

NPN

New Product News



T-CLAMP

PARTING & GROOVING

Precision Round Type Single-ended Insert



KEY POINT

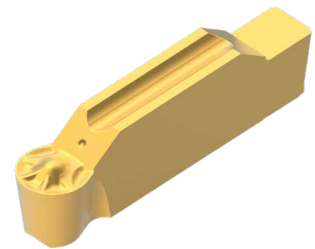
TaeguTec has introduced the TST-RS precision round type insert for deep turning and grooving applications.

TaeguTec's deep profiling, external turning and grooving round type single-ended TST-RS insert, with its sharp cutting edge, enables lower cutting loads, resulting in stable machining performance and excellent surface roughness, even in super alloy machining. This single-ended insert, with the same geometry as the double-ended TDT-RS insert, is capable of deep depth of cut machining where demand has recently grown.

For further information, please contact the relevant product manager.

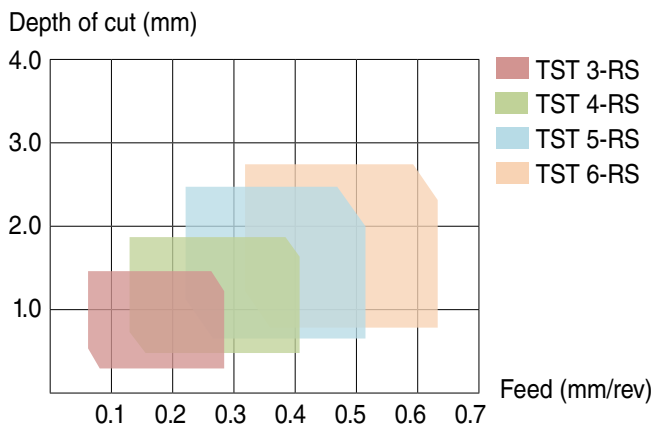
Feature

- For external and internal profiling, turning and grooving applications
- Precision machining and excellent repeatability
- Low cutting force and good surface finish due to the insert's sharp cutting edge
- Good chip control over a wide medium-to-finishing machining range
- TT3010 grade provides excellent tool life in super alloy machining

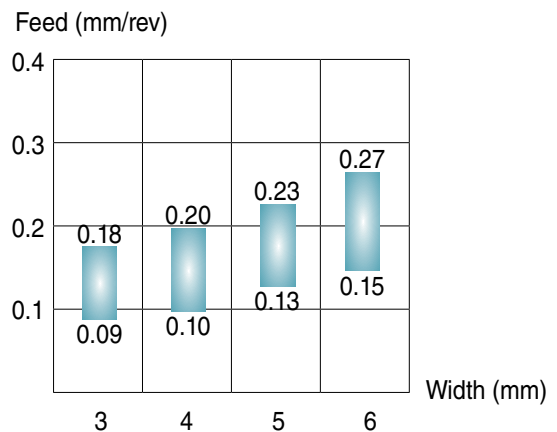


Cutting conditions

Turning

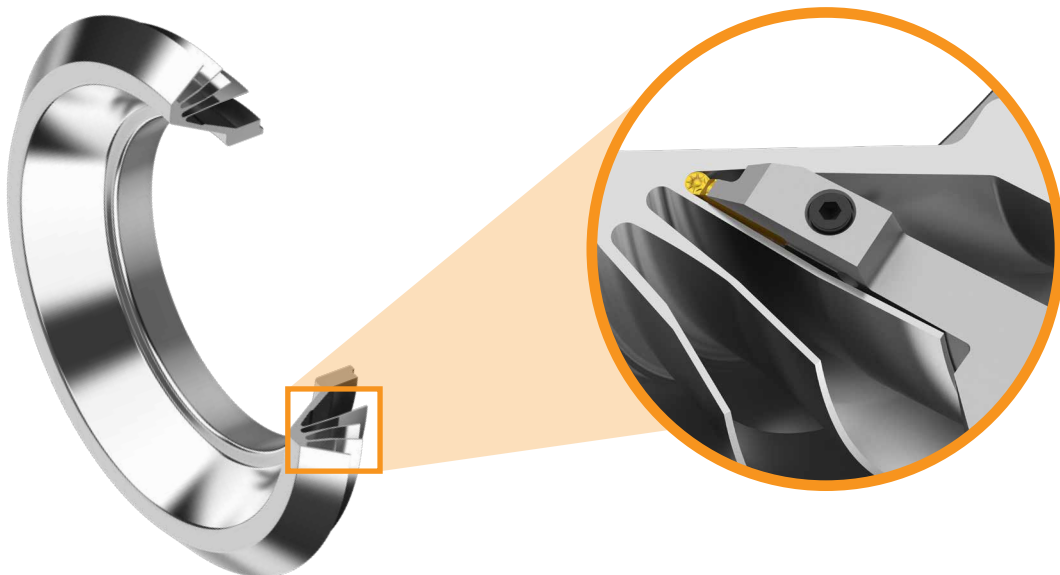
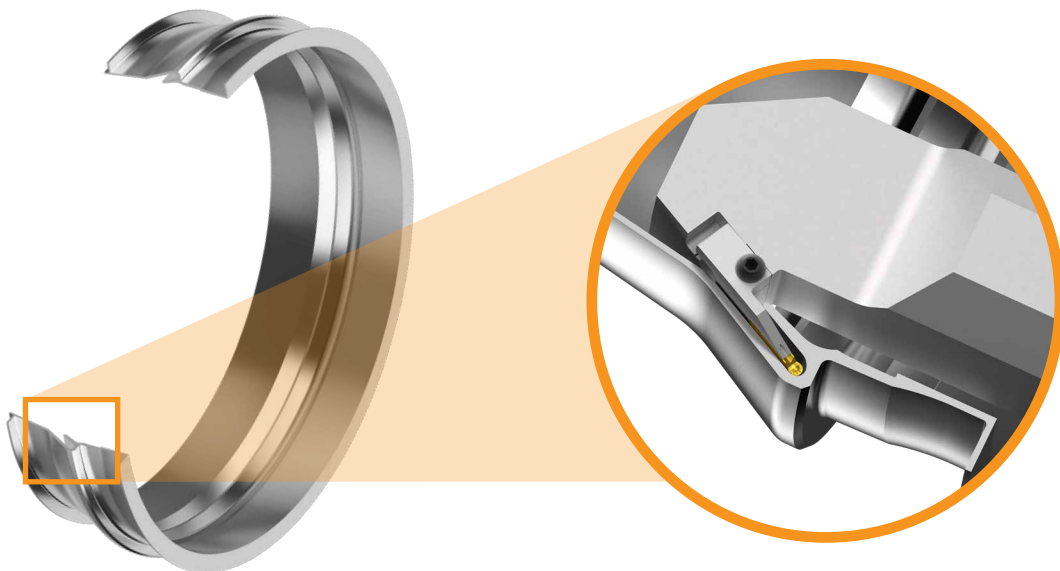


Grooving



Applications

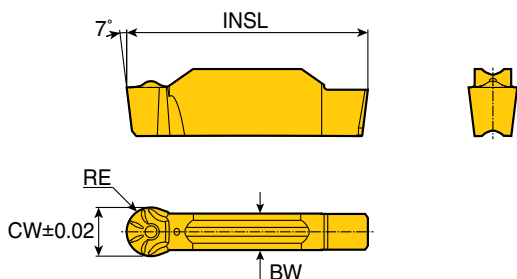
Deep machining capable perfect for tough sectors like aerospace



TST-RS (Full-Radius)



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



Size	Dimension (mm)			
	CW	RE	BW	INSL
3	3.00	1.50	2.4	19.8
4	4.00	2.00	3.0	19.8
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		
	TST 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	
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
			Cured		280	32	30-50	20-40
		Ni or Co based	Annealed		250	33	30-40	20-30
			Cured		350	34	25-35	15-20
			Cast		320	35	25-35	15-20
	Titanium, Ti alloys			Rm 400		36	140-180	130-170
		Alpha+beta alloys cured		Rm 1050		37	40-80	40-70

Steel

High temp. alloys