

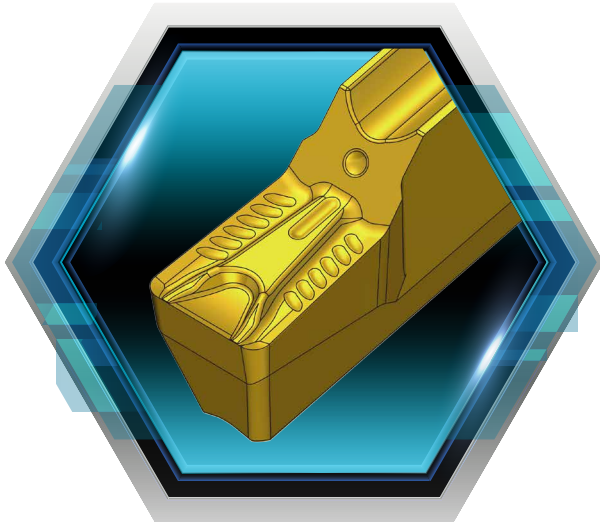
NPN

New Product News



T-CLAMP
PARTING & GROOVING

The New TDXY Insert for Multi-purpose Grooving and Turning Applications



KEY POINT

TaeguTec has launched the new TDXY insert for multi-purpose grooving and turning applications.

TaeguTec has added the new **TDXY** insert featuring unique chip breaker geometries to the existing line of multi-purpose inserts.

The **TDXY** insert is designed for various applications: external, internal and face grooving as well as turning applications. High feed capability due to the reinforced edge strength and optimal chip breaker result in improved productivity.

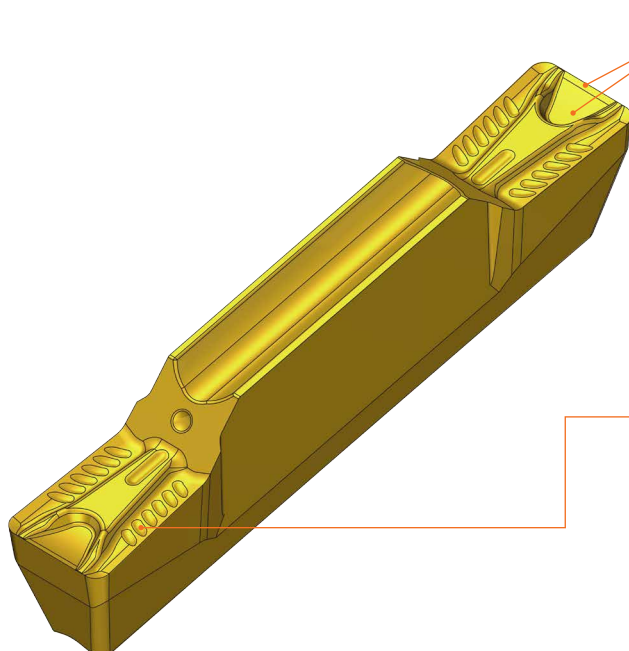
The insert line enables good performance even in both continuous and interrupted cutting conditions; the straight front cutting edge shape not only enables a flat bottom surface when grooving but also improves tool life by minimizing chipping and notch wear.

The insert is available in 3, 4, 5, and 6 mm widths. It is suitable for processing a variety of workpieces with the TT9080 grade, TT6080 for cast irons and the new TT3010 grade for machining Heat Resistant Super Alloys.

For further questions, please contact the product manager.

Features

- For external and internal grooving as well as turning applications
- Good chip control when face grooving and turning
- Flat bottom surface machining
- Suitable for medium to high feed machining
- Ideal for steel, stainless steel, cast iron and super alloys machining



Straight front cutting edge and wide chip breaker design

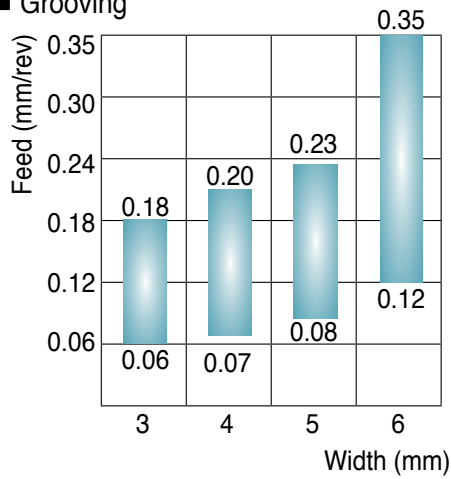
- Low cutting force on grooving applications and flat bottom surface machining
- The reinforced edge increases tool life
- Good chip control on external face grooving applications

Special chip breaker design

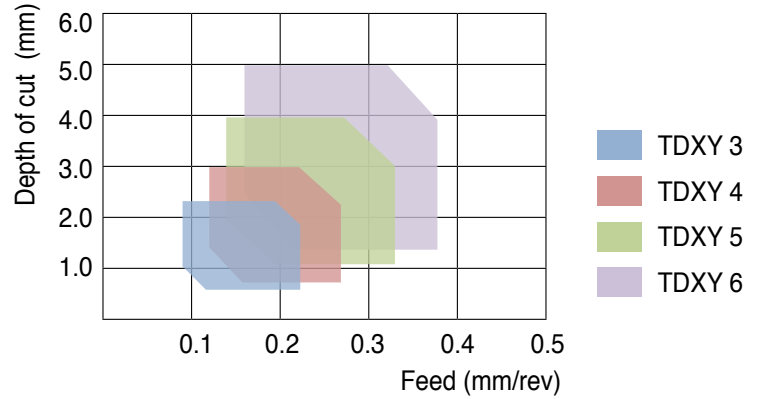
- Good chip control on turning applications
- Applicable to medium to high feed rates
- Low cutting force on turning applications

Cutting conditions

■ Grooving



■ Turning



■ Available PVD coated grades

TT6080	K05 - K25	H05 - H25	
TT3010	S05 - S20		
TT9080	P20 - P40	M20 - M40	S20 - S40

Harder

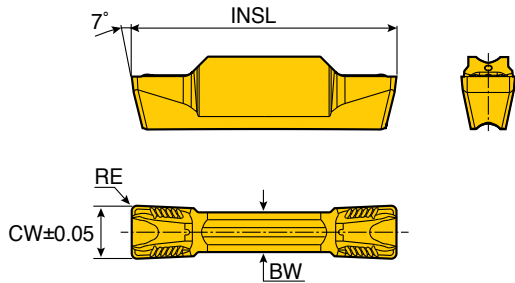


Tougher



TDXY

Double-ended inserts for grooving, turning and face grooving



Size	Dimension (mm)			
	CW	RE	BW	INSL
3E-0.4	3.0	0.40	2.2	20
4E-0.4	4.0	0.40	3.0	20
4E-0.8	4.0	0.80	3.0	20
5E-0.4	5.0	0.40	4.0	25
5E-0.8	5.0	0.80	4.0	25
6E-0.4	6.0	0.40	5.0	25
6E-0.8	6.0	0.80	5.0	25

Insert	Designation	Insert seat size	Turning		Grooving	Cermet		Coated						Uncoated
			ap (mm)	Feed (mm/rev)	Feed (mm/rev)	CT3000	TT7505	TT6080	TT3010	TT5100	TT9080	TT7220	TT8020	K10
	TDXY 3E-0.4	3	0.5-1.8	0.17-0.20	0.06-0.18				•	•	•			
	4E-0.4	4	0.5-2.4	0.20-0.27	0.07-0.20				•	•	•			
	4E-0.8	4	1.0-2.4	0.22-0.27	0.07-0.20				•	•	•			
	5E-0.4	5	0.5-3.0	0.22-0.32	0.08-0.23				•	•	•			
	5E-0.8	5	1.0-3.0	0.25-0.37	0.08-0.23				•	•	•			
	6E-0.4	6	0.5-3.6	0.25-0.38	0.12-0.35				•	•	•			
	6E-0.8	6	1.0-3.6	0.26-0.42	0.12-0.35				•	•	•			

• 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)				
						Coated				
						TT6080	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	
		>=0.55%C	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		
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12				80-170	
		Martensitic	820	240	13				80-150	
		Austenitic	600	180	14				80-170	
K	Gray cast iron (GG)	Ferritic		160	15	110-250				
		Pearlitic		250	16	90-140				
	Cast iron nodular (GGG)	Ferritic		180	17	120-230				
		Pearlitic		260	18	90-180				
	Malleable cast iron	Ferritic		130	19	90-180				
Pearlitic			230	20	80-150					
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		40-60	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	
	Titanium, Ti alloys		Cast		320	35		25-35	15-20	
				Rm 400		36		140-180	130-170	
	Alpha+beta alloys cured	Rm 1050		37		40-80	40-70			
H	Hardened steel	Hardened		55HRC	38					
		Hardened		60HRC	39					
	Chilled cast iron	Cast		400	40					
	Cast iron nodular	Hardened		55HRC	41					

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

Recommended Cutting Conditions

Face grooving and Internal grooving

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