

NEW PRODUCT NEWS

T-CLAMP
ULTRA PLUS



For Small ID Turning and Grooving



TDIM
Pressed inserts



TDIP
Precision inserts

T-CLAMP

ULTRA PLUS

For small ID turning and grooving

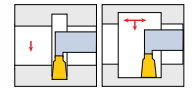
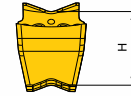
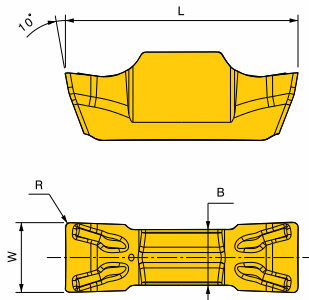
FEATURES

- Economical double-ended insert
- Strong clamping with fully supported seat
- Internal coolant through the shank
- Various application range
 - TDIM: pressed insert with efficient chip breaker for boring and grooving operation
 - TDIP: ground insert for precise machining
 - Internal machining from Dmin 12.5mm
 - Special insert for threading and profiling are available on demand

TaeguTec add new product to T-CLAMP family. This new tools, which adopt double ended insert and through cooling hole for better chip evacuation, are for internal grooving and boring operation at small diameters. Therefore, this tools are suitable for machining of miniatures.

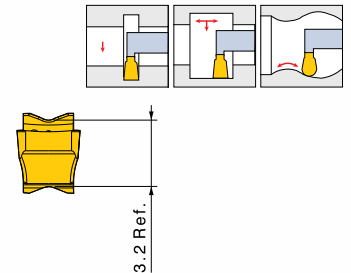
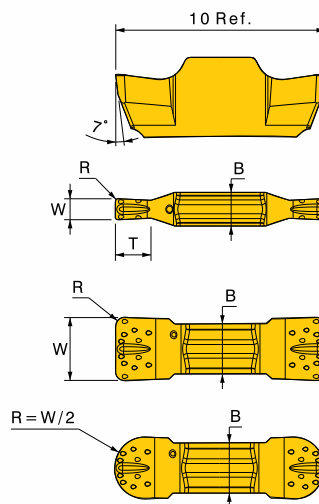


TDIM - Pressed inserts for internal turning and grooving



Designation	Insert seat size	Dimension (mm)					Grade
		W±0.05	R	B	L	H	
TDIM 2E-0.15	2	2.0	0.15	1.6	10	3.2	TT9080
TDIM 3E-0.2	3	3.0	0.2	2.4	10	3.2	TT9080

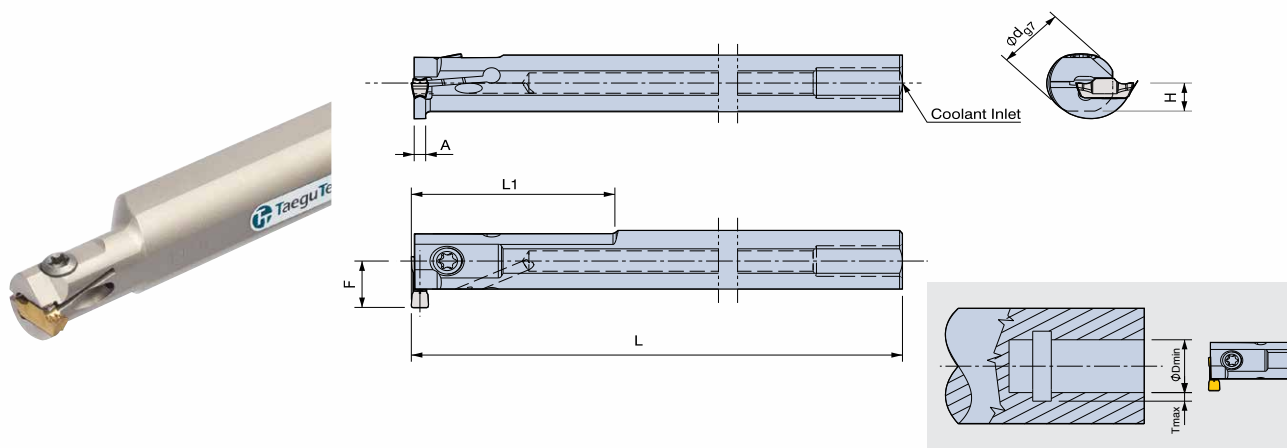
TDIP - Precision inserts for internal turning and grooving



Designation	Insert seat size	Dimension (mm)				Grade
		W	R	B	T	
TDIP 1.00-0.10*	2	1.00	0.10	1.6	1.60	TT9080
TDIP 1.00-0.50*	2	1.00	0.50	1.6	1.60	TT9080
TDIP 1.20-0.00*	2	1.20	0.00	1.6	1.80	TT9080
TDIP 1.40-0.00*	2	1.40	0.00	1.6	2.00	TT9080
TDIP 1.50-0.10*	2	1.50	0.10	1.6	2.00	TT9080
TDIP 2.00E-0.10	2	2.00	0.10	1.6	-	TT9080
TDIP 2.00E-0.20	2	2.00	0.20	1.6	-	TT9080
TDIP 2.00E-1.00	2	2.00	1.00	1.6	-	TT9080
TDIP 2.15E-0.15	2	2.15	0.15	1.6	-	TT9080
TDIP 2.50E-0.20	3	2.50	0.20	2.4	-	TT9080
TDIP 3.00E-0.20	3	3.00	0.20	2.4	-	TT9080
TDIP 3.00E-1.50	3	3.00	1.50	2.4	-	TT9080

*Not for standard holder & only for grooving

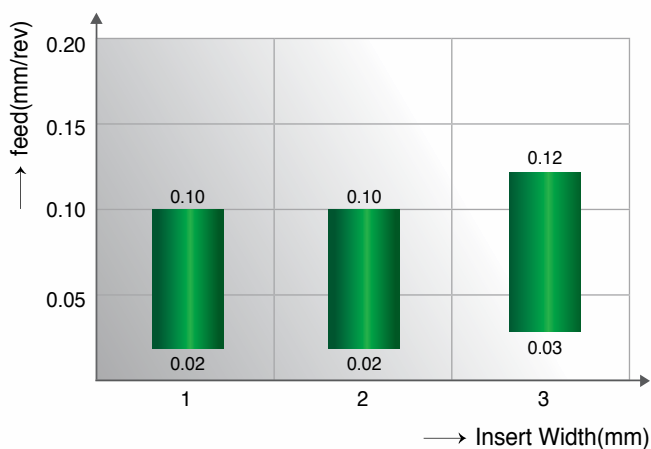
TTSIR/L - Internal, grooving and turning on small diameters



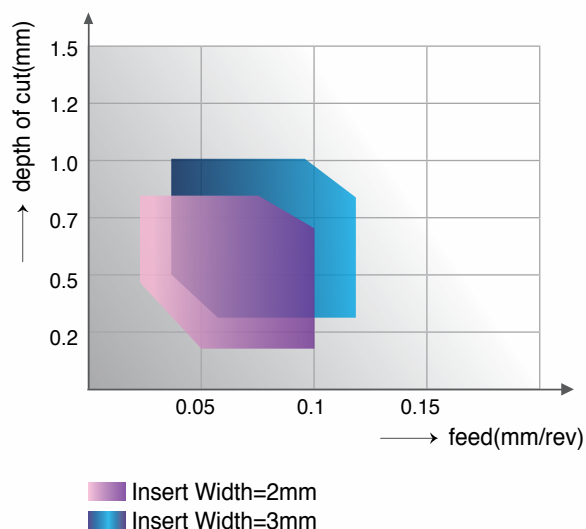
Designation	Insert seat size	Dimension (mm)								Coolant inlet	Screw	Wrench
		Ød	L	L1	F	H	A	Tmax	ØDmin			
TTSIR/L 10-12.5-2	2	10	125	25	7.5	4.5	1.6	2.4	12.5	Ø3.5	TS 40093I	T 15
TTSIR/L 12-14-2		12	125	35	9.1	5.5		2.6	14	Ø6		
TTSIR/L 16-12.5-2		16	150	20	10.5	7.5		2.4	12.5	PL 16		
TTSIR/L 16-14-2		16	150	25	11	7.5		2.6	14	PL 16		
TTSIR/L 16-16-2		16	150	40	11	7.5		3.0	16	PL 16	TS 50125I	T 20
TTSIR/L 12-14-3	3	12	125	35	9.1	5.5	2.0	2.6	14	Ø6	TS 40093I	T 15
TTSIR/L 16-12.5-3		16	150	20	10.5	7.5		2.4	12.5	PL 16		
TTSIR/L 16-14-3		16	150	25	11	7.5		2.6	14	PL 16		
TTSIR/L 16-16-3		16	150	40	11	7.5		3.0	16	PL 16	TS 50125I	T 20
TTSIR/L 20-20-3		20	150	40	14	9		4	20	PL 20		

TDIM, TDIP cutting conditions

Grooving



Turning



Recommended cutting condition According to DIN / ISO513 and VDI3323

ISO	Material	Condition	Tensile strength Rm (N/mm ²)	Hardness (HB)	Material group no	Internal grooving (m/min)	
						TT9080 TT9030	
P	Non-alloy steel,	<0.25 %C	Annealed	420	125	1	100-150
		>=0.25 %C	Annealed	650	190	2	60-100
	cast steel, free cutting steel	<0.55 %C	Quenched and tempered	850	250	3	
		>=0.55%C	Annealed	750	220	4	60-110
			Quenched and tempered	1000	300	5	
	Low alloy steel and cast steel (less than 5% alloying elements)		Annealed	600	200	6	60-110
				930	275	7	70-110
			Quenched and tempered	1000	300	8	
				1200	350	9	60-90
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	60-90
			Quenched and tempered	1100	325	11	50-80

ISO	Material	Condition	Tensile strength Rm (N/mm ²)	Hardness (HB)	Material group no	Internal grooving (m/min)
						TT9080 TT9030
M	Stainless steel and cast steel	Ferritic/martensitic	680	200	12	50-130
		Martensitic	820	240	13	
		Austenitic	600	180	14	40-130

ISO	Material	Condition	Tensile strength Rm (N/mm ²)	Hardness (HB)	Material group no	Internal grooving (m/min)
						TT9080 TT9030
K	Gray cast iron (GG)	Ferritic		160	15	70-120
		Pearlitic		250	16	60-100
	Cast iron nodular (GGG)	Ferritic		130	17	70-110
		Pearlitic		230	18	60-90
	Malleable cast iron	Ferritic		180	19	60-110
		Pearlitic		260	20	50-90

Recommended cutting condition According to DIN / ISO513 and VDI3323

ISO	Material	Condition	Tensile strength Rm (N/mm ²)	Hardness (HB)	Material group no	Internal grooving (m/min)	
						TT9080	TT9030
S	High temp. alloys	Fe based	Annealed		200	31	20-40
			Cured		280	32	15-30
		Ni or Co based	Annealed		250	33	15-20
			Cured		350	34	15-20
			Cast		320	35	15-20
	Titanium, Ti alloys		Rm 400		36	90-120	
		Alpha+beta alloys cured	Rm 1050		37	20-50	

ISO	Material	Condition	Tensile strength Rm (N/mm ²)	Hardness (HB)	Material group no	Internal grooving (m/min)	
						TT9080	TT9030
H	Hardened steel	Hardened		55 HRc	38	15-25	
		Hardened		60 HRc	39	15-25	
	Chilled cast iron	Cast		400	40	15-25	
	Cast iron nodular	Hardened	55 HRc	55 HRc	41	15-25	

* For more information of material groups, see the TaeguTec concise catalogue "Material conversion Table" section.

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