8	2	35	35	B64-B73
2012-2	2	20	12	150	11.1	31	1.8	-	35	35	
2020-2	2	20	20	150	19.1	31	1.8	-	35	35	
1212-3	3	12	12	150	10.8	31	2.4	6	38	40	
1616-3	3	16	16	150	14.8	31	2.4	2	38	45	
2020-3	3	20	20	125	18.8	31	2.4	-	38	45	
2525-3	3	25	25	150	23.8	31	2.4	-	38	45	
2020-4	4	20	20	125	18.4	33	3.2	-	38	55	
2525-4	4	25	25	150	23.4	33	3.2	-	38	55	

Spare parts

Designation	Extractor			
TGER/L...-1.4T10	EDG-23B			
TGER/L...-2	EDG-33B			
TGER/L...-3	EDG-33B			
TGER/L...-4	EDG-33B			

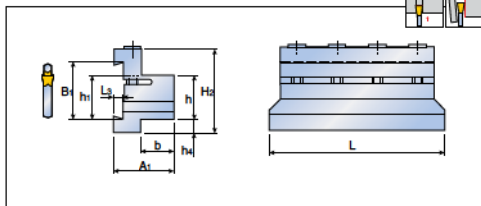
Components



• Extractor should be ordered separately

T801-T802

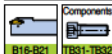
Blocks for parting and deep grooving blades



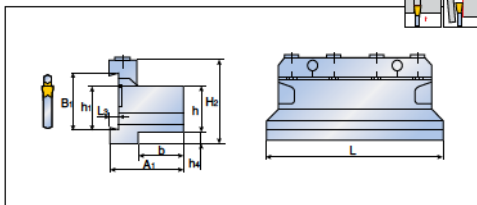
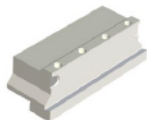
Designation	Dimension (mm)									
	B1	h1	h	h4	H2	L3	L	b	A1	
TTBN 16-26	26	21.0	16	12	38	4.0	87	15	29	
20-26	26	21.4	20	8	38	4.0	87	19	33	
25-26	26	21.4	25	3	38	4.0	110	20	34	
20-32	32	24.8	20	13	48	5.5	100	19	35	
25-32	32	24.8	25	8	48	5.5	110	20	36	
32-32	32	24.8	32	3	48	5.5	120	28	44	
25-45	45	38.1	25	25	66	5.5	110	22	40	
32-45	45	38.1	32	18	66	5.5	120	28	45	
40-52	52	45.2	40	21	82	8.0	160	40	65	

Spare parts

Designation	Screw	Wrench		
TTBN...26	SH M6x1.0x25	L-W5		
TTBN...32	SH M6x1.0x30	L-W5		
TTBN...45	SH M6x1.0x40	L-W5		
TTBN...52	SH M8x1.25x45	L-W6		



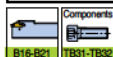
Blocks for parting and deep grooving blades



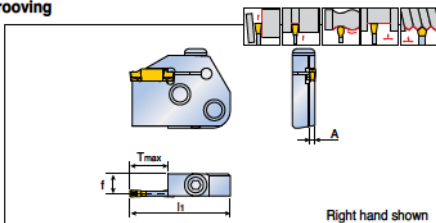
Designation	Dimension (mm)								
	B1	h1	h	h4	H2	L3	L	b	A1
TTBU 20-26	26	21.4	20	9	43	4.0	86	21	38
25-26	26	21.4	25	5	45	4.0	110	23	42
20-32	32	24.8	20	13	50	5.3	100	19	38
25-32	32	24.8	25	8	50	5.3	110	23	42
32-32	32	24.8	32	5	54	5.3	110	29	48
25-45	45	38.1	25	27	70	5.3	110	23	42
32-45	45	38.1	32	20	70	5.3	110	29	48

Spare parts

Designation	Screw	Clamp	Wrench	
TTBU 20-26	SR-M6x30	BKU- 86	L-W5	
TTBU 25-26	SR-M6x30	BKU-105	L-W5	
TTBU 20-32	SR-M6x30 DIN 912	BKU-100	L-W5	
TTBU 25/32-32/45	SR-M6x30	BKU-110	L-W5	



Cartridge for external turning and grooving

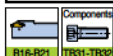


Designation	Insert seat size	Dimension (mm)				Insert	Holder
		l ₁	A	f	T _{max}		
TCER/L 1.4T12	1	41	1.0	9.5	12	TDJ 1.4	C.-TCHN
2T16	2	45	1.8	9.1	16	TDC ⁽¹⁾ / J ⁽¹⁾ / T	C.-TCHPN
2T22	2	51	1.8	9.1	22	TDXU / XT	TCHR/L
3T16	3	45	2.4	8.8	16	TSC ⁽¹⁾ / J ⁽¹⁾	TCHPR/L
3T22	3	51	2.4	8.8	22	B64-B73	B28-B31
4T16	4	45	3.0	8.5	16		
4T22	4	51	3.0	8.5	22		
5T20	5	49	4.0	8.0	20		
5T25	5	54	4.0	8.0	25		
6T20	6	49	5.0	7.5	20		
6T25	6	54	5.0	7.5	25		

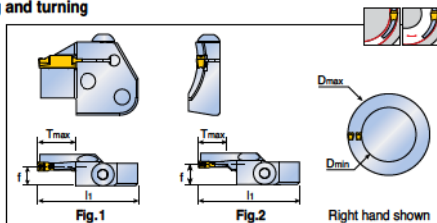
- ⁽¹⁾ Insert for grooving only
- Ordering example: 2 pcs. TCER 3T16

Spare parts

Designation	Screw	Wrench		
TCER/L	BH M6x1x20	L-W4		



Cartridge for external face grooving and turning



Designation	Insert seat size	Dimension (mm)					Fig.	Insert	Holder
		l1	f	Tmax	Dmin	Dmax			
TCFR/L 3T12-40-55 RN	3	45	8.9	12	40	55	2	TDC ⁽¹⁾ / J ⁽¹⁾ / T	C.-TCHN C.-TCHPN TCHRL TCHPR/L B28-B31
3T12-55-75 RN	3	45	8.9	12	55	75	2	TDX / XT	
3T12-75-100 RN	3	45	8.9	12	75	100	2	TSC ⁽¹⁾ / J ⁽¹⁾	
3T12-100-140 RN	3	45	8.9	12	100	140	2	B64-B73	
3T12-140-200 RN	3	45	8.9	12	140	200	2		
4T16-50-70 RN	4	45	8.5	16	50	70	1		
4T16-70-100 RN	4	45	8.5	16	70	100	1		
4T16-100-150 RN	4	45	8.5	16	100	150	1		
4T16-150-250 RN	4	45	8.5	16	150	250	1		
4T16-250 RN	4	45	8.5	16	250	∞	1		
5T20-55-80 RN	5	49	8.0	20	55	80	1		
5T20-80-120 RN	5	49	8.0	20	80	120	1		
5T20-120-180 RN	5	49	8.0	20	120	180	1		
5T20-180-300 RN	5	49	8.0	20	180	300	1		
5T20-300 RN	5	49	8.0	20	300	∞	1		
6T25-60-90 RN	6	55	7.5	25	60	90	1		
6T25-90-150 RN	6	55	7.5	25	90	150	1		
6T25-150-250 RN	6	55	7.5	25	150	250	1		
6T25-250-400 RN	6	55	7.5	25	250	400	1		
6T25-400 RN	6	55	7.5	25	400	∞	1		

⁽¹⁾ Insert for grooving only

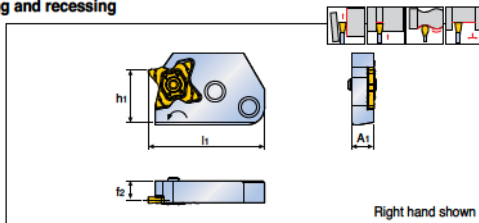
- Ordering example: 5 pcs. TCFR 3T12-40-55RN
- Please check insert min. dia for face grooving B43 page

Spare parts

Designation	Screw	Wrench		
	TCFR/L	BH M6x1x20	L-W4	



Cartridge for grooving, parting and recessing



Right hand shown

Designation	Dimension (mm)					Insert	Holder
	fz ⁽¹⁾	l1	W _{range}	h1	A1		
TQCR 27	8.8	53	0.5 ≤ W < 5.3	24	10	TQ..27...	C...TCHN
TQCL 27	8.8	53	0.5 ≤ W < 5.3	24	10	B96-B102	C...TCHPN TCHR/L TCHPR/L B28-B31

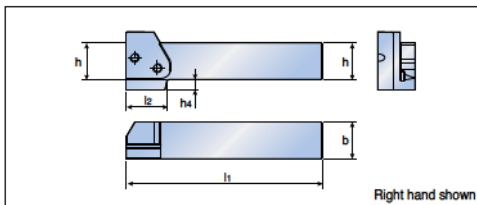
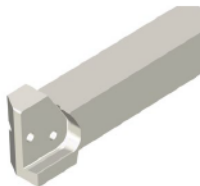
⁽¹⁾ "fz" value is based on TQ.. 27 standard insert

Spare parts

Designation	Screw	Wrench		
TQCR 27	TS 50125IL	T 10 / 20		
TQCL 27	TS 50125I	T 10 / 20		





Parallel holders



Designation	Dimension (mm)					Cartridge
	h	b	l1	l2	h4	
TCHR/L 2020	20	20	133	35	12	TCER/L / TCFR/L
2525	25	25	133	28	7	TQCR/L
3232	32	32	153	28	-	B25-B27

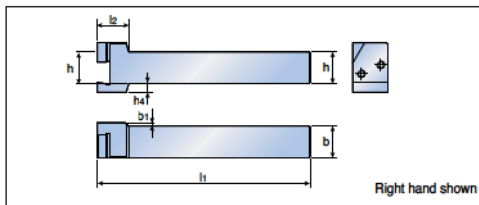
• Ordering example: 2 pcs. TCHR 2525

Spare parts

Designation	Clamp screw	Wrench		
				
TCHR/L	TS 60190I	L-W4		



Perpendicular holders



Designation	Dimension (mm)						Cartridge
	h	b	l ₁	l ₂	b ₁	h ₄	
TCHPR/L 2020	20	20	150	25	8	12	TCER/L / TCFR/L TCOR/L B25-B27
2525	25	25	150	25	3	7	
3232	32	32	170	25	-	-	

• Ordering example: 2 pcs. TCHPR 2525

Spare parts

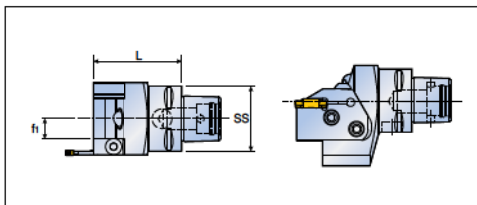
Designation	Clamp screw	Wrench		
TCHPR/L	TS 60190I	L-W4		

Components



TB01-TB02

Parallel type



Designation	Dimension (mm)			Cartridge
	SS	L	fi	
C4-TCHN	40	55	12.2	TCER/L / TCFR/L
C5-TCHN	50	58	17.2	TQCR/L
C6-TCHN	63	60	22.2	B25-B27

• Cartridge should be ordered separately

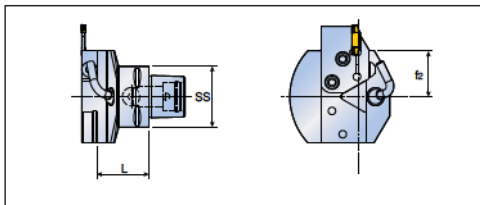
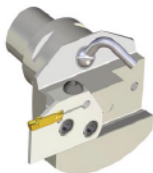
Spare parts

Designation	Screw 	Nozzle 	Wrench 	
TCHN	TS 60190I	NZ-125	L-W4	



C-ADAPTER

Perpendicular type



Designation	Dimension (mm)			Cartridge
	SS	L	t ₂	
C4-TCHPN	40	35	30.5	TCER/L / TCFR/L
C5-TCHPN	50	40	35.5	TQCR/L
C6-TCHPN	63	42	35.5	B25-B27

• Cartridge should be ordered separately

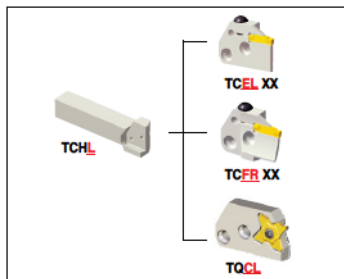
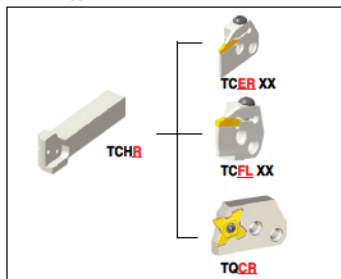
Spare parts

Designation	Screw	Nozzle	Wrench	Pipe
TCHPN	TS 60190I	NZ-125	L-W4	NZP 5

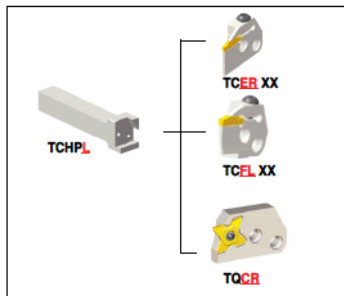
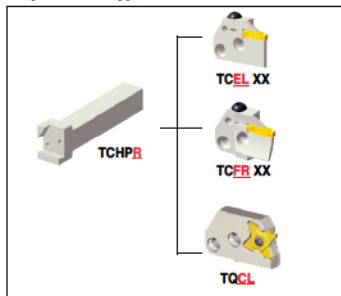


Cartridge and Holder Selection

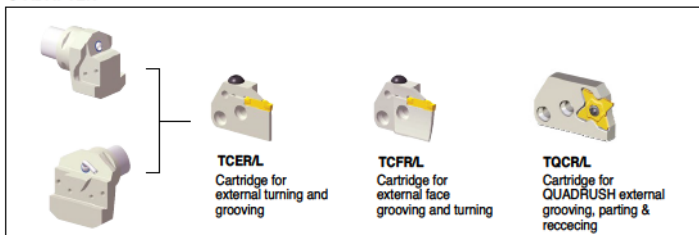
Parallel type



Perpendicular type

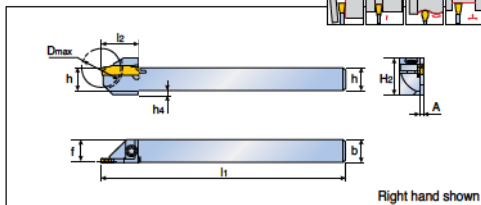
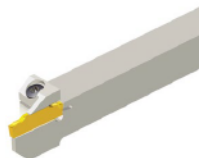


C-ADAPTER



TTER/L-SH

External turning and grooving holder for swiss automatics



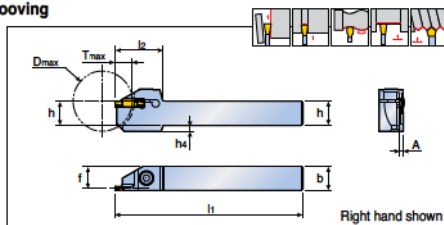
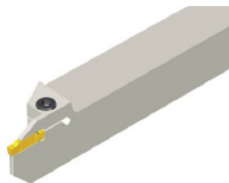
Designation	Insert seat size	Dimension (mm)									Insert
		h	b	l ₁	f	l ₂	A	h ₄	H ₂	D _{max}	
TTER/L 10-20-1.4SH	1	10	10	125	9.5	18	1.0	-	13.7	20	TDC / J / T
12-24-1.4SH	1	12	12	125	11.5	19.5	1.0	-	15.7	24	TDXU / XT
14-24-1.4SH	1	14	14	125	13.5	19.5	1.0	-	17.7	24	TSC / J
16-32-1.4SH	1	16	16	125	15.5	24	1.0	-	19.7	32	B64-B73
10-20-2SH	2	10	10	125	9.1	19	1.8	2	17.5	20	
12-24-2SH	2	12	12	125	11.1	19	1.8	2	19.0	24	
14-24-2SH	2	14	14	125	13.1	19	1.8	-	19.0	24	
16-32-2SH	2	16	16	125	15.1	24	1.8	-	21.0	32	
12-24-3SH	3	12	12	125	10.8	19	2.4	2	19.0	24	
16-32-3SH	3	16	16	125	14.8	24	2.4	-	21.0	32	

Spare parts

Designation	Screw	Wrench		
TTER/L- SH	TS 40A115I	T15		



Reinforced external turning and grooving



Designation	Insert seat size	Dimension (mm)										Insert
		h	b	l1	f	l2	h4	A	Tmax	Dmax		
TTER/L 1010-1.4T15-D40	1	10	10	125	9.5	32	6	1.0	15	40	TDC / J / T	
1212-1.4T15-D40	1	12	12	125	11.5	32	4	1.0	15	40	TDXU / XT	
1616-1.4T20-D45	1	16	16	125	15.5	38	4	1.0	20	45	TSC / J	
2020-1.4T20-D45	1	20	20	125	19.5	38	-	1.0	20	45	B64-B73	
1010-2T15-D40	2	10	10	125	9.1	32	6	1.8	15	40		
1212-2T15-D40	2	12	12	125	11.1	32	4	1.8	15	40		
1616-2T20-D45	2	16	16	125	15.1	38	4	1.8	20	45		
2020-2T20-D45	2	20	20	125	19.1	38	-	1.8	20	45		
2525-2T20-D45	2	25	25	150	24.1	38	-	1.8	20	45		
1212-3T15-D40	3	12	12	125	10.8	32	4	2.4	15	40		
1616-3T20-D45	3	16	16	125	14.8	38	4	2.4	20	45		
2020-3T20-D45	3	20	20	125	18.8	38	-	2.4	20	45		
2525-3T20-D45	3	25	25	150	23.8	38	-	2.4	20	45		
2525-3T25-D60	3	25	25	150	23.8	43	-	2.4	25	60		

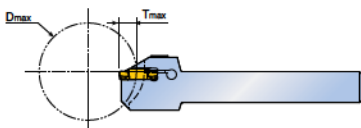
Spare parts

Designation	Screw	Wrench		
	TTER/L-D	SH M5x0.8x16	L-W 4	



T801-T832

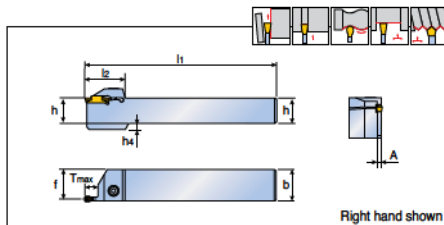
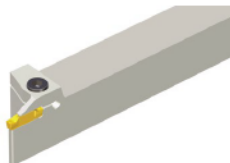
Machining depth for diameter of workpiece



Designation	Dmax	Tmax												
		1	2	3	4	5	6	7	8	9	10	11	12	13
TTER/L 1010-1.4T15-D40	Dmax					∞						269	120	79
1212-1.4T15-D40						∞						269	120	79
1616-1.4T20-D45						∞								432
2020-1.4T20-D45						∞								432
1010-2T15-D40						∞						269	120	79
1212-2T15-D40						∞						269	120	79
1616-2T20-D45						∞								432
2020-2T20-D45						∞								432
2525-2T20-D45						∞				1468	339	193	136	106
1212-3T15-D40						∞						269	120	79
1616-3T20-D45						∞								432
2020-3T20-D45						∞								432
2525-3T20-D45						∞				1468	339	193	136	106
2525-3T25-D60						∞								

Designation	Dmax	Tmax												
		14	15	16	17	18	19	20	21	22	23	24	25	
TTER/L 1010-1.4T15-D40	Dmax	59	40											
1212-1.4T15-D40		59	40											
1616-1.4T20-D45		193	125	94	76	64	57	45						
2020-1.4T20-D45		193	125	94	76	64	57	45						
1010-2T15-D40		59	40											
1212-2T15-D40		59	40											
1616-2T20-D45		193	125	94	76	64	57	45						
2020-2T20-D45		193	125	94	76	64	57	45						
2525-2T20-D45		87	75	67	60	56	52	45						
1212-3T15-D40		59	40											
1616-3T20-D45		193	125	94	76	64	57	45						
2020-3T20-D45		193	125	94	76	64	57	45						
2525-3T20-D45		87	75	67	60	56	52	45						
2525-3T25-D60				1810	418	237	167	130	107	91	81	73	60	

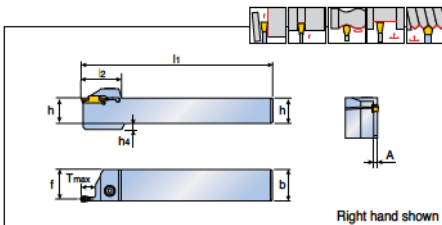
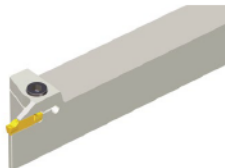
External turning and grooving



Designation	Insert seat size	Dimension (mm)									Insert
		h	b	l1	f	l2	A	h4	Tmax		
TTER/L 1616-2T08	2	16	16	110	15.1	33	1.8	4	8.0	TDC / J / T / A TDXU / XT TSC / J / A B64-B77	
2020-2T08	2	20	20	125	19.1	33	1.8	-	8.0		
2525-2T08	2	25	25	150	24.1	33	1.8	-	8.0		
1616-2	2	16	16	110	15.1	32	1.8	4	12.0		
2020-2	2	20	20	125	19.1	32	1.8	-	12.0		
2525-2	2	25	25	150	24.1	32	1.8	-	12.0		
1616-2T17	2	16	16	110	15.1	37	1.8	4	17.0		
2020-2T17	2	20	20	125	19.1	37	1.8	-	17.0		
2525-2T17	2	25	25	150	24.1	37	1.8	-	17.0		
TTER/L 1616-3T09	3	16	16	110	14.8	32	2.4	4	9.0		
2020-3T09	3	20	20	125	18.8	32	2.4	-	9.0		
2525-3T09	3	25	25	150	23.8	32	2.4	-	9.0		
1616-3	3	16	16	110	14.8	32	2.4	4	12.0		
2020-3	3	20	20	125	18.8	32	2.4	-	12.0		
2525-3	3	25	25	150	23.8	32	2.4	-	12.0		
1616-3T20	3	16	16	110	14.8	38.5	2.4	-	20.0		
2020-3T20	3	20	20	125	18.8	38.5	2.4	-	20.0		
2525-3T20	3	25	25	150	23.8	38.5	2.4	-	20.0		
2525-3T25	3	25	25	150	23.8	44.5	2.4	-	25.0		
TTER/L 1616-4T10	4	16	16	110	14.5	32	3.0	4	10.0		
2020-4T10	4	20	20	125	18.5	32	3.0	-	10.0		
2525-4T10	4	25	25	150	23.5	32	3.0	-	10.0		
1616-4	4	16	16	110	14.5	33	3.0	4	15.0		
2020-4	4	20	20	125	18.5	33	3.0	-	15.0		
2525-4	4	25	25	150	23.5	33	3.0	-	15.0		
1616-4T25	4	16	16	110	14.5	45	3.0	-	25.0		
2020-4T25	4	20	20	125	18.5	45	3.0	-	25.0		
2525-4T25	4	25	25	150	23.5	45	3.0	-	25.0		
TTER/L 2020-5T12	5	20	20	125	18.1	37	4.0	-	12.0		
2525-5T12	5	25	25	150	23.1	37	4.0	-	12.0		
2020-5	5	20	20	125	18.1	37	4.0	-	20.0		
2525-5	5	25	25	150	23.1	37	4.0	-	20.0		
2525-5T32	5	25	25	150	23.0	56	4.0	-	32.0		





External turning and grooving



Designation	Insert seat size	Dimension (mm)								Insert
		h	b	l ₁	f	l ₂	A	h ₄	T _{max}	
TTER/L 2020-6T12	6	20	20	125	17.6	37	5.0	-	12.0	TDC / J / T / A
2525-6T12	6	25	25	150	22.6	37	5.0	7	12.0	TDXU / XT
2020-6	6	20	20	125	17.6	41	5.0	-	20.0	TSC / J / A
2525-6	6	25	25	150	22.6	41	5.0	7	20.0	B64-B77
2525-6T32	6	25	25	150	22.5	56	5.0	7	32.0	
TTER/L 2525-8T16	8	25	25	150	22.1	47	6.0	7	16.0	
2525-8	8	25	25	150	22.1	47	6.0	7	25.0	
3232-8	8	32	32	170	29.1	47	6.0	-	25.0	
2525-8T36	8	25	25	150	22.1	60	6.0	7	36.0	
3232-8T36	8	32	32	170	29.1	60	6.0	-	36.0	
TTER/L 2525-10T25	10	25	25	150	21.1	50	7.85	7	25.0	
3232-10T25	10	32	32	170	28.1	50	7.85	-	25.0	
4040-10T25	10	40	40	200	36.1	50	7.85	-	25.0	

Spare parts

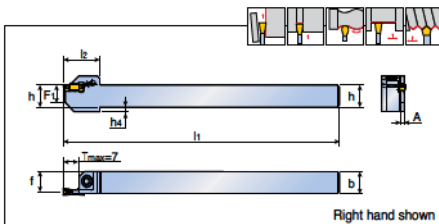
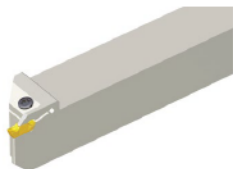
Designation	Screw	Wrench		
				
TTER/L 1616-2/3	SH M5x0.8x16	L-W 4		
TTER/L 2020-2/3	SH M5x0.8x20	L-W 4		
TTER/L 2525-2/3	SH M5x0.8x25	L-W 4		
TTER/L 1616-4/5	SH M6x1x16	L-W 5		
TTER/L 2020-4/5	SH M6x1x20	L-W 5		
TTER/L 2525-4/5	SH M6x1x25	L-W 5		
TTER/L 2020-6	SH M8x1.25x20	L-W 6		
TTER/L 2525-6/8	SH M8x1.25x25	L-W 6		
TTER/L 3232-8/10	SH M8x1.25x25	L-W 6		
TTER/L 4040-10	SH M8x1.25x25	L-W 6		

Components



TB91-TB32

External turning and grooving



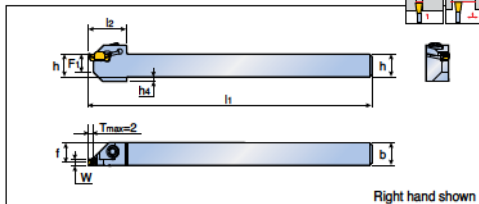
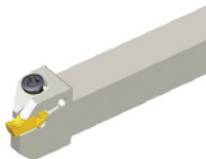
Designation	Insert seat size	Dimension (mm)								Insert
		h	b	l ₁	f	F ₁	l ₂	A	h ₄	
TTSER/L 1010-2T7	2	10	10	125	9.2	8	17	1.6	2	TDIM / IP B75, B76
1212-2T7	2	12	12	125	11.2	8	17	1.6	-	
1616-2T7	2	16	16	125	15.2	11	20	1.6	-	
2020-2T7	2	20	20	125	19.2	14	20	1.6	-	
2525-2T7	2	25	25	125	24.2	18	20	1.6	-	
1010-3T7	3	10	10	125	8.8	8	17	2.4	2	
1212-3T7	3	12	12	125	10.8	8	17	2.4	-	
1616-3T7	3	16	16	125	14.8	11	20	2.4	-	
2020-3T7	3	20	20	125	18.8	14	20	2.4	-	
2525-3T7	3	25	25	125	23.8	18	20	2.4	-	

Spare parts

Designation	Screw	Wrench		
TTSER/L	TS 400971	T 15		



Shallow turning and grooving



Right hand shown

Designation	Insert seat size	Dimension (mm)								Insert
		h	b	l ₁	f	F ₁	l ₂	h ₄	W	
TGSFR/L 1010-3T2	2, 3	10	10	125	8.8	8	17	2	≤ 3	TDIM / IP B75, B76
1212-3T2	2, 3	12	12	125	10.8	8	17	-	≤ 3	
1616-3T2	2, 3	16	16	125	14.8	11	20	-	≤ 3	

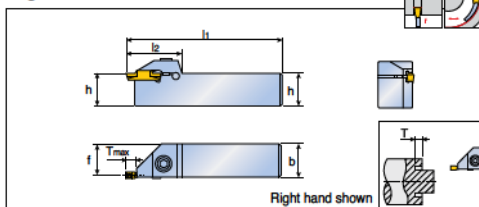
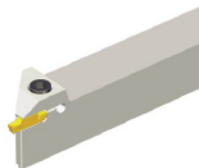
Spare parts

Designation	Screw	Wrench		
TGSFR/L	TS 400971	T 15		



TB01-TB02

External face grooving and turning



Designation	Insert seat size	Dimension (mm)							Insert
		h	b	l1	f	l2	T _{max}		
TGFR/L 1616-4	2, 3, 4	16	16	110	14.6	33	4.8	TDC ⁽¹⁾ / J ⁽¹⁾ / T	
2020-4	2, 3, 4	20	20	125	18.6	33	4.8	TDXU / XT / FT	
2525-4	2, 3, 4	25	25	150	23.6	33	4.8	TSC ⁽¹⁾ / J ⁽¹⁾	
2020-6	5, 6	20	20	125	17.6	37	4.8	E64-E73	
2525-6	5, 6	25	25	150	22.6	37	4.8		

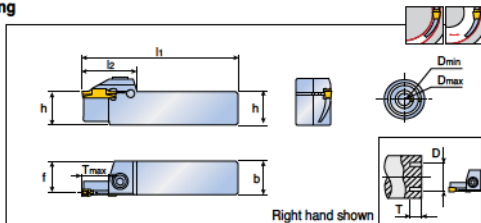
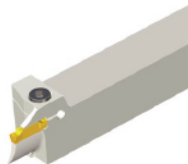
- ⁽¹⁾ Insert for grooving only
- External turning & grooving is available depending on the insert type
- Please check insert min. dia for face grooving B43 page

Spare parts

Designation	Screw	Wrench		
	TGFR/L 1616	SH M6x1x16	L-W5	
TGFR/L 2020	SH M6x1x20	L-W5		
TGFR/L 2525	SH M6x1x25	L-W5		



Deep face grooving and turning



Designation	Insert seat size	Dimension (mm)									Insert
		h	b	l1	f	l2	Tmax	Dmin	Dmax		
TTFR/L 25-30-3	3	25	25	150	24.0	32	10	24	35	TDC ⁽¹⁾ / J ⁽¹⁾ / T TDXU / XT / FT TSC ⁽¹⁾ / J ⁽¹⁾ B64-B73	
25-35-3	3	25	25	150	24.0	32	10	29	40		
25-40-3	3	25	25	150	24.0	32	10	34	50		
25-50-3	3	25	25	150	24.0	32	15	44	60		
25-60-3	3	25	25	150	24.0	32	15	54	85		
25-30-4	4	25	25	150	23.6	33	12	22	40		
25-40-4	4	25	25	150	23.6	33	15	32	50		
25-50-4	4	25	25	150	23.6	33	15	42	60		
25-60-4	4	25	25	150	23.6	33	15	52	85		
25-60-5	5	25	25	150	23.5	41	20	50	80		
25-80-5	5	25	25	150	23.5	41	20	70	110		
25-110-5	5	25	25	150	23.5	41	20	110	150		
25-150-5	5	25	25	150	23.5	41	20	140	200		
25-60-6	6	25	25	150	22.6	41	20	48	85		
25-85-6	6	25	25	150	22.6	41	20	73	150		
25-150-6	6	25	25	150	22.6	41	20	140	200		
25-250-6	6	25	25	150	22.6	41	20	250	∞		

- ⁽¹⁾ Insert for grooving only
- Please check insert min. dia for face grooving B43 page

Spare parts

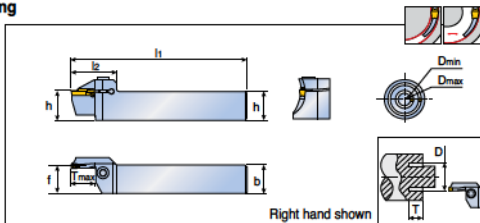
Designation	Screw	Wrench		
TTFR/L...-3	SH M5x0.8x25	L-W 4		
TTFR/L...-4	SH M6x1x25	L-W 5		
TTFR/L...-5	SH M6x1x25	L-W 5		
TTFR/L...-6	SH M6x1x25	L-W 5		



TTFR/L-RN (Renewed Type)

T-CLAMP
TWIN PLUS

Deep face grooving and turning



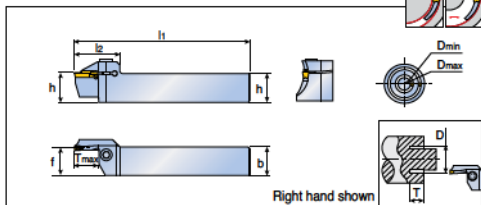
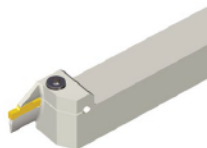
Designation	Insert seat size	Dimension (mm)									Insert
		h	b	l ₁	f	l ₂	T _{max}	D _{min}	D _{max}		
TTFR/L 20-21-30-3T10 RN	3	20	20	140	19	31	10	21	30	TDC ⁽¹⁾ / J ⁽¹⁾ / T TDXU / XT / FT TSC ⁽¹⁾ / J ⁽¹⁾	
20-24-36-3T10 RN	3	20	20	140	19	31	10	24	35		
20-29-40-3T10 RN	3	20	20	140	19	31	10	29	40		
20-34-50-3T10 RN	3	20	20	140	19	31	10	34	50	B64-B73	
20-44-70-3T15 RN	3	20	20	140	19	35	15	44	70		
20-64-100-3T15 RN	3	20	20	140	19	35	15	64	100		
20-19-30-4T10 RN	4	20	20	140	18.6	31	10	19	30		
20-22-36-4T10 RN	4	20	20	140	18.6	31	10	22	36		
20-28-42-4T16 RN	4	20	20	140	18.6	36	16	28	42		
20-34-50-4T16 RN	4	20	20	140	18.6	36	16	34	50		
20-42-70-4T16 RN	4	20	20	140	18.6	36	16	42	70		
20-62-120-4T16 RN	4	20	20	140	18.6	36	16	62	120		
20-112-200-4T16 RN	4	20	20	140	18.6	36	16	112	200		
25-30-3 RN	3	25	25	150	24.0	38	10.0	24	35		
25-36-3 RN	3	25	25	150	24.0	38	10.0	29	40		
25-40-3 RN	3	25	25	150	24.0	38	10.0	34	50		
25-50-3 RN	3	25	25	150	24.0	38	15.0	44	70		
25-70-3 RN	3	25	25	150	24.0	38	15.0	64	100		
25-30-4 RN	4	25	25	150	23.6	39	10.0	22	36		
25-36-4 RN	4	25	25	150	23.6	39	20.0	28	42		
25-42-4 RN	4	25	25	150	23.6	39	20.0	34	50		
25-50-4 RN	4	25	25	150	23.6	39	20.0	42	70		
25-70-4 RN	4	25	25	150	23.6	39	20.0	62	120		
25-120-4 RN	4	25	25	150	23.6	39	20.0	112	200		
25-200-4 RN	4	25	25	150	23.6	39	20.0	200	∞		
25-60-5 RN	5	25	25	150	23.1	49	25.0	50	80		
25-60-5T15 RN	5	25	25	150	23.1	41	15.0	50	80		
25-80-5 RN	5	25	25	150	23.1	49	25.0	70	110		
25-80-5T15 RN	5	25	25	150	23.1	41	15.0	70	110		
25-110-5 RN	5	25	25	150	23.1	49	25.0	100	150		
25-150-5 RN	5	25	25	150	23.1	49	25.0	140	200		
25-200-5 RN	5	25	25	150	23.1	49	25.0	200	∞		



- ⁽¹⁾ Insert for grooving only
- Please check insert min. dia for face grooving B43 page

TTFR/L-RN (Renewed Type)

Deep face grooving and turning



Designation	Insert seat size	Dimension (mm)									Insert
		h	b	l1	f	l2	Tmax	Dmin	Dmax		
TTFR/L 25-60-6 RN	6	25	25	150	22.6	49	25.0	48	70	TDC ⁽¹⁾ / J ⁽¹⁾ / T TDXU / XT / FT TSC ⁽¹⁾ / J ⁽¹⁾ B64-873	
25-70-6 RN	6	25	25	150	22.6	49	25.0	58	100		
25-100-6 RN	6	25	25	150	22.6	49	25.0	88	180		
25-180-6 RN	6	25	25	150	22.6	49	25.0	168	400		
25-400-6 RN	6	25	25	150	22.6	49	25.0	400	∞		

- ⁽¹⁾ Insert for grooving only
- Please check insert min. dia for face grooving B43 page

Insert initial min.Dia (Dmin) for face grooving

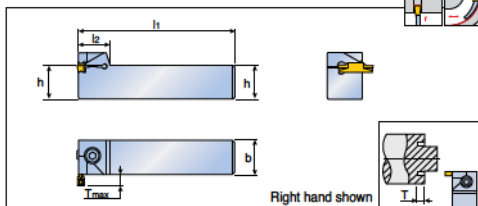
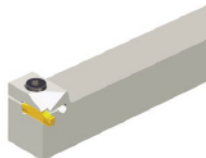
Machining	Insert	Size (mm)	Min. dia. (mm)	Insert	Size (mm)	Min. dia. (mm)
Facing Min. dia. of face machining 	TDJ/C	3	54	TDT RU	3	41
		4	34		4	36
		5	49		5	54
		6	46		6	54
	TDT	3	44	TDXU	3	18
		4	42		4	18
		5	50		5	20
		6	48		6	18

Spare parts

Designation	Screw	Wrench		
TTFR/L 20...RN	SH M6x1x20	L-W 5		
TTFR/L 25...3/4 RN	SH M6x1x25	L-W 5		
TTFR/L 25...5/6 RN	SH M8x1.25x25	L-W 6		



Shallow face perpendicular grooving and face turning



Designation	Insert seat size	Dimension (mm)					Insert
		h	b	h ₁	l ₂	T _{max}	
TGFPR/L 2020-4	2, 3, 4	20	20	125	18	4.8	TDC ⁽¹⁾ / J ⁽¹⁾ / T
2525-4	2, 3, 4	25	25	150	18	4.8	TDXU / XT / FT
2525-6	5, 6	25	25	150	22	4.8	TSC ⁽¹⁾ / J ⁽¹⁾
							B64-B73

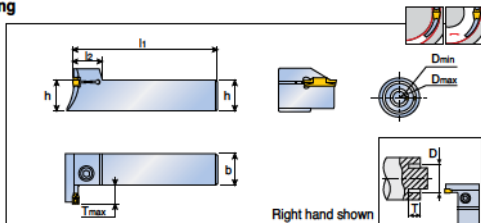
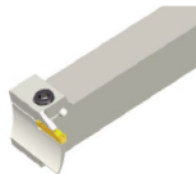
- ⁽¹⁾ Insert for grooving only
- External Turning & Grooving is available depending on the insert
- Please check insert min. dia for face grooving B43 page

Spare parts

Designation	Screw	Wrench		
	TGFPR/L 2020	SH M6x1x20	L-W5	
TGFPR/L 2525	SH M6x1x25	L-W5		
TGFPR/L 2525	SH M6x1x25	L-W5		



Deep face grooving and turning



Designation	Insert seat size	Dimension (mm)							Insert
		h	b	h	l ₂	T _{max}	D _{min}	D _{max}	
TTFPR/L 25-30-3	3	25	25	150	18	10	24	35	TDC ⁽¹⁾ / J ⁽¹⁾ / T TDXU / XT / FT
25-35-3	3	25	25	150	18	10	29	40	
25-40-3	3	25	25	150	18	10	34	50	TSC ⁽¹⁾ / J ⁽¹⁾ B64-B73
25-50-3	3	25	25	150	18	15	44	60	
25-60-3	3	25	25	150	18	15	54	85	
25-30-4	4	25	25	150	18.5	12	22	40	
25-40-4	4	25	25	150	18.5	15	32	50	
25-50-4	4	25	25	150	18.5	15	42	60	
25-60-4	4	25	25	150	18.5	15	52	85	
25-60-5	5	25	25	150	22	20	50	80	
25-80-5	5	25	25	150	22	20	70	110	
25-110-5	5	25	25	150	22	20	100	150	
25-150-5	5	25	25	150	22	20	140	200	
25-200-5	5	25	25	150	22	20	200	∞	
25-60-6	6	25	25	150	22	20	48	85	
25-85-6	6	25	25	150	22	20	73	150	
25-150-6	6	25	25	150	22	20	138	250	
25-250-6	6	25	25	150	22	20	250	∞	

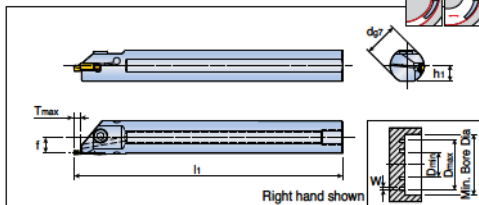
- ⁽¹⁾ Insert for grooving only
- Please check insert min. dia for face grooving B43 page

Spare parts

Designation	Screw	Wrench		
TTFPR/L...-3	SH M5x0.8x25	L-W 4		
TTFPR/L...-4	SH M6x1x25	L-W 5		
TTFPR/L...-5	SH M8x1.25x25	L-W 6		
TTFPR/L...-6	SH M8x1.25x25	L-W 6		



Shallow internal face grooving and face turning

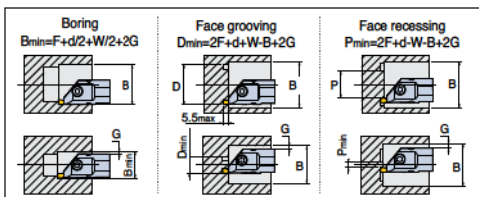


Designation	Insert seat size	Dimension (mm)					Insert
		d	l	f	h1	Tmax	
TGIFR/L 25-4C-T5.5	3, 4	25	200	11.3	11.5	5.5	TDC ⁽¹⁾ / J ⁽¹⁾ / T
32-4C-T5.5	3, 4	32	250	14.8	15	5.5	TDXU / XT / FT
25-6C-T5.5	5, 6	25	200	10.3	11.5	5.5	TSC ⁽¹⁾ / J ⁽¹⁾
32-6C-T5.5	5, 6	32	250	13.8	15	5.5	E64-E73

- ⁽¹⁾ Insert for grooving only
- Please check insert min. dia for face grooving E43 page

W	Min. bore dia		Dmin		Dmax
	d=25	d=32	TDFT / TDXU	TDT / TDC / TDJ	
3	26.3	33.3	20	44	∞
4	26.8	33.8	18	42	
5	26.3	33.3	20	50	
6	26.8	33.8	18	48	

TGIFR/L Application

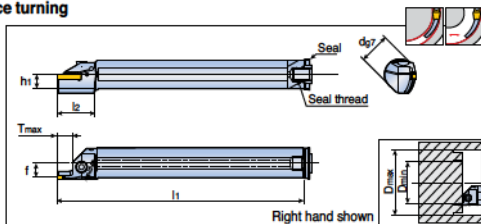


Spare parts

Designation	Screw	Wrench	Seal	
TGIFR/L 25	SH M6x1x16	L-W5	PL 25 (R1/8")	
TGIFR/L 32	SH M6x1x16	L-W5	PL 32 (R1/8")	



Internal face grooving and face turning



Designation	Insert seat size	Dimension (mm)									Insert
		d	l ₁	l ₂	f	h ₁	T _{max}	D _{min}	D _{max}		
TTFIR/L 25-3T12 20-33	3	25	200	31	11.5	11.5	12	20	33	TDC ⁽¹⁾ / J ⁽¹⁾ / T	
25-3T12 26-39	3	25	200	31	11.5	11.5	12	26	39	TDXU / XT / FT	
25-3T12 33-48	3	25	200	31	11.5	11.5	12	33	48	TSC ⁽¹⁾ / J ⁽¹⁾	
25-3T12 42-60	3	25	200	31	11.5	11.5	12	42	60	B64-B73	
25-3T12 54-85	3	25	200	31	11.5	11.5	12	54	85		
25-3T12 79-150	3	25	200	31	11.5	11.5	12	79	150		
25-4T12 18-34	4	25	200	31	11	11.5	12	18	34		
25-4T12 26-42	4	25	200	31	11	11.5	12	26	42		
25-4T12 34-55	4	25	200	31	11	11.5	12	34	55		
32-4T12 47-70	4	32	250	31	14.5	15.0	12	47	70		
32-4T12 62-100	4	32	250	31	14.5	15.0	12	62	100		
32-4T12 92-180	4	32	250	31	14.5	15.0	12	92	180		

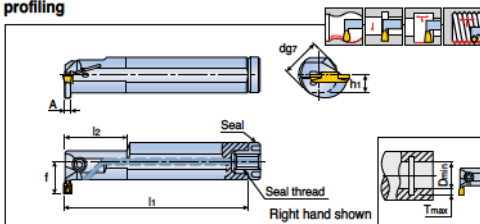
- ⁽¹⁾ Insert for grooving only
- Please check insert min. dia for face grooving B43 page

Spare parts

Designation	Screw	Wrench	Seal	
TTFIR/L 25	SH M5x0.8x16	L-W 4	PL 25 (R1/8")	
TTFIR/L 32	SH M5x0.8x16	L-W 4	PL 32 (R1/8")	



Internal turning, grooving and profiling



Designation	Insert seat size	Dimension (mm)								Insert
		d	l ₁	l ₂	f	h ₁	A	T _{max}	D _{min}	
TTIR/L 16-2C	2	16	125	-	16.5	7.5	1.8	8.5	25	TDC ⁽¹⁾ / J ⁽¹⁾ / T
20-2C	2	20	160	40	15.8	9.0	1.6	6.0	25	TDXU / XT / FT / IT
25-2C	2	25	200	40	17.5	11.5	1.6	5.0	25	TSC ⁽¹⁾ / J ⁽¹⁾
20-3C	3	20	160	40	15.8	9.0	2.1	6.0	25	B64-B74
25-3C	3	25	200	40	17.5	11.5	2.1	5.1	25	
25-3C-T8	3	25	200	40	21.5	11.5	2.4	8	32	
32-3C	3	32	250	60	19.8	14.0	2.1	4.7	31	
32-3C-T10	3	32	250	60	27	15	2.4	10	40	
40-3C-T12	3	40	300	65	33	19	2.4	12	50	
20-4C	4	20	160	40	15.8	9.0	2.9	6.0	25	
25-4C	4	25	200	40	17.5	11.5	2.9	5.2	25	
25-4C-T8	4	25	200	40	21.5	11.5	3.0	8	32	
32-4C	4	32	250	60	20.8	14.0	2.9	4.7	31	
32-4C-T10	4	32	250	60	27	15	3.0	10	40	
40-4C-T12	4	40	300	65	33	19	3.0	12	50	
50-4C-T14	4	50	350	70	40	23.5	3.0	14	60	
25-5C	5	25	200	40	17.3	11.5	3.9	5.2	31	
32-5C	5	32	250	60	20.8	14.0	3.9	4.7	31	
32-5C-T10	5	32	250	60	27	15	3.85	10	40	
40-5C-T12	5	40	300	65	33	19	3.85	12	50	
50-5C-T14	5	50	350	70	40	23.5	3.85	14	60	
32-6C	6	32	250	60	20.8	14.0	4.9	4.7	31	
32-6C-T10	6	32	250	60	27	15	4.85	10	40	
40-6C-T12	6	40	300	65	33	19	4.85	12	50	
50-6C-T14	6	50	350	70	40	23.5	4.85	14	60	
32-8C	8	32	250	60	21.3	14.5	5.9	5.5	37	
40-8C	8	40	300	65	25.8	19.0	5.9	5.8	42	

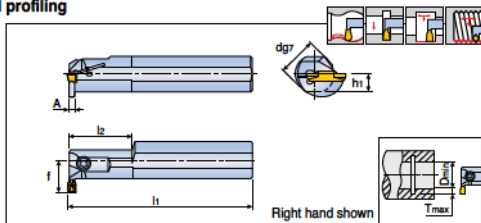
Components



TB31-TB32

- (1) Insert for grooving only
- Please check insert min. dia for internal grooving B49 page

Internal turning, grooving and profiling



Designation	Insert seat size	Dimension (mm)									Insert
		d	l ₁	l ₂	f	h ₁	A	T _{max}	D _{min}		
TTIR/L 16-2	2	16	125	-	16.5	7.5	1.8	8.5	25	TDC ⁽¹⁾ / J ⁽¹⁾ / T	
20-2	2	20	160	40	15.8	9.0	1.6	6.0	25	TDXU / XT /	
25-2	2	25	200	40	17.5	11.5	1.6	5.0	25	FT / IT	
20-3	3	20	160	40	15.8	9.0	2.1	6.0	25	TSC ⁽¹⁾ / J ⁽¹⁾	
25-3	3	25	200	40	17.5	11.5	2.1	5.1	25	B64-874	
32-3	3	32	250	60	19.8	14.0	2.1	4.7	31		
20-4	4	20	160	40	15.8	9.0	2.9	6.0	25		
25-4	4	25	200	40	17.5	11.5	2.9	5.2	25		
32-4	4	32	250	60	20.8	14.0	2.9	4.7	31		

- ⁽¹⁾ Insert for grooving only
- Without "C" on the description: non-coolant hole type
- Please check insert min. dia for internal grooving B49 page

Machining	TDJ/C		TDT		TDT RU		TDXU	
	Size (mm)	Min. dia. (mm)	Size (mm)	Min. dia. (mm)	Size (mm)	Min. dia. (mm)	Size (mm)	Min. dia. (mm)
Internal grooving Min. dia. of internal machining	2	40	3	40	2	41	2	24
	3	50	4	40	3	38	3	24
	4	50	5	50	4	38	4	21
	5	60	6	50	5	43	5	30
	6	60	8	62	6	46	6	31
	8	70			8	56	8	33

Spare parts

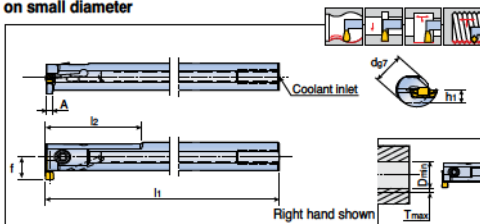
Designation	Screw	Wrench	Seal
TTIR/L 16-2	SH M5x0.8x10	L-W 4	PL 16 (M6)
TTIR/L 20-2/3/4	SH M5x0.8x12	L-W 4	PL 20 (M6)
TTIR/L 25-2/3/4	SH M5x0.8x16	L-W 4	PL 25 (R1/8")
TTIR/L 32-3/4	SH M5x0.8x16	L-W 4	PL 32 (R1/8")
TTIR/L 40-3/4	SH M5x0.8x16	L-W 4	PL 40 (R1/8")
TTIR/L 50-4	SH M5x0.8x20	L-W 4	PL 40 (R1/8")
TTIR/L 25-5/6	SH M6x1x16	L-W 5	PL 25 (R1/8")
TTIR/L 32-5/6	SH M6x1x20	L-W 5	PL 32 (R1/8")
TTIR/L 40/50-5/6	SH M6x1x25	L-W 5	PL 40 (R1/8")

Components



TB01-TB02

Internal, grooving and turning on small diameter



Designation	Insert seat size	Dimension (mm)										Coolant inlet	Insert
		d	l ₁	l ₂	f	h ₁	A	T _{max}	D _{min}				
TTSIR/L 10-12.5-2	2	10	125	25	7.5	4.5	1.6	2.4	12.5	Ø3.5	TDIM / TDIP B75, B76		
12-14-2	2	12	125	35	9.1	5.5	1.6	2.6	14	Ø6			
16-12.5-2	2	16	150	20	10.5	7.5	1.6	2.4	12.5	-			
16-14-2	2	16	150	25	11.0	7.5	1.6	2.6	14	-			
16-16-2	2	16	150	40	11.0	7.5	1.6	3.0	16	-			
12-14-3	3	12	125	35	9.1	5.5	2.0	2.6	14	Ø6			
16-12.5-3	3	16	150	20	10.5	7.5	2.0	2.4	12.5	-			
16-14-3	3	16	150	25	11.0	7.5	2.0	2.6	14	-			
16-16-3	3	16	150	40	11.0	7.5	2.0	3.0	16	-			
20-20-3	3	20	150	40	14.0	9.0	2.0	4.0	20	-			

Spare parts

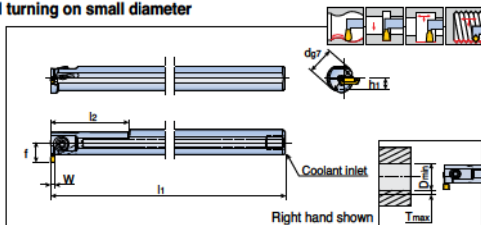
Designation	Screw	Wrench	Seal	
TTSIR/L 10/12	TS 40093I	T 15	-	
TTSIR/L 16-12/14	TS 40093I	T 15	PL 16 (M6)	
TTSIR/L 16-16	TS 50125I	T 20	PL 16 (M6)	
TTSIR/L 20	TS 50125I	T 20	PL 20 (M6)	

Components



TTS01-TB32

Internal shallow grooving and turning on small diameter



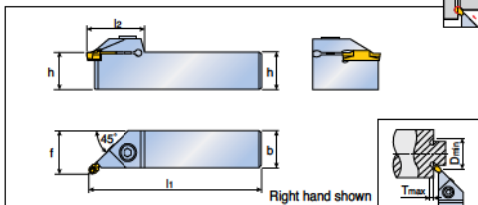
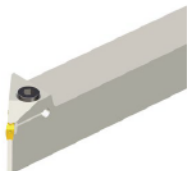
Designation	Insert seat size	Dimension (mm)								Coolant inlet	Insert
		d	l ₁	l ₂	f	h ₁	T _{max}	D _{min}	W		
TGSIR/L 10-13-2	2,3	10	125	25	7.6	5	2.5	12.5	<2	Ø3.5	TDIM / TDIP B75, B76
12-14-2	2,3	12	125	32	9.0	6	2.5	14.0	<2	Ø6	
16-13-2	2,3	16	150	20	10.6	8	2.5	13.0	<2	-	
16-14-2	2,3	16	150	25	10.9	8	2.5	14.0	<2	-	
16-16-2	2,3	16	150	40	10.5	8	2.5	16.0	<2	-	

Spare parts

Designation	Screw	Wrench	Seal	
TGSIR/L 10/12	TS 40093I	T 15	-	
TGSIR/L 16	TS 40093I	T 15	PL 16 (M6)	



External undercutting



Designation	Insert seat size	Dimension (mm)							Insert
		h	b	l ₁	f	l ₂	T _{max}	D _{min}	
TGEUR/L 1616-3	2, 3	16	16	110	19.3	30	2.8	32	TDT / TDIT B69-B73
2020-3	2, 3	20	20	125	23.3	30	2.8	32	
2525-3	2, 3	25	25	150	28.3	30	2.8	32	
1616-4	4	16	16	110	19.5	31	2.8	32	
2020-4	4	20	20	125	23.5	31	2.8	32	
2525-4	4	25	25	150	28.5	31	2.8	32	
2525-6	5, 6	25	25	150	28.9	35	3.4	34	

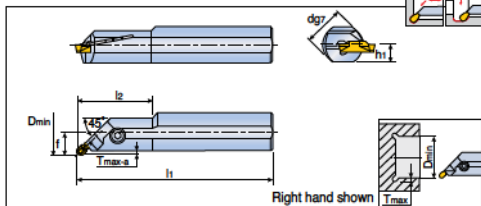
Spare parts

Designation	Screw	Wrench		
TGEUR/L 1616-3	SH M5x0.8x16	L-W4		
TGEUR/L 2020-3	SH M5x0.8x20	L-W4		
TGEUR/L 2525-3	SH M5x0.8x25	L-W4		
TGEUR/L 1616-4	SH M6x1x16	L-W5		
TGEUR/L 2020-4	SH M6x1x20	L-W5		
TGEUR/L 2525-4/6	SH M6x1x25	L-W5		

Components



Internal undercutting



Designation	Insert seat size	Dimension (mm)								Insert
		d	l1	l2	f	h1	Tmax-a	Dmin		
TGIUR/L 20-3	2, 3	20	160	-	12.8	9.5	2.8	38	TDT / TDIT B69-573	
25-3	2, 3	25	200	40	14.8	11.5	2.8	38		
20-4	4	20	160	-	12.9	9.5	2.8	38		
25-4	4	25	200	40	14.9	11.5	2.8	46		
25-6	5, 6	25	200	-	15.2	11.5	2.8	46		

Spare parts

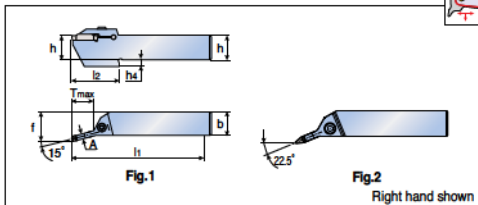
Designation	Screw	Wrench		
TGIUR/L 20-3	SH M5x0.8x12	L-W4		
TGIUR/L 20-4	SH M5x0.8x16	L-W4		
TGIUR/L 25-3/4	SH M5x0.8x16	L-W4		
TGIUR/L 25-6	SH M6x1x16	L-W5		

Components



TB01-TB02

Aluminum wheel machining



Designation	Insert seat size	Dimension (mm)									Fig.	Insert
		h	b	l ₁	f	l ₂	A	h ₄	T _{max}			
TTER/L 2525-6-15A	6	25	25	150	30	51	4.9	7	25.0	1	TDA / TSA B77	
2525-8-15A	8	25	25	150	30	55	5.9	7	30.0	1		
2525-8V-22.5A*	8	25	25	150	31.7	45	5.85	7	22.0	2		

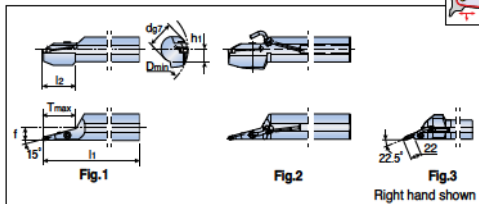
* For TDA-35V insert

Spare parts

Designation	Screw	Wrench		
TTER/L	SH M6x1x25	L-W5		








Aluminum wheel machining



Designation	Insert seat size	Dimension (mm)								Fig.	Coolant	Insert
		d	l1	l2	f	h1	Tmax	Dmin				
TGIUR/L40-6-15A	6	40	320	60	19.8	19.0	50.00	160	1	External	TDA / TSA B77	
40-6C-15A	6	40	320	60	19.8	19.0	50.00	160	2	Internal		
50-6C-15A	6	50	350	85	25.2	23.5	85.00	200	2	Internal		
40-8-15A	8	40	320	65	20.2	19.0	81.35	160	1	External		
40-8C-15A	8	40	320	85	20.2	19.0	83.00	160	2	Internal		
50-8C-15A	8	50	350	85	25.9	23.5	85.00	200	2	Internal		
40-8VC-22.5A*	8	40	320	85	19.3	19.0	35.00	160	3	Internal		

* For TDA-35V insert

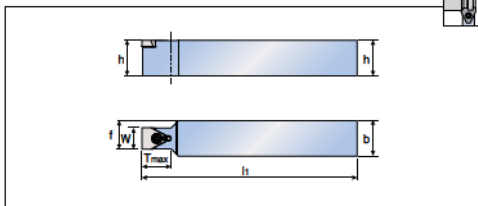
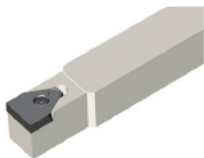
Spare parts

Designation	Screw	Wrench	Seal	Coolant pipe	Coolant nozzle
TGIUR/L	 SH M6x1x25	 L-W5	 PL 40 (R1/8")	 NZP5	 NZ125

Components



Semi finished holder for TGUX insert



Designation	Dimension (mm)						Insert ⁽¹⁾
	h	b	f	T _{max}	l	W	
TTLEN 1212 K10	12	12	11	20	125	10	TGUX B78
1616 K10	16	16	13	20	125	10	
2020 M10	20	20	15	20	150	10	
2525 M10	25	25	17.5	20	150	10	
1616 K15	16	16	15.5	20	125	15	
2020 M15	20	20	17.5	20	150	15	
2525 M15	25	25	20	20	150	15	
2020 K20	20	20	20	35	125	20	
2525 M20	25	25	22.5	35	150	20	
3232 P20	32	32	26	35	170	20	
2020 K25	20	20	22.5	35	125	25	
2525 M25	25	25	25	35	150	25	
3232 P25	32	32	28.5	35	170	25	

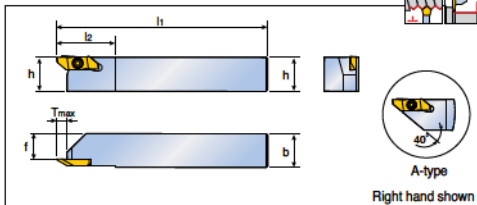
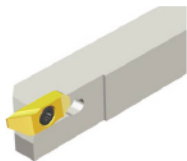
⁽¹⁾ Designation of final insert will be different to the semi finished blank

Spare parts

Designation	Screw	Wrench		
TTLEN ...K10/K15/M10/M15	TS 40B100I	T15		
TTLEN ...K20/M20/P20	TS 45120I	T20		
TTLEN ...K25/M25/P25	TS 45120I	T20		



Holders for threading & back turning



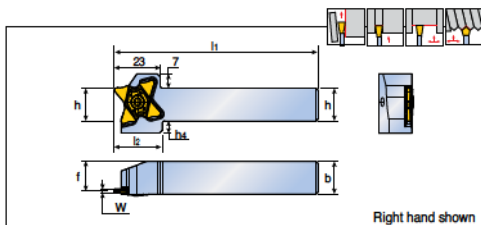
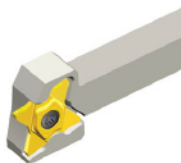
Designation	Dimension (mm)						Insert
	h	b	l ₁	l ₂	T _{max}	f	
TTVBR/L 1010-4-A	10	10	125	29	6.7	5.7	TVBR/L TVTR/L B93
1212-4-A	12	12	125	29	6.7	7.7	
1616-4	16	16	125	29	6.4	11.7	
2020-4	20	20	125	29	6.4	15.7	
2525-4	25	25	125	29	6.4	20.7	

Spare parts

Designation	Screw	Wrench		
TTVER/L	CSTB-4SD	T 8		
TTVBR/L	CSTB-4SD	T 8		



Integral shank toolholders



Designation	Dimension (mm)							Insert
	h	b	Wrange	f ⁽¹⁾	l1	l2	h4	
TQHR/L 10-27	10	10	0.5 ≤ W < 5.3	8.5	120	24	9	TQ.. 27 B96-B102
12-27	12	12	0.5 ≤ W < 5.3	10.5	120	24	8	
16-27	16	16	0.5 ≤ W < 5.3	14.5	120	24	6	
20-27	20	20	0.5 ≤ W < 5.3	18.5	120	24	2	
25-27	25	25	0.5 ≤ W < 5.3	23.5	135	-	-	
16-27-8 ⁽¹⁾	16	16	5.3 ≤ W ≤ 8.2	14.0	120	24	6	TQS 27 B102
20-27-8 ⁽¹⁾	20	20	5.3 ≤ W ≤ 8.2	18.0	120	24	2	
25-27-8 ⁽¹⁾	25	25	5.3 ≤ W ≤ 8.2	23.0	135	-	-	

• ⁽¹⁾ Only for TQS wider inserts from 5.3mm-8.2mm width

• ⁽²⁾ "f" value is based on TQ.. 27 standard insert

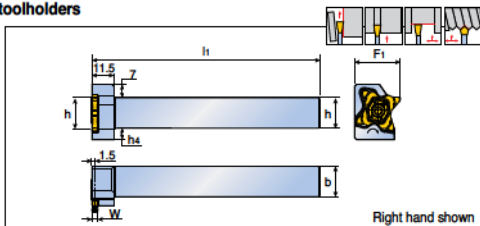
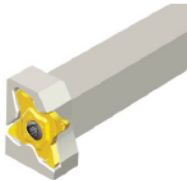
Spare parts

Designation	Screw	Wrench		
TQHR/L 10/12/16/20/25	TS 50125I ⁽¹⁾	T 10/20		
	TS 50125IL ⁽²⁾	T 10/20		
TQHR/L16/20/25-27-8	TS 5017011-IC ⁽²⁾	T 15		
	TS 5017011L-IC ⁽²⁾	T 15		



• ⁽¹⁾⁽²⁾ For left holder • ⁽²⁾⁽⁴⁾ For right holder

Perpendicular integral shank toolholders



Designation	Dimension (mm)						Insert
	h	b	Wange	F1	l	h4	
TQHPR/L 16-27	16	16	$0.5 \leq W < 5.3$	24	120	6	TQ.. 27
20-27	20	20	$0.5 \leq W < 5.3$	28	120	2	B96-B102
25-27	25	25	$0.5 \leq W < 5.3$	33	135	-	
16-27-8 ⁽¹⁾	16	16	$5.3 \leq W \leq 8.2$	24	120	6	TQS 27
20-27-8 ⁽¹⁾	20	20	$5.3 \leq W \leq 8.2$	28	120	2	B102
25-27-8 ⁽¹⁾	25	25	$5.3 \leq W \leq 8.2$	33	135	-	

⁽¹⁾ Only for TQS wider inserts from 5.3mm-8.2mm width

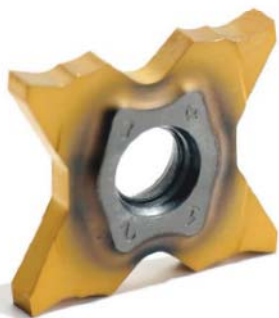
Spare parts

Designation	Screw	Wrench		
	TQHPR/L 16/20/25	TS 501251 ⁽¹⁾	T 20	
	TS 501251L ⁽²⁾	T 20		
TQHPR/L 16/20/25-8	TS 5017011-IC ⁽³⁾	T 15		
	TS 5017011L-IC ⁽⁴⁾	T 15		

Cutting Condition
 Product Manual
 Components
 B113 TB28 TB31-TB32

• ⁽¹⁾/⁽²⁾ For right holder • ⁽³⁾/⁽⁴⁾ For left holder

Parting & Grooving Inserts and Solid Bars



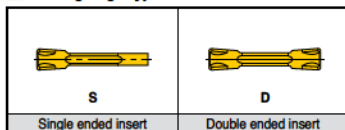
Insert Designation System

Parting and grooving

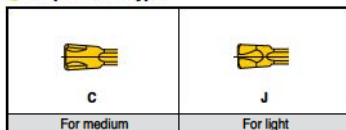


1 TaeguTec

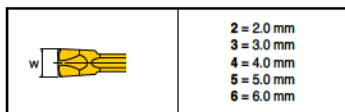
2 Cutting edge type



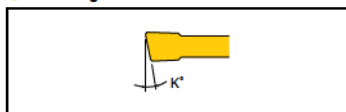
3 Chip breaker type



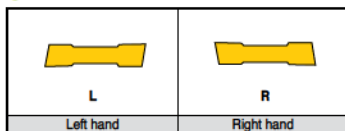
4 Width of Insert



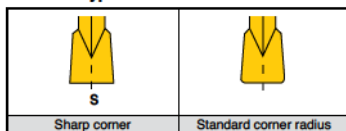
5 Lead angle



6 Hand of Insert



7 Corner type



Insert Designation System

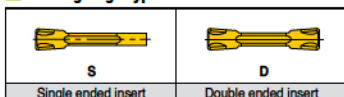
Turning, grooving and face machining

T D (F) T 3.00 E - 0.40 R

1 2 3 4 5 6 7 8

1 TaeguTec


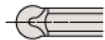




2 Cutting edge type



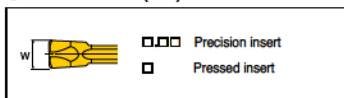
3 Application type

F	Face turning and grooving
I	Internal turning and grooving
X	Universal

4 Chip breaker type

					
T	A	U	G	M	P
For steel, high-temp. alloy and cast iron	For aluminum	Universal chip breaker	Without chip breaker	Pressed for small diameter	Ground for small diameter

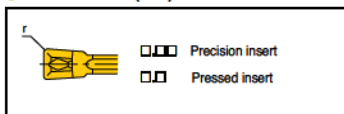
5 Width of insert (mm)





6 Application type

E	For turning and grooving
No designation	For precision grooving

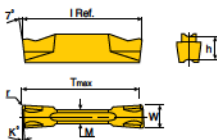
7 Corner radius (mm)



8 Hand of Insert - For face machining

	
L	R
Left hand insert on left hand holder	Right hand insert on right hand holder

Double ended inserts for parting and grooving with "C" type chip breaker

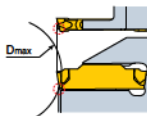


Right hand shown

Size	Dimension (mm)						
	W±0.05	r	M	l	K	h	Tmax
2 (.R/L)	2.0	0.20	1.7	20.0	0-15	4.7	19
2 RS/LS	2.0	0.02	1.7	19.6	15	4.7	19
3 (.R/L)	3.0	0.20	2.4	20.0	0-15	4.7	19
3 RS/LS	3.0	0.02	2.4	19.6	6-15	4.7	19
4 (.R/L)	4.0	0.30	3.0	20.0	0-15	4.7	19
5 (.R/L)	5.0	0.30	4.0	25.0	0-4	5.2	24
6	6.0	0.30	5.0	25.0	-	5.2	24
8	8.0	0.40	6.0	30.0	-	6.4	29

Insert	Designation	Insert seat size	Feed (mm/rev)	Cermet		Coated				Uncoated		
				PV3030	CT3000	TT6300	TT6080	TT5100	TT9080	TT7220	TT8020	K10
	TDC 2	2	0.05-0.18	●	●				●	●	●	●
	2-6R/L	2	0.04-0.14						●	●	●	●
	2-8R/L	2	0.04-0.14						●	●		
	2-15R/L	2	0.04-0.12						●	●		
	2-15RS/LS	2	0.02-0.12						●	●		
	3	3	0.07-0.25	●	●				●	●	●	●
	3-6R/L	3	0.06-0.18						●	●	●	
	3-6RS/LS	3	0.03-0.18						●			
	3-15R/L	3	0.06-0.16						●	●		
	3-15RS/LS	3	0.03-0.16						●	●		
	4	4	0.08-0.30		●				●	●	●	●
	4-4R/L	4	0.06-0.24						●	●	●	
	4-15R/L	4	0.06-0.22						●	●		
	5	5	0.09-0.35						●	●	●	●
	5-4R/L	5	0.07-0.28						●	●	●	●
	6	6	0.12-0.40						●	●	●	●
8	8	0.14-0.43						●	●			

●: Standard item



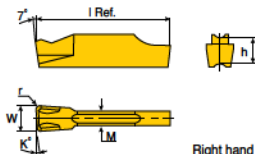
Dmax (mm) for parting & grooving

Insert	Dmax (mm)
TDC 2-15 RS/LS	28
TDC 3-15 RS/LS	29
TDC 4-5 R/L	30

• Standard holders (except TGFR xxxx) will be damaged if workpiece diameter goes over the dimension of each insert in the table.



Single ended inserts for deep grooving and parting with "C" type chip breaker

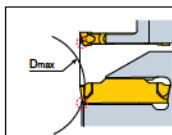


Right hand shown

Size	Dimension (mm)					
	W±0.05	r	M	l	K	h
2 (L/R)	2.0	0.20	1.7	20.0	0-15	4.7
2 RS/LS	2.0	0.02	1.7	19.6	15	4.7
3 (L/R)	3.0	0.20	2.4	20.0	0-15	4.7
3 RS/LS	3.0	0.02	2.4	19.6	15	4.7
4 (L/R)	4.0	0.30	3.0	20.0	0-15	4.7
5 (L/R)	5.0	0.30	4.0	25.0	0-4	5.2
6	6.0	0.30	5.0	25.0	-	5.2
8	8.0	0.40	6.0	30.0	-	6.4

Insert	Designation	Insert seat size	Feed (mm/rev)	Cermet		Coated						Uncoated	
				PV3030	CT3000	TT6300	TT6080	TT5100	TT9080	TT7220	TT8020	K10	
	TSC 2	2	0.05-0.18						•	•	•	•	
	2-6R/L	2	0.04-0.14							•	•	•	•
	2-8R/L	2	0.04-0.14							•	•	•	•
	2-15R/L	2	0.04-0.12							•	•	•	•
	2-15RS/LS	2	0.02-0.12							•	•	•	•
	3	3	0.07-0.25						•	•	•	•	
	3-6R/L	3	0.06-0.18							•	•	•	•
	3-15R/L	3	0.06-0.16							•	•	•	•
	3-15RS/LS	3	0.03-0.16							•	•	•	•
	4	3	0.08-0.30						•	•	•	•	
	4-4R/L	4	0.06-0.24						•	•	•	•	•
	4-6R/L	4	0.06-0.23							•	•	•	•
	4-15R/L	4	0.06-0.22							•	•	•	•
	5	5	0.09-0.35						•	•	•	•	•
	5-4R/L	5	0.07-0.28							•	•	•	•
	6	6	0.12-0.40						•	•	•	•	•
8	8	0.14-0.43						•	•	•	•	•	

•: Standard item



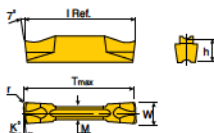
Dmax (mm) for parting & grooving

Insert	Dmax (mm)
TSC 3-15 R/L	96

• Standard holders (except TGFR xxxx) will be damaged if workpiece diameter goes over the dimension of each insert in the table.



Double ended inserts for parting and grooving with "J" type chip breaker

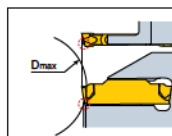


Right hand shown

Size	Dimension (mm)						
	W±0.05	r	M	l	K	h	Tmax
1.4	1.4	0.16	1.0	16.0	-	4.0	15
2 (L/R/L)	2.0	0.20	1.7	20.0	0-15	4.7	19
2 RS/LS	2.0	0.02	1.7	19.6	6-15	4.7	19
3 (L/R/L)	3.0	0.20	2.4	20.0	0-15	4.7	19
3 RS/LS	3.0	0.02	2.4	19.6	6-15	4.7	19
4 (L/R/L)	4.0	0.30	3.0	20.0	0-15	4.7	19
5 (L/R/L)	5.0	0.30	4.0	25.0	0-4	5.2	24
6	6.0	0.30	5.0	25.0	-	5.2	24

Insert	Designation	Insert seat size	Feed (mm/rev)	Cermet		Coated				Uncoated	
				PV3030	CT3000	TT6300	TT6080	TT5100	TT9080	TT7220	TT8020
	TDJ 1.4	1	0.02-0.10					•	•		
	2	2	0.04-0.12					•	•		
	2-6R/L	2	0.03-0.08					•	•	•	
	2-6RS/LS	2	0.03-0.07					•	•	•	
	2-8R/L	2	0.03-0.08					•	•		
	2-15R/L	2	0.03-0.08					•	•		
	2-15RS/LS	2	0.03-0.07					•	•		
	3	3	0.04-0.16	•				•	•	•	•
	3-6R/L	3	0.03-0.12					•	•	•	
	3-6RS/LS	3	0.03-0.10					•	•		
	3-15R/L	3	0.03-0.12					•	•		
	3-15RS/LS	3	0.03-0.10					•	•		
	4	4	0.05-0.18					•	•	•	•
	4-4R/L	4	0.05-0.14					•	•	•	
4-15R/L	4	0.05-0.12					•	•	•		
5	5	0.05-0.20					•	•	•	•	
5-4R/L	5	0.05-0.16					•	•	•		
6	6	0.05-0.22					•	•	•	•	

• Standard item



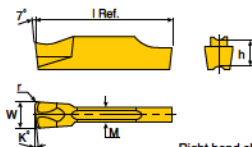
Dmax (mm) for parting & grooving

Insert	Dmax (mm)
TDJ 2-15 RS/LS	28
TDJ 3-15 RS/LS	29
TDJ 4-15 R/L	30

• Standard holders (except TGFR xxxx) will be damaged if workpiece diameter goes over the dimension of each insert in the table.



Single ended inserts for deep grooving and parting with "J" type chip breaker

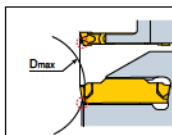


Right hand shown

Size	Dimension (mm)					
	W±0.05	r	M	l	K	h
2 (L/R/L)	2.0	0.20	1.7	20.0	0-15	4.7
2 RS/LS	2.0	0.02	1.7	19.8	15	4.7
3 (L/R/L)	3.0	0.20	2.4	20.0	0-15	4.7
3 RS/LS	3.0	0.02	2.4	19.8	6-15	4.7
4 (L/R/L)	4.0	0.30	3.0	20.0	0-6	4.7
5 (L/R/L)	5.0	0.30	4.0	25.0	0-4	5.2
6	6.0	0.30	5.0	25.0	-	5.2

Insert	Designation	Insert seat size	Feed (mm/rev)	Cermet		Coated				Uncoated		
				PV3030	CT3000	TT6300	TT6080	TT15100	TT9080	TT7220	TT8020	K10
	TSJ 2	2	0.04-0.12					•	•	•	•	
	2-6R/L	2	0.03-0.08					•	•	•	•	
	2-15R/L	2	0.03-0.08					•	•	•	•	
	2-15RS/LS	2	0.03-0.08					•	•	•	•	
	2-8R/L	2	0.03-0.07					•	•	•	•	
	3	3	0.04-0.16					•	•	•	•	
	3-6R/L	3	0.03-0.12					•	•	•	•	
	3-6RS/LS	3	0.03-0.10					•	•	•	•	
	3-15R/L	3	0.03-0.12					•	•	•	•	
	3-15RS/LS	3	0.03-0.10					•	•	•	•	
	4	4	0.05-0.18					•	•	•	•	
	4-4R/L	4	0.05-0.14					•	•	•	•	
	4-6R/L	4	0.05-0.12					•	•	•	•	
	5	5	0.05-0.20					•	•	•	•	
	5-4R/L	5	0.05-0.16					•	•	•	•	
	6	6	0.05-0.22					•	•	•	•	

• Standard item



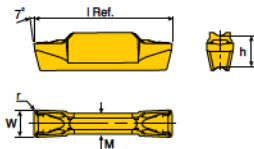
Dmax (mm) for parting & grooving

Insert	Dmax (mm)
TSJ 3-15 R/L	103
TSJ 3-15 RS/LS	34

• Standard holders (except TGFR xxxx) will be damaged if workpiece diameter goes over the dimension of each insert in the table.



Pressed inserts for external, internal, face turning, grooving and parting



Size	Dimension (mm)				
	W±0.05	r	M	l	h
2E-0.3	2.0	0.3	1.7	20.0	4.7
3E-0.3	3.0	0.3	2.2	20.0	4.7
4E-0.4	4.0	0.4	3.0	20.0	4.7
4E-0.8	4.0	0.8	3.0	20.0	4.7
5E-0.4	5.0	0.4	4.0	25.0	5.2
5E-0.8	5.0	0.8	4.0	25.0	5.2
6E-0.4	6.0	0.4	5.0	25.0	5.2
6E-0.8	6.0	0.8	5.0	25.0	5.2
8E-0.8	8.0	0.8	6.0	30.0	6.4

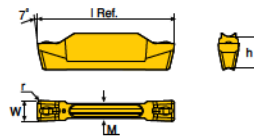
Insert	Designation	Insert seat size	Turning		Grooving Feed (mm/rev)	Cermat		Coated				Uncoated K10	
			Feed (mm/rev)	ap (mm)		PV3030	CT3000	TT6300	TT6080	TT5100	TT9080		TT7220
	TDXU 2E-0.3	2	0.12-0.18	0.4-1.2	0.03-0.18			•	•	•	•	•	•
	3E-0.3	3	0.15-0.19	0.4-1.8	0.07-0.11	•	•	•	•	•	•	•	•
	4E-0.4	4	0.18-0.24	0.5-2.4	0.09-0.15	•	•	•	•	•	•	•	•
	4E-0.8	4	0.18-0.24	1.0-2.4	0.09-0.15	•	•	•	•	•	•	•	•
	5E-0.4	5	0.20-0.30	0.5-3.0	0.11-0.20			•	•	•	•	•	•
	5E-0.8	5	0.23-0.35	1.0-3.0	0.11-0.21		•	•	•	•	•	•	•
	6E-0.4	6	0.22-0.36	0.1-0.4	0.13-0.23			•	•	•	•	•	•
	6E-0.8	6	0.24-0.42	1.0-3.6	0.13-0.25			•	•	•	•	•	•
8E-0.8	8	0.30-0.56	1.0-4.8	0.15-0.34			•	•	•	•	•	•	



• Standard item

TDXT-E

Pressed inserts for external, internal, face turning and grooving



Size	Dimension (mm)				
	W±0.05	r	M	l	h
3E-0.4	3.0	0.4	2.2	20.0	4.7
4E-0.4	4.0	0.4	3.0	20.0	4.7
5E-0.4	5.0	0.4	4.0	25.0	5.2
6E-0.8	6.0	0.8	5.0	25.0	5.2
8E-0.8	8.0	0.8	6.0	30.0	6.4

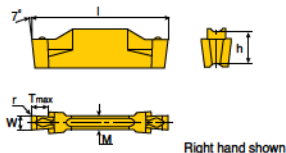
Insert	Designation	Insert seat size	Turning		Grooving Feed (mm/rev)	Cermat		Coated				Uncoated K10
			Feed (mm/rev)	ap (mm)		PV3030	CT3000	TT6300	TT6080	TT5100	TT9080	
	TDXT 3E-0.4	3	0.15-0.22	0.5-1.8	0.07-0.15		•	•	•	•	•	•
	4E-0.4	4	0.18-0.30	0.5-2.4	0.09-0.18	•	•	•	•	•	•	•
	5E-0.4	5	0.20-0.35	0.5-3.0	0.11-0.20			•	•	•	•	•
	6E-0.8	6	0.24-0.42	1.0-3.6	0.13-0.30			•	•	•	•	•
	8E-0.8	8	0.30-0.56	1.0-4.8	0.15-0.40			•	•	•	•	•




• Non-standard grade production available at the customer's request

• Standard item

Precision inserts for external grooving only



Size	Dimension (mm)					
	W±0.02	r±0.05	M	l	Tmax	h
1.00	1.00	0.00	2.2	20.0	2.5	4.7
1.30	1.30	0.00	2.2	20.0	2.5	4.7
1.60	1.60	0.10	2.2	20.0	2.5	4.7
1.85	1.85	0.10	2.2	20.0	3.5	4.7
2.15	2.15	0.15	2.2	20.0	3.5	4.7

Insert	Designation	Insert seat size	Grooving Feed (mm/rev)	Cermet		Coated				Uncoated
				PV3030	CT3000	TT6300	TT6080	TT5100	TT9080	
	TDT 1.00-0.00*	2	0.02-0.04					•	•	•
	TDT 1.30-0.00*	2	0.02-0.05					•	•	•
	TDT 1.60-0.10*	2	0.03-0.07					•	•	•
	TDT 1.85-0.10*	2	0.03-0.09					•	•	•
	TDT 2.15-0.15	2	0.03-0.10					•	•	•

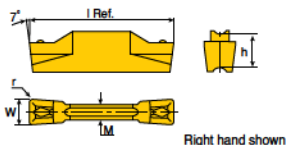


* *: Not for standard holder & only for grooving


•: Standard item

TDT-E

Pressed inserts for external turning and grooving



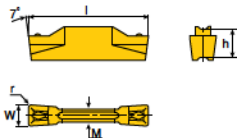
Size	Dimension (mm)				
	W±0.05	r	M	l	h
3	3.0	0.4	2.2	20.0	4.7
4	4.0	0.4	3.0	20.0	4.7
6	6.0	0.8	5.0	25.0	5.2

Insert	Designation	Insert seat size	Turning		Grooving Feed (mm/rev)	Cermet			Ceramic			Coated		Uncoated
			Feed (mm/rev)	ap (mm)		PV3030	CT3000	AB30	TT6300	TT6080	TT5100	TT9080	TT7220	
 CE type	TDT 3E-0.4	3	0.15-0.22	0.5-1.8	0.07-0.15	•			•	•	•	•	•	•
	4E-0.4	4	0.18-0.30	0.5-2.4	0.09-0.18	•			•	•	•	•	•	•
	4E-0.4T CE ⁽¹⁾	4	0.18-0.30	0.5-2.4	0.09-0.35		•							
	6E-0.8T CE ⁽¹⁾	6	0.24-0.42	1.0-3.6	0.13-0.40		•							

⁽¹⁾ This insert is a pressed ceramic insert

•: Standard item

Precision inserts for external turning and grooving



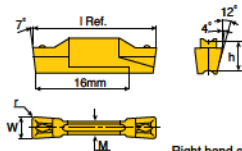
Size	Dimension (mm)				
	Wa0.02	r	M	l	h
2.65 / 3.00 / 3.15	2.65-3.15	0.15-0.40	2.2	20.0	4.7
4.00 / 4.15	4.00-4.15	0.15-0.80	3.0	20.0	4.7
4.78 / 5.00 / 5.15	4.78-5.15	0.15-0.80	4.0	25.0	5.2
6.00	6.00	0.80-1.20	5.0	25.0	5.2
8.00	8.00	0.80-1.20	6.0	30.0	6.4
10.00	10.00	0.80-2.00	8.0	30.0	6.4

Insert	Designation	Insert seat size	Turning		Grooving	Cermet		Coated				Uncoated
			Feed (mm/rev)	ap (mm)	Feed (mm/rev)	PV3030	CT3000	TT6000	TT6080	TT5100	TT9080	TT7220
	TDT 2.65E-0.15	3	0.10-0.18	0.2-1.8	0.05-0.12			●	●	●		●
	3.00E-0.20	3	0.12-0.20	0.3-0.2	0.07-0.13			●	●	●		●
	3.00E-0.40	3	0.15-0.22	0.5-0.2	0.07-0.15			●	●	●		●
	3.15E-0.15	3	0.15-0.22	0.2-0.2	0.07-0.15			●	●	●		●
	4.00E-0.40	4	0.18-0.30	0.5-2.4	0.09-0.18			●	●	●		●
	4.00E-0.80	4	0.18-0.30	1.0-2.4	0.09-0.18			●	●	●	●	
	4.15E-0.15	4	0.18-0.30	0.5-2.4	0.09-0.18			●	●	●		●
	4.78E-0.55	5	0.20-0.35	0.7-2.8	0.10-0.20			●	●	●		●
	5.00E-0.40	5	0.20-0.35	0.5-2.3	0.11-0.20			●	●	●		
	5.00E-0.80	5	0.23-0.35	1.0-3.0	0.11-0.21			●	●	●		●
	5.15E-0.15	5	0.23-0.35	0.2-3.0	0.11-0.21			●	●	●		●
	6.00E-0.80	6	0.24-0.42	1.0-3.6	0.13-0.30			●	●	●		●
	6.00E-1.20	6	0.24-0.42	1.3-3.6	0.13-0.30			●	●	●		●
	8.00E-0.80	8	0.30-0.56	1.0-4.8	0.15-0.40			●	●	●		●
	8.00E-1.20	8	0.30-0.56	1.3-4.8	0.15-0.40			●	●	●		●
	10.00E-0.80	10	0.35-0.65	1.0-6.0	0.20-0.45			●				
10.00E-1.20	10	0.40-0.80	1.0-6.0	0.20-0.45			●	●				
10.00E-2.00	10	0.35-0.80	1.0-6.0	0.20-0.45			●	●				



●: Standard item

Pressed inserts for face grooving and turning



Right hand shown

Size	Dimension (mm)				
	W±0.05	r	M	l	h
3E	3.0	0.40	2.2	20.0	4.7
4E	4.0	0.40	3.0	20.0	4.7
4E... CE	4.0	0.40	3.0	20.0	4.7

Insert	Designation	Insert seat size	Turning		Grooving	Cermet			Ceramic			Coated		Uncoated
			Feed (mm/rev)	ap (mm)	Feed (mm/rev)	PV3030	CT3000	AB30	TT6300	TT6080	TT5100	TT9080	TT7220	TT8020
 CE type	TDFT3E-0.4R/L	3	0.15-0.22	0.5-0.2	0.07-0.15								•	•
	4E-0.4R/L	4	0.18-0.30	0.5-2.4	0.09-0.18								•	•
	4E-0.4TR/L CE ⁽¹⁾	4	0.18-0.30	0.5-2.4	0.09-0.35			•						

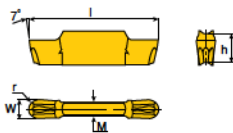


- Apply R insert on R tool and L insert on L tool
- ⁽¹⁾This insert is a pressed ceramic insert

• Standard item

TDIT-E (Full-Radius)

Precision inserts for internal turning, grooving, profiling and undercutting



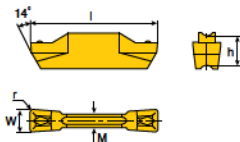
Size	Dimension (mm)				
	W±0.02	r±0.05	M	l	h
3	3.00	1.50	2.2	20.0	4.7
4	4.00	2.00	3.0	20.0	4.7
5	5.00	2.50	4.0	25.0	5.2
6	6.00	3.00	5.0	25.0	5.2

Insert	Designation	Insert seat size	Turning		Grooving	Cermet			Coated			Uncoated		
			Feed (mm/rev)	ap (mm)	Feed (mm/rev)	PV3030	CT3000	TT6300	TT6080	TT5100	TT9080	TT7220	TT8020	K10
	TDIT 3.00E-1.50	3	0.15-0.28	0.0-1.5	0.08-0.18								•	•
	4.00E-2.00	4	0.18-0.35	0.0-2.0	0.10-0.20								•	•
	5.00E-2.50	5	0.20-0.42	0.0-2.5	0.12-0.23								•	•
	6.00E-3.00	6	0.25-0.54	0.0-3.0	0.15-0.27								•	•



• Standard item

Precision inserts for internal turning and grooving



Size	Dimension (mm)				
	W±0.02	r±0.05	M	l	h
3	3.00	0.40	2.2	20.0	4.7
4	4.00	0.40-0.80	3.0	20.0	4.7
5	5.00	0.40-0.80	4.0	25.0	5.2
6	6.00	0.80-1.20	5.0	25.0	5.2
8	8.00	1.20	6.0	30.0	6.4

Insert	Designation	Insert seat size	Turning		Grooving	Cermel	Ceramic	Coated			Uncoated			
			Feed (mm/rev)	ap (mm)	Feed (mm/rev)	PV3030	CT3000	AB30	TT6300	TT6080	TT5100	TT9080	TT7220	TT8020
 CE type	TDIT 3.00E-0.40	3	0.15-0.22	0.5-1.8	0.07-0.15							•	•	
	4.00E-0.40	4	0.18-0.30	0.5-2.4	0.09-0.18							•	•	
	4.00E-0.80	4	0.18-0.30	1.0-2.4	0.09-0.18							•	•	
	5.00E-0.40	5	0.20-0.35	0.5-2.3	0.11-0.20							•	•	
	5.00E-0.80	5	0.23-0.35	1.0-3.0	0.11-0.21							•	•	
	6.00E-0.80	6	0.24-0.42	1.0-3.6	0.13-0.30							•	•	
	6.00E-1.20	6	0.24-0.42	1.3-3.6	0.13-0.30							•	•	
	8.00E-0.80	8	0.30-0.56	1.0-4.8	0.15-0.40							•	•	
	8.00E-1.20	8	0.30-0.56	1.3-4.8	0.15-0.40							•	•	
	4E-0.4T CE ⁽¹⁾	4	0.18-0.30	0.5-2.4	0.09-0.35			•						
	6E-0.8T CE ⁽¹⁾	6	0.24-0.42	1.0-3.6	0.13-0.40			•						

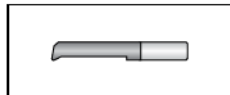


⁽¹⁾ This insert is a pressed ceramic insert (W±0.05)

•: Standard item

MIN
T
R
04
040
005
D010
1
7
2
3
4
5
6

1 TOPMICRO series



2 Hand of tool

R Right hand
L Left hand

3 Shank dia.

04 4.0mm
07 7.0mm

4 Max. depth

050 5.0mm
140 14.0mm

5 Corner radius

010 0.10mm
020 0.20mm

6 Min. bore. dia.

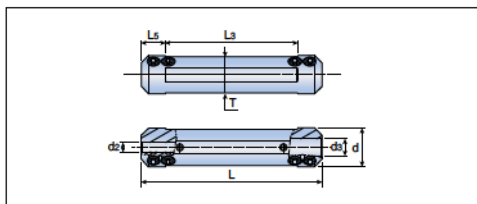
D010 1.0mm

7 Application type

T Turning and chamfering
B Back turning
P Turning and profiling
U Undercutting and chamfering
C Turning & 45° chamfering
G Grooving and turning
A Grooving along shaft
F Face grooving
R Full radius for internal boring and profiling
N ISO full profile internal threading
SL Sleeve for MINS



Sleeves



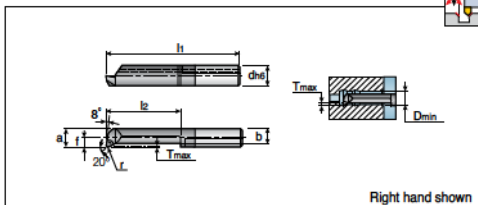
Designation	Dimension (mm)						
	d	d2	d3	L	L5	L3	T
MINSL 12-4-4	12.00	4.00	4.00	75.00	10.00	55.00	10.30
14-4-4	14.00	4.00	4.00	75.00	10.00	55.00	12.00
16-4-7	16.00	4.00	7.00	75.00	10.00	55.00	15.00
20-4-7	20.00	4.00	7.00	90.00	10.00	70.00	18.00
22-4-7	22.00	4.00	7.00	90.00	10.00	70.00	20.00
25-4-7	25.00	4.00	7.00	100.00	10.00	80.00	23.00

Spare parts

Designation	Set screw	Wrench		
MINSL 12	SS M5x0.8x4-MG	L-W 2.5		
MINSL 14/16/20/22/25	SS M5x0.8x6-MG	L-W 2.5		



Mini carbide bars for internal turning and chamfering



Designation	Dimension (mm)										R/L	Grade
	d	f	a	b	l1	l2	r±0.05	Tmax	Dmin			
MINTR07-090015D050	7.00	0.90	4.40	3.65	25.00	10.00	0.15	0.50	5.00	R	•	
140015D050	7.00	0.90	4.40	3.65	30.00	15.00	0.15	0.50	5.00	R	•	
190015D050	7.00	0.90	4.40	3.65	35.00	20.00	0.15	0.50	5.00	R	•	
240015D050	7.00	0.90	4.40	3.65	40.00	25.00	0.15	0.50	5.00	R	•	
290015D050	7.00	0.90	4.40	3.65	45.00	30.00	0.15	0.50	5.00	R	•	
340015D050	7.00	0.90	4.40	3.65	50.00	35.00	0.15	0.50	5.00	R	•	
140015D060	7.00	1.80	5.30	4.40	30.00	15.00	0.15	0.50	6.00	R	•	
210015D060	7.00	1.80	5.30	4.40	37.00	22.00	0.15	0.50	6.00	R	•	
240015D060	7.00	1.80	5.30	4.40	40.00	25.00	0.15	0.50	6.00	R	•	
290015D060	7.00	1.80	5.30	4.40	45.00	30.00	0.15	0.50	6.00	R	•	
340015D060	7.00	1.80	5.30	4.40	50.00	35.00	0.15	0.50	6.00	R	•	
410015D060	7.00	1.80	5.30	4.40	57.00	42.00	0.15	0.50	6.00	R	•	
190015D068	7.00	2.80	6.30	5.40	35.00	20.00	0.15	0.60	6.80	R	•	
240015D068	7.00	2.80	6.30	5.40	40.00	25.00	0.15	0.60	6.80	R	•	
290015D068	7.00	2.80	6.30	5.40	45.00	30.00	0.15	0.60	6.80	R	•	
340015D070	7.00	2.80	6.30	5.40	50.00	35.00	0.15	0.60	7.00	R	•	
390015D070	7.00	2.80	6.30	5.40	55.00	40.00	0.15	0.60	7.00	R	•	
440015D070	7.00	2.80	6.30	5.40	60.00	45.00	0.15	0.60	7.00	R	•	
490015D070	7.00	2.80	6.30	5.40	65.00	50.00	0.15	0.60	7.00	R	•	
MINTL07-090015D050	7.00	0.90	4.40	3.65	25.00	10.00	0.15	0.50	5.00	L	•	
140015D050	7.00	0.90	4.40	3.65	30.00	15.00	0.15	0.50	5.00	L	•	
190015D050	7.00	0.90	4.40	3.65	35.00	20.00	0.15	0.50	5.00	L	•	
240015D050	7.00	0.90	4.40	3.65	40.00	25.00	0.15	0.50	5.00	L	•	
290015D050	7.00	0.90	4.40	3.65	45.00	30.00	0.15	0.50	5.00	L	•	
140015D060	7.00	1.80	5.30	4.40	30.00	15.00	0.15	0.50	6.00	L	•	
210015D060	7.00	1.80	5.30	4.40	37.00	22.00	0.15	0.50	6.00	L	•	
240015D060	7.00	1.80	5.30	4.40	40.00	25.00	0.15	0.50	6.00	L	•	
290015D060	7.00	1.80	5.30	4.40	45.00	30.00	0.15	0.50	6.00	L	•	
190015D068	7.00	2.80	6.30	5.40	35.00	20.00	0.15	0.60	6.80	L	•	
290015D068	7.00	2.80	6.30	5.40	45.00	30.00	0.15	0.60	6.80	L	•	
340015D070	7.00	2.80	6.30	5.40	50.00	35.00	0.15	0.60	7.00	L	•	

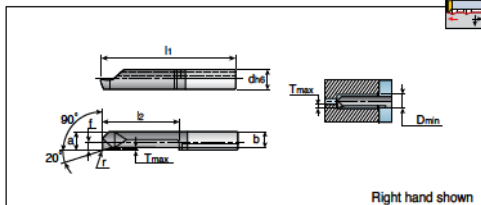


• Standard item

MINP R 04/07

TOPMICRO

Mini carbide bars for internal turning and profiling



Right hand shown

Designation	Dimension (mm)										R/L	Grade TT9030
	d	f	a	b	l ₁	l ₂	r ±0.05	T _{max}	D _{min}			
MINPR04-090010D028	4.00	0.60	2.60	2.20	25.50	10.50	0.10	0.20	2.80	R	•	
150010D028	4.00	0.60	2.60	2.20	31.50	16.50	0.10	0.20	2.80	R	•	
090010D040	4.00	1.50	3.50	2.90	25.50	10.50	0.10	0.30	4.00	R	•	
150010D040	4.00	1.50	3.50	2.90	31.50	16.50	0.10	0.30	4.00	R	•	
MINPR07-140015D050	7.00	0.90	4.40	3.65	30.00	15.00	0.15	0.50	5.00	R	•	
190015D050	7.00	0.90	4.40	3.65	35.00	20.00	0.15	0.50	5.00	R	•	

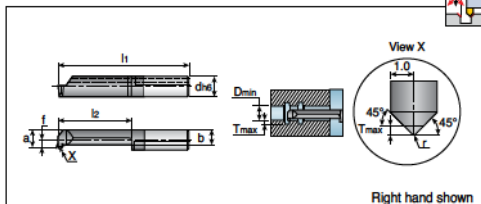
•: Standard item



MINC R 07

TOPMICRO

Mini carbide bars for internal turning and 45° chamfering



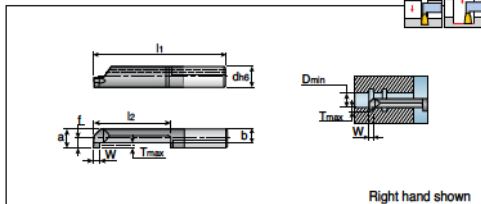
Right hand shown

Designation	Dimension (mm)										R/L	Grade TT9030
	d	f	a	b	l ₁	l ₂	r ±0.04	T _{max}	D _{min}			
MINCR07-140020D050	7.00	0.90	4.40	3.20	30.00	15.00	0.20	0.70	5.00	R	•	
190020D050	7.00	0.90	4.40	3.20	35.00	20.00	0.20	0.70	5.00	R	•	
190020D068	7.00	2.80	6.30	3.80	35.00	20.00	0.20	0.70	6.80	R	•	

•: Standard item



Mini carbide bars for grooving and turning



Designation	Dimension (mm)										R/L	Grade
	d	W±0.05	f	a	b	l1	l2	T _{max}	D _{min}	TT9030		
MINGR07-090100D050	7.00	1.00	0.90	4.40	3.00	25.00	10.00	1.00	5.00	R	●	
140100D050	7.00	1.00	0.90	4.40	3.00	30.00	15.00	1.00	5.00	R	●	
090150D050	7.00	1.50	0.90	4.40	3.00	25.00	10.00	1.00	5.00	R	●	
140150D050	7.00	1.50	0.90	4.40	3.00	30.00	15.00	1.00	5.00	R	●	
090200D050	7.00	2.00	0.90	4.40	3.00	25.00	10.00	1.00	5.00	R	●	
190200D050	7.00	2.00	0.90	4.40	3.00	35.00	20.00	1.00	5.00	R	●	
090100D060	7.00	1.00	1.80	5.30	3.10	25.00	10.00	1.80	6.00	R	●	
140100D060	7.00	1.00	1.80	5.30	3.10	30.00	15.00	1.80	6.00	R	●	
210100D060	7.00	1.00	1.80	5.30	3.10	37.00	22.00	1.80	6.00	R	●	
290100D060	7.00	1.00	1.80	5.30	3.10	45.00	30.00	1.80	6.00	R	●	
090150D060	7.00	1.50	1.80	5.30	3.10	25.00	10.00	1.80	6.00	R	●	
140150D060	7.00	1.50	1.80	5.30	3.10	30.00	15.00	1.80	6.00	R	●	
210150D060	7.00	1.50	1.80	5.30	3.10	37.00	22.00	1.80	6.00	R	●	
240150D060	7.00	1.50	1.80	5.30	3.10	40.00	25.00	1.80	6.00	R	●	
290150D060	7.00	1.50	1.80	5.30	3.10	45.00	30.00	1.80	6.00	R	●	
090200D060	7.00	2.00	1.80	5.30	3.10	25.00	10.00	1.80	6.00	R	●	
140200D060	7.00	2.00	1.80	5.30	3.10	30.00	15.00	1.80	6.00	R	●	
210200D060	7.00	2.00	1.80	5.30	3.10	37.00	22.00	1.80	6.00	R	●	
240200D060	7.00	2.00	1.80	5.30	3.10	40.00	25.00	1.80	6.00	R	●	
290200D060	7.00	2.00	1.80	5.30	3.10	45.00	30.00	1.80	6.00	R	●	
090100D068	7.00	1.00	2.70	6.20	3.30	25.00	10.00	2.50	6.80	R	●	
140100D068	7.00	1.00	2.70	6.20	3.30	30.00	15.00	2.50	6.80	R	●	
210100D068	7.00	1.00	2.70	6.20	3.30	37.00	22.00	2.50	6.80	R	●	
090150D068	7.00	1.50	2.70	6.20	3.30	25.00	10.00	2.50	6.80	R	●	
140150D068	7.00	1.50	2.70	6.20	3.30	30.00	15.00	2.50	6.80	R	●	
210150D068	7.00	1.50	2.70	6.20	3.30	37.00	22.00	2.50	6.80	R	●	
290150D068	7.00	1.50	2.70	6.20	3.30	45.00	30.00	2.50	6.80	R	●	
090200D068	7.00	2.00	2.70	6.20	3.30	25.00	10.00	2.50	6.80	R	●	
140200D068	7.00	2.00	2.70	6.20	3.30	30.00	15.00	2.50	6.80	R	●	
210200D068	7.00	2.00	2.70	6.20	3.30	37.00	22.00	2.50	6.80	R	●	
290200D068	7.00	2.00	2.70	6.20	3.30	45.00	29.00	2.50	6.80	R	●	
MINGL07-090100D060	7.00	1.00	1.80	5.30	3.10	25.00	10.00	1.80	6.00	L	●	
090150D060	7.00	1.50	1.80	5.30	3.10	25.00	10.00	1.80	6.00	L	●	
140200D068	7.00	2.00	2.70	6.20	3.30	30.00	15.00	2.50	6.80	L	●	

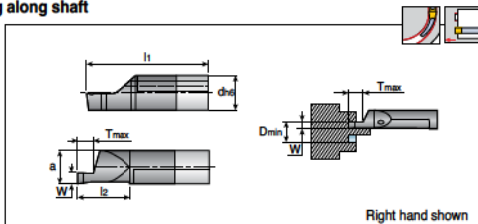


●: Standard item

MINA R 07

TOPMICRO

Mini carbide bars for grooving along shaft



Right hand shown

Designation	Dimension (mm)							R/L	Grade
	d	W	a	l ₁	l ₂	T _{max}	D _{min}		
MINAR07-200200D060	7.00	2.00	5.20	36.00	21.00	4.00	6.00	R	•

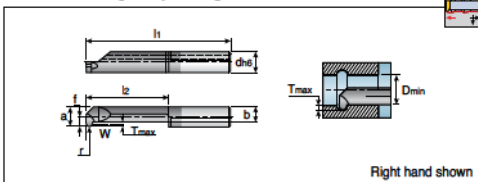


• Standard item

MINR R 07

TOPMICRO

Mini carbide bars, full radius for internal boring and profiling



Right hand shown

Designation	Dimension (mm)										R/L	Grade
	d	W±0.05	f	a	b	r	l ₁	l ₂	T _{max}	D _{min}		
MINRR07-190050D050	7.00	1.00	0.90	4.40	3.10	0.50	35.00	20.00	1.00	5.00	R	•
240050D060	7.00	1.00	1.80	5.30	3.20	0.50	40.00	25.00	1.80	6.00	R	•
290050D068	7.00	1.00	2.80	6.30	3.55	0.50	45.00	30.00	2.50	6.80	R	•



• Standard item

TV **E** **R** **4** **07** **010** **45**

1 2 3 4 5 6 7

1 TaeguTeo TOPCUT series

2 Application type

E External turning
 R Reverse turning
 B Back turning
 T Threading
 P Parting

3 Hand of tool

R Right hand
 L Left hand

4 Insert thickness

4 3.97mm

5 Width of insert

07 0.7mm
 10 1.0mm
 12 1.2mm
 15 1.5mm
 18 1.8mm
 20 2.0mm

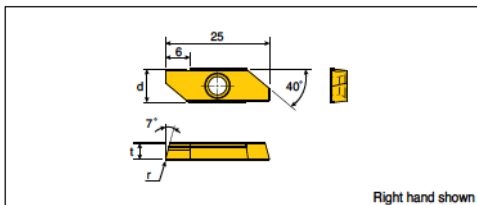
6 Corner radius

000 0mm
 003 0.03mm
 005 0.05mm
 010 0.10mm
 015 0.15mm

7 Tmax (TVPR/L only)

45 4.5mm
 50 5.0mm
 60 6.0mm

General turning



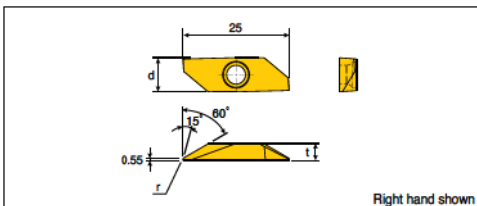
Designation	Feed (mm/rev)	ap (mm)	Dimension (mm)				Grade (TT9010)	
			d	t	r	T _{max}	R	L
TVER/L 40003	0.01-0.15	0.1-5.5	8	3.97	0.03	5.5	●	
40010	0.01-0.15	0.1-5.5	8	3.97	0.10	5.5	●	



●: Standard item

TVRR/L

Reverse turning

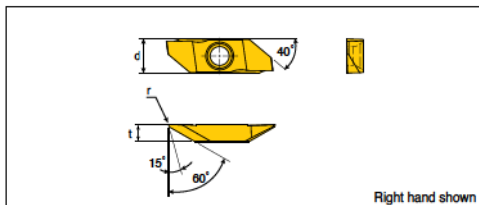


Designation	Feed (mm/rev)	ap (mm)	Dimension (mm)				Grade (TT9010)	
			d	t	r	T _{max}	R	L
TVRR/L 40003-60	0.01-0.15	0.1-5.5	8	3.97	0.03	5.5	●	
40010-60	0.01-0.15	0.1-5.5	8	3.97	0.10	5.5	●	



●: Standard item

Back turning



Right hand shown

Designation	Feed (mm/rev)	ap (mm)	Dimension (mm)				Grade (TT9010)	
			d	t	r	T _{max}	R	L
TVBR/L 40003	0.01-0.15	0.1-5.5	8	3.97	0.03	5.5	●	●
40005	0.01-0.15	0.1-5.5	8	3.97	0.05	5.5	●	●
40010	0.01-0.15	0.1-5.5	8	3.97	0.10	5.5	●	●
40015	0.01-0.15	0.1-5.5	8	3.97	0.15	5.5	●	●
40005-H ⁽¹⁾	0.01-0.15	0.1-5.5	8	3.97	0.05	5.5	●	●
40010-H ⁽¹⁾	0.01-0.15	0.1-5.5	8	3.97	0.10	5.5	●	●
40015-H ⁽¹⁾	0.01-0.15	0.1-5.5	8	3.97	0.15	5.5	●	●

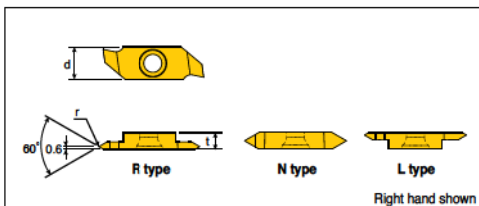


• ⁽¹⁾With honed edges

●: Standard item

TVTR/L

Threading



Right hand shown

Designation	Dimension (mm)			Grade (TT9010)	
	d	t	r	R	L
TVTR/L 41203-R	8	3.97	0.03	●	
40003-N	8	3.97	0.03	●	
41203-L	8	3.97	0.03		



• TVTR 41203-R/L → pitch range: 0.5 - 1.0mm
 • TVTR 40003-N → pitch range: 0.5 - 2.0mm




●: Standard item



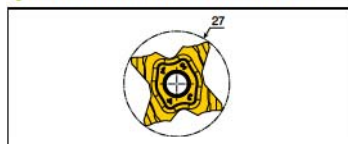
1 TaeguTec

2 QUADRUSH


3 Chip breaker type

		
C	J	S
For medium	For light	For light & tailor made


4 Circular circumference of the Insert



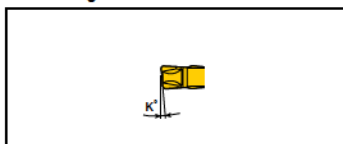
5 Width of Insert

	<p>1.00 = 1.0 mm</p> <p>1.50 = 1.5 mm</p> <p>2.53 = 2.53 mm</p> <p>3.18 = 3.18 mm</p>
--	---



6 Corner radius

	<p>0.10 = 0.1 mm</p> <p>0.20 = 0.2 mm</p> <p>0.30 = 0.3 mm</p> <p>0.40 = 0.4 mm</p>
---	---

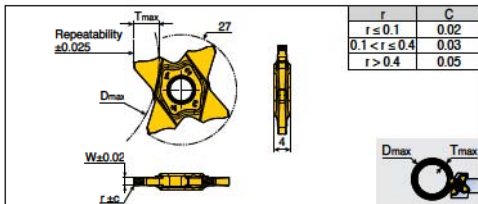
7 Lead angle



8 Hand of Insert

	
L	R
Left hand	Right hand

Precision grooving, parting and recessing insert



r	C
$r \leq 0.1$	0.02
$0.1 < r \leq 0.4$	0.03
$r > 0.4$	0.05



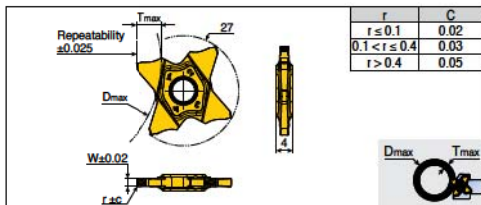
Designation	Feed (mm/rev)	W±0.02	r	T _{max}	D _{max}											Grade						
					T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤5.7	T≤6.0	T≤6.2	T≤6.4								
TQJ 27-0.50-0.00	0.02-0.04	0.50	0.00	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TT9080
27-0.50-0.04	0.02-0.04	0.50	0.04	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-0.75-0.10	0.02-0.05	0.75	0.10	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-0.80-0.00	0.02-0.05	0.80	0.00	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.00-0.06	0.03-0.07	1.00	0.06	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.00-0.10	0.03-0.07	1.00	0.10	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-1.04-0.00	0.03-0.07	1.04	0.00	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.20-0.00	0.03-0.07	1.20	0.00	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.25-0.10	0.03-0.07	1.25	0.10	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-1.25-0.20	0.03-0.07	1.25	0.20	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-1.40-0.00	0.03-0.08	1.40	0.00	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.47-0.00	0.03-0.08	1.47	0.00	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.50-0.10	0.03-0.08	1.50	0.10	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	-	-	-	-	-	-	●
27-1.50-0.20	0.03-0.08	1.50	0.20	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	-	-	-	-	-	-	●
27-1.57-0.10	0.03-0.08	1.57	0.10	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.57-0.15	0.03-0.08	1.57	0.15	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.70-0.10	0.03-0.08	1.70	0.10	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.75-0.10	0.03-0.08	1.75	0.10	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-1.75-0.20	0.03-0.08	1.75	0.20	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-1.78-0.18	0.04-0.10	1.78	0.18	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-1.85-0.20	0.04-0.10	1.85	0.20	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
27-1.96-0.15	0.04-0.10	1.96	0.15	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-2.00-0.10	0.04-0.10	2.00	0.10	6.4	N.L.	600	280	180	130	105	85	60	50	30	-	-	-	-	-	-	-	●
27-2.00-0.20	0.04-0.10	2.00	0.20	6.4	N.L.	600	280	180	130	105	85	60	50	30	-	-	-	-	-	-	-	●
27-2.22-0.15	0.04-0.10	2.22	0.15	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-2.30-0.20	0.04-0.10	2.30	0.20	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27-2.39-0.15	0.04-0.10	2.39	0.15	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	-	-	-	-	-	-	-
27-2.47-0.20	0.04-0.10	2.47	0.20	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	-	-	-	-	-	-	-
27-2.50-0.10	0.04-0.10	2.50	0.10	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	-	-	-	-	-	-	●
27-2.50-0.30	0.05-0.12	2.50	0.30	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	-	-	-	-	-	-	●
27-2.70-0.10	0.05-0.12	2.70	0.10	6.2	N.L.	600	280	180	135	105	95	85	78	-	-	-	-	-	-	-	-	-
27-2.87-0.20	0.05-0.12	2.87	0.20	6.2	N.L.	600	280	180	135	105	95	85	78	-	-	-	-	-	-	-	-	-



● N.L. = No limit

● Standard item

Precision grooving, parting and recessing insert



r	C
$r \leq 0.1$	0.02
$0.1 < r \leq 0.4$	0.03
$r > 0.4$	0.05

Designation	Feed (mm/rev)	W±0.02	r	T _{max}	D _{max}										Grade
					T _{≤3.0}	T _{≤3.5}	T _{≤4.0}	T _{≤4.5}	T _{≤5.0}	T _{≤5.5}	T _{≤5.7}	T _{≤6.0}	T _{≤6.2}	T _{≤6.4}	
TQJ 27-3.00-0.00	0.05-0.12	3.00	0.00	6.4	N.L.	600	280	180	135	105	95	85	78	55	
27-3.00-0.20	0.05-0.12	3.00	0.20	6.4	N.L.	600	280	180	135	105	95	85	78	55	
27-3.00-0.30	0.05-0.12	3.00	0.30	6.4	N.L.	600	280	180	135	105	95	85	78	55	●
27-3.00-0.40	0.05-0.12	3.00	0.40	6.4	N.L.	600	280	180	135	105	95	85	78	55	
27-3.15-0.15	0.05-0.12	3.15	0.15	6.4	N.L.	600	280	180	135	105	95	85	78	68	
27-3.18-0.20	0.05-0.12	3.18	0.20	6.4	N.L.	600	280	180	135	105	95	85	78	68	●

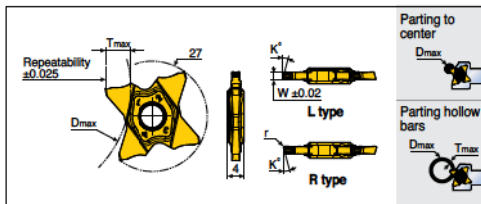


● N.L. = No limit

● Standard item

TQJ 27

Parting insert

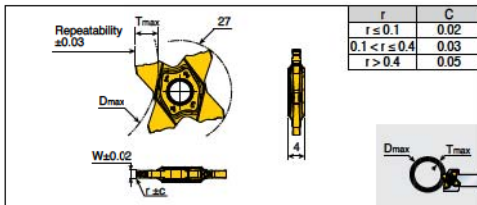


Designation	Feed (mm/rev)	W±0.02	r	K'	Parting to center		Parting hollow bars		Grade
					D _{max}	T _{max}	D _{max}	T _{max}	
TQJ 27-1.00-15R/L	0.02-0.06	1.00	0.06	15	7.0	3.5	600		●
27-1.50-6R/L	0.02-0.06	1.50	0.06	6	12.0	5.7	35		●
27-1.50-15R/L	0.02-0.06	1.50	0.06	15	12.0	5.7	35		●
27-2.00-6R/L	0.03-0.08	2.00	0.10	6	13.0	6.4	30		●
27-2.00-15R/L	0.03-0.08	2.00	0.10	15	13.0	6.4	30		●

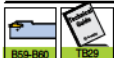


● Standard item

Parting and grooving insert



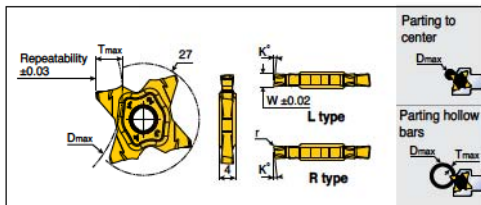
Designation	Feed (mm/rev)	W±0.02	r	T _{max}	D _{max}											Grade
					T ≤ 3.0	T ≤ 3.5	T ≤ 4.0	T ≤ 4.5	T ≤ 5.0	T ≤ 5.5	T ≤ 5.7	T ≤ 6.0	T ≤ 6.2	T ≤ 6.4	TT9080	
TQC 27-1.50-0.10	0.05-0.08	1.50	0.10	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	•
27-1.50-0.20	0.05-0.06	1.50	0.20	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	•
27-1.57-0.15	0.05-0.08	1.57	0.15	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-1.70-0.10	0.05-0.09	1.70	0.10	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-1.75-0.10	0.05-0.10	1.75	0.10	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-1.75-0.20	0.05-0.09	1.75	0.20	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-1.78-0.18	0.05-0.11	1.78	0.18	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-1.85-0.20	0.05-0.11	1.85	0.20	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-1.96-0.15	0.05-0.11	1.96	0.15	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	•
27-2.00-0.10	0.05-0.17	2.00	0.10	6.4	N.L.	600	280	180	130	105	85	60	50	30	-	•
27-2.00-0.20	0.05-0.15	2.00	0.20	6.4	N.L.	600	280	180	130	105	85	60	50	30	-	•
27-2.22-0.15	0.05-0.15	2.22	0.15	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	•
27-2.30-0.20	0.05-0.16	2.30	0.20	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	•
27-2.39-0.15	0.05-0.16	2.39	0.15	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	•
27-2.47-0.20	0.05-0.19	2.47	0.20	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	•
27-2.50-0.10	0.05-0.20	2.50	0.10	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	•
27-2.50-0.30	0.05-0.17	2.50	0.30	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	•
27-2.70-0.10	0.05-0.19	2.70	0.10	6.2	N.L.	600	280	180	135	105	95	85	78	-	-	•
27-2.87-0.20	0.05-0.19	2.87	0.20	6.2	N.L.	600	280	180	135	105	95	85	78	-	-	•
27-3.00-0.00	0.05-0.11	3.00	0	6.4	N.L.	600	280	180	135	105	95	85	78	55	-	•
27-3.00-0.20	0.06-0.23	3.00	0.20	6.4	N.L.	600	280	180	135	105	95	85	78	55	-	•
27-3.00-0.30	0.06-0.25	3.00	0.30	6.4	N.L.	600	280	180	135	105	95	85	78	55	-	•
27-3.00-0.40	0.06-0.25	3.00	0.40	6.4	N.L.	600	280	180	135	105	95	85	78	55	-	•
27-3.15-0.15	0.06-0.21	3.15	0.15	6.4	N.L.	600	280	180	135	105	95	85	78	68	-	•
27-3.18-0.20	0.06-0.23	3.18	0.20	6.4	N.L.	600	280	180	135	105	95	85	78	68	-	•



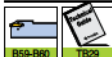
• N.L. = No limit

• Standard item

Parting insert



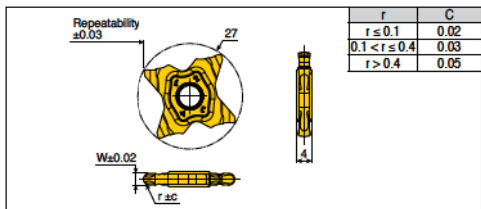
Designation	Feed (mm/rev)	W±0.02	r	K ^s	Parting to center		Parting hollow bars		Grade
					D _{max}	T _{max}	D _{max}	T _{max}	
TQC 27-1.50-6R/L	0.03-0.07	1.50	0.06	6	12.0	5.7	35	●	
27-1.50-15R/L	0.03-0.07	1.50	0.06	15	12.0	5.7	35	●	
27-2.00-6R/L	0.04-0.14	2.00	0.10	6	13.0	6.4	30	●	
27-2.00-15R/L	0.04-0.14	2.00	0.10	15	13.0	6.4	30	●	



●: Standard item

TQC 27

Full radius



Designation	Feed (mm/rev)	W±0.02	r	T _{max}	D _{max}											Grade
					T ≤ 3.0	T ≤ 3.5	T ≤ 4.0	T ≤ 4.5	T ≤ 5.0	T ≤ 5.5	T ≤ 5.7	T ≤ 6.0	T ≤ 6.2	T ≤ 6.4	TT9080	
TQC 27-1.57-0.79	0.05-0.09	1.57	0.79	3.0	N.L.	-	-	-	-	-	-	-	-	-	-	●
27-2.00-1.00	0.05-0.13	2.00	1.00	3.5	N.L.	600	-	-	-	-	-	-	-	-	-	●
27-2.39-1.20	0.06-0.17	2.39	1.20	5.7	N.L.	600	280	180	130	50	35	-	-	-	-	●
27-3.00-1.50	0.06-0.20	3.00	1.50	6.4	N.L.	600	280	180	135	105	95	85	78	55	-	●



●: N.L. = No limit

●: Standard item

TDIT 3.20 - 0.00 - 0.25 - - TT8020

1

2

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4

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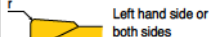
1 Main style of Insert

T type: Chip breaker
G type: Non-chip breaker

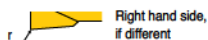
2 Insert width



3 Corner radius



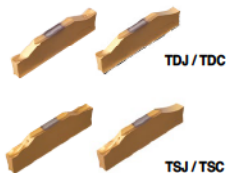
4 Corner radius



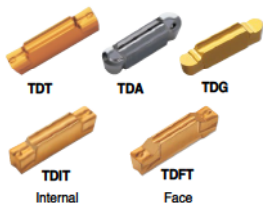
5 Additional codes

6 Grades

Parting & Grooving



Turning & Grooving



Special profile Inserts



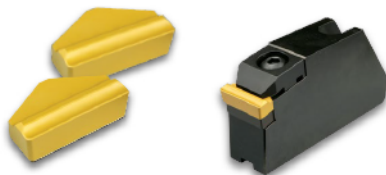
Tailor-made inserts are available upon request.

Shape	Designation	Remarks
	TDT 4.00-0.50	Symmetrical type
	TDT 3.20-0.00-0.25	Non-symmetrical type
	TDT 3.30-1.65	Full-R type
	TDT 4.00-0.30-5RA	L: Chamfer on left hand side R: Chamfer on right hand side
	TDT 3.10-0.10-15LA	
	TDG 5.28-1.20-R25A	
	TDT 5.28-1.20-L25A	

Shape	Designation	Remarks
	TDG 4.40-1.82-29A	L: Chamfer on left hand side R: Chamfer on right hand side
	TDT 4.40-1.50-30A	
	TDT 5.28-2.05-45R25L	
	TDG 4.40-0.15-60A	
	TDG 5.40-0.10-30R50L	
	TDT 3.90-4.00	
	TDT 1.90-T3.5C	
	TDT 1.90-0.30-4.20T	

Shape	Designation	Remarks
	<p>TDG 1.98-T4.5C</p>	
	<p>TDFT 3.80E-0.25</p>	
	<p>TDIT 2.60-1.30</p>	
<p>The others</p>	<p>Available upon customer's request</p>	

Designation	Dimension (mm)	Remarks
XNMR 401416-HD		
XNGT 332-GV		



Shape	Designation	Grade	Pitch	Z
	B ZT 2706035-N4	Carbide	3.56	4
	B ZT 2706043-N3	Carbide	3.56	3
	B ZT 22-5.76-0.425-N3	Carbide	3.56	3
	B ZT 13.5-5.76-N3	Carbide	3.56	3

Shape	Designation	Grade	Pitch	Z
	B ZT 22-5.76-N3-A20	Carbide	3.56	3
	B ZT1215-NO	Carbide	2.34	5
	B ZT 5030-ITX	Ceramic	3.56	6
	B ZT 22-5.76-N3-CE-P	Ceramic	3.56	3
	D INMN 09A111	Ceramic	3.56	3

Recommended Cutting Conditions

Turning and grooving

ISO	Material	Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Groove-turn, profiling, undercutting cutting speed Vc (m/min)		
						KP300	TB650	
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	420	125	1		
		0.25-0.25 %C	Annealed	650	190	2		
		0.25-0.25 %C	Quenched and tempered	850	250	3		
		0.55-0.80 %C	Annealed	750	220	4		
		0.55-0.80 %C	Quenched and tempered	1000	300	5		
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Quenched and tempered	Annealed	600	200	6	
				930	275	7		
				1000	300	8		
				1200	350	9		
	High alloy steel, cast steel and tool steel		Annealed	680	200	10		
Quenched and tempered			1100	325	11			
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12			
		Martensitic	820	240	13			
		Austenitic	600	180	14			
K	Gray cast iron (GG)	Ferritic		160	15			
		Pearlitic		250	16			
	Cast iron nodular (GGG)	Ferritic		180	17			
		Pearlitic		260	18			
	Malleable cast iron	Ferritic		130	19			
Pearlitic			230	20				
N	Aluminum - Wrought alloy	Not cureable		60	21	150-2500		
		Cured		100	22	150-2500		
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	150-2500	
			Cured		90	24	150-2500	
		>12% Si	High temp.		130	25	330-800	
	Copper alloys		>1% Pb	Free cutting		110	26	
			Brass		90	27	330-800	
			Electrolitic copper		100	28	190-400	
	Non-metallic		Duroplastics, fiber plastics			29		
			Hard rubber			30		
S	High temp. alloys	Fe based	Annealed		200	31		
			Cured		280	32		
		Ni or Co based	Annealed		250	33		
			Cured		350	34		
	Titanium, Ti alloys		Cast		320	35		
				Rm 400		36		
	Alpha+beta alloys cured	Rm 1050		37				
H	Hardened steel	Hardened		55HRC	38	90-110		
				60HRC	39	80-100		
	Chilled cast iron	Cast		400	40	180-200		
	Cast iron nodular	Hardened		55HRC	41	90-110		

• For more information of material groups, see the Technical Guide "material conversion table".

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Parting and grooving

ISO	Material	Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)			
						TT9080 TT7220	TT8020	K10	
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C Annealed	420	125	1	140-250	80-120		
		0.25-0.25 %C Annealed	650	190	2	130-220	80-110		
		0.25-0.25 %C Quenched and tempered	850	250	3	90-200	70-90		
		0.55-0.80 %C Annealed	750	220	4	100-220	70-100		
		0.55-0.80 %C Quenched and tempered	1000	300	5	70-170	40-70		
	Low alloy steel and cast steel (Less than 5% of alloying elements)	Annealed		600	200	6	90-120	70-100	
				930	275	7	80-170	50-70	
		Quenched and tempered		1000	300	8	70-130	40-60	
				1200	350	9	50-120	30-50	
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	60-140	50-80		
Quenched and tempered		1100	325	11	50-70	30-60			
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	70-170	80-120		
		Martensitic	820	240	13	60-150	60-90		
		Austenitic	600	180	14	90-180	60-90		
K	Gray cast iron (GG)	Ferritic		160	15	100-230		60-80	
		Pearlitic		250	16	90-180		50-70	
	Cast iron nodular (GGG)	Ferritic		180	17	190-300		70-100	
		Pearlitic		260	18	120-220		70-90	
	Malleable cast iron	Ferritic		130	19	120-250		60-85	
Pearlitic			230	20	100-210		45-75		
N	Aluminum - Wrought alloy	Not cureable		60	21				
		Cured		100	22				
	Aluminum-cast, alloyed	<=12% Si Not cureable		75	23				
		>12% Si Cured		90	24				
		>12% Si High temp.		130	25				
	Copper alloys	>1% Pb Free cutting		110	26				
		Brass		90	27				
		Electrolitic copper		100	28				
Non-metallic	Duroplastics, fiber plastics			29					
	Hard rubber			30					
S	High temp. alloys	Fe based	Annealed		200	31	40-70	35-50	
			Cured		280	32	30-50	25-40	
		Ni or Co based	Annealed		250	33	30-40	20-30	
			Cured		350	34	15-25	15-20	
			Cast		320	35	15-30	15-20	
	Titanium, Ti alloys		Rm 400		36	90-190	150-200		
	Alpha+beta alloys cured	Rm 1050		37	30-60	50-80			
H	Hardened steel	Hardened		55HRC	38				
		Hardened		60HRC	39				
	Chilled cast iron	Cast		400	40				
	Cast iron nodular	Hardened		55HRC	41				

• For more information of material groups, see the Technical Guide "material conversion table".

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

Recommended Cutting Conditions

QUAD-RUSH
QUADRUSH

ISO	Material		Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)	
							TT9080	
P	Non-alloy steel, cast steel, free cutting steel	0.1-0.25 %C	Annealed	420	125	1	140-250	
		0.25-0.25 %C	Annealed	650	190	2	130-220	
		0.25-0.25 %C	Quenched and tempered	850	250	3	90-200	
		0.55-0.80 %C	Annealed	750	220	4	100-220	
		0.55-0.80 %C	Quenched and tempered	1000	300	5	70-170	
	Low alloy steel and cast steel (Less than 5% of alloying elements)			Annealed	600	200	6	90-120
				Quenched and tempered	930	275	7	80-170
					1000	300	8	70-130
					1200	350	9	50-120
	High alloy steel, cast steel and tool steel			Annealed	680	200	10	60-140
Quenched and tempered				1100	325	11	50-70	
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	70-170	
			Martensitic	820	240	13	60-150	
			Austenitic	600	180	14	90-180	
K	Gray cast iron (GG)		Ferritic	160	15	15	100-230	
			Pearlitic	250	16	16	90-180	
	Cast iron nodular (GGG)		Ferritic	180	17	17	190-300	
			Pearlitic	260	18	18	120-220	
	Malleable cast iron		Ferritic	130	19	19	120-250	
		Pearlitic	230	20	20	100-210		
N	Aluminum - Wrought alloy		Not cureable	60	21			
			Cured	100	22			
	Aluminum-cast, alloyed	<=12% Si		Not cureable	75	23		
				Cured	90	24		
				>12% Si	High temp.	130	25	
	Copper alloys			>1% Pb	Free cutting	110	26	
				Brass	90	27		
	Non-metallic			Electrolitic copper	100	28		
Duroplastics, fiber plastics					29			
			Hard rubber		30			
S	High temp. alloys	Fe based	Annealed		200	31	40-70	
			Cured		280	32	30-50	
		Ni or Co based	Annealed		250	33	30-40	
			Cured		350	34	15-25	
			Cast		320	35	15-30	
	Titanium, Ti alloys			Rm 400	36	90-190		
			Alpha+beta alloys cured	Rm 1050	37	30-60		
H	Hardened steel				55HRC	38		
					60HRC	39		
	Chilled cast iron		Cast	400	40			
	Cast iron nodular		Hardened		55HRC	41		

• For more information of material groups, see the Technical Guide "material conversion table".

■ Steel
 ■ Stainless steel
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 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel

• **Feed rate:** Neutral: 0.05-0.18 mm/rev, Handed: Reduce 20% feed rate

[Contents](#)

Recommended Cutting Conditions

Ceramic T-CLAMP ULTRA PLUS insert

Material		Grooving	Turning
P	High hardened steel	Vc (m/min)	250-350
		F (mm/rev)	0.08-0.20
K	Cast iron	600-800	600-800
		0.1-0.2	0.1-0.24

• Above condition is adapted to TDT 4E-0.4T CE AB30

TOPMICRO

Cutting speed Vc(m/min)		Feed (mm/rev)		
		Turning / Back turning	Grooving	Face grooving
P	30-150	0.01-0.08	0.01-0.05	0.01-0.04
M	30-130			
K	30-150			
N	50-200			
S	10-50			