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NPN

New Product News

new

T-CLAMP
PARTING & GROOVING

TDT...-RS Precision Round Type Insert

ADVANCE MACHINING
TaeguTec Industry 4.0

INDUSTRY 4.0 TaeguTec
Member IMC Group

KEY POINT

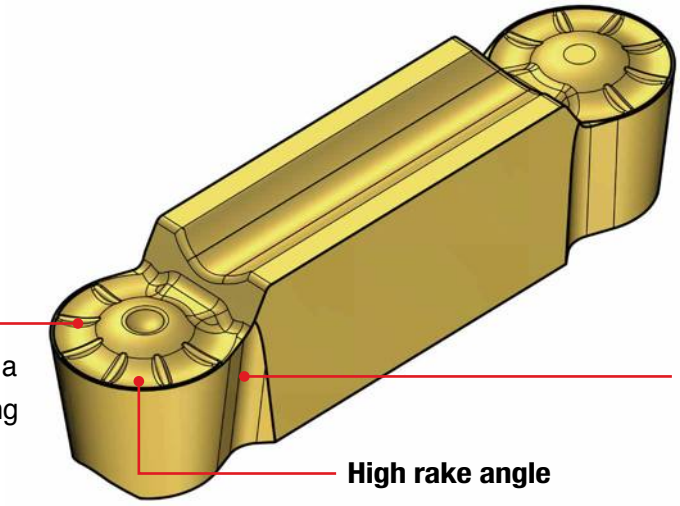
TaeguTec has introduced the TDT...-RS precision round type insert for profiling, turning and grooving applications.

The TDT… -RS precision round type insert provides excellent surface finish for external and internal profiling, turning and grooving applications.
A sharp cutting edge due to the ground flank face and high rake angle reduces cutting force, therefore provides good surface finish and longer tool life. The unique chip breaker enables effective chip control at various cutting depths during profiling, therefore the TDT…-RS can be used in a wide medium to finishing machining range. In particular, when machining heat-resistant super alloys, it provides precision machining, excellent surface finish and stable tool life.

Features

- For external and internal profiling, turning and grooving applications
- Low cutting force and good surface finish due to the sharp cutting edge
- Good chip control over a wide medium to finishing machining range
- Precision machining and excellent repeatability
- TT3010 grade provides excellent tool life when machining heat-resistant super alloys
- The first choice for medium to finishing machining of heat-resistant super alloys

TDT...-RS features



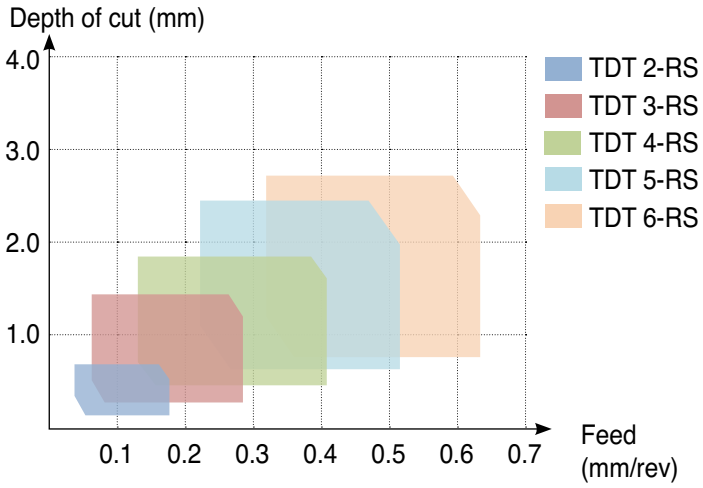
Unique chip breaker
- Good chip control over a wide medium to finishing machining range
- Ideal for profiling

Precision insert
- Sharp cutting edge
- Good surface finish
- Precision machining capable

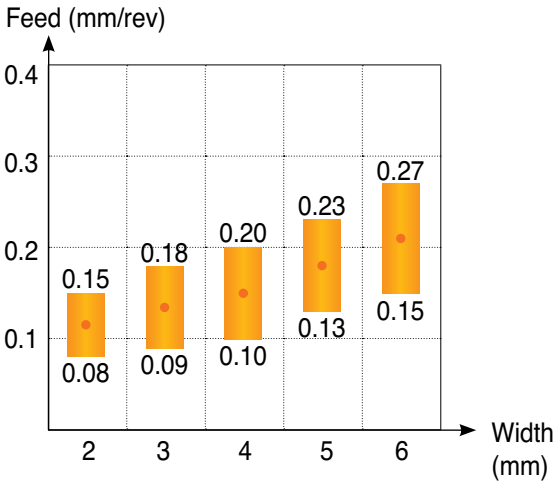
High rake angle
- Low cutting force
- Reduces built-up-edge
- Suitable for difficult-to-cut materials

Cutting conditions

Turning



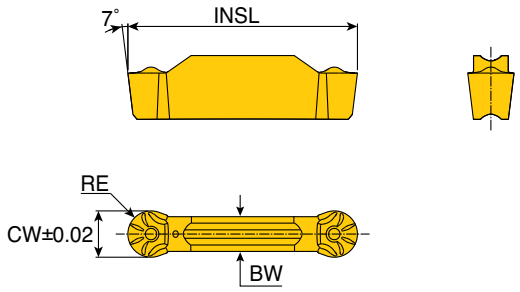
Grooving



TDT-RS (Full-Radius)

T-CLAMP PARTING & GROOVING

Precision double-ended inserts for external turning, grooving and profiling



Size	Dimension (mm)			
	CW	RE	BW	INSL
2	2.00	1.00	1.7	20.0
3	3.00	1.50	2.4	20.0
4	4.00	2.00	3.0	20.0
5	5.00	2.50	4.0	25.0
6	6.00	3.00	5.0	25.0

Insert	Designation	Insert seat size	Turning		Grooving	Cermet	Coated							Uncoated	
			ap (mm)	Feed (mm/rev)	Feed (mm/rev)	CT3000	TT7505	TT6080	TT5100	TT3010	TT9080	TT7220	TT8020	K10	
	**TDT 2.00E-1.00-RS**	2	0.0-1.0	0.10-0.22	0.08-0.15					●	●			●	
	3.00E-1.50-RS	3	0.0-1.5	0.15-0.28	0.09-0.18					●	●			●	
	4.00E-2.00-RS	4	0.0-2.0	0.18-0.35	0.10-0.20					●	●			●	
	5.00E-2.50-RS	5	0.0-2.5	0.25-0.54	0.13-0.23					●	●			●	
	6.00E-3.00-RS	6	0.0-3.0	0.30-0.67	0.15-0.27					●	●			●	

●: Standard items

Recommended Cutting Conditions

Grooving and Turning

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc(m/min)		
							TT3010	TT9080	K10
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1		100-200	
		>=0.25%C	Annealed	650	190	2		100-180	
		<0.55%C	Quenched and tempered	850	250	3		80-160	
		>=0.55%C	Annealed	750	220	4		80-160	
			Quenched and tempered	1000	300	5		70-130	
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6		100-160	
			Quenched and tempered	930	275	7		80-160	
				1000	300	8		80-150	
				1200	350	9		80-130	
	High alloy steel, cast steel and tool steel		Annealed	680	200	10		90-130	
			Quenched and tempered	1100	325	11		50-80	
S	High temp. alloys	Fe based	Annealed		200	31	40-60	30-50	30-40
			Cured		280	32	30-50	20-40	20-40
		Ni or Co based	Annealed		250	33	30-40	20-30	20-30
			Cured		350	34	25-35	15-20	15-20
			Cast		320	35	25-35	15-20	15-20
	Titanium, Ti alloys			Rm 400		36	140-180	130-170	100-130
			Alpha+beta alloys cured	Rm 1050		37	40-80	40-70	20-50

Steel High temp. alloys