NPA

NEW

New Product Announcement

Member IMC Group Ingersoll Cutting Tools

NEW-367-1 • 8/2025

PARTING & GROOVING

Series

TDXY

Features

Double-ended

Compatible with all TClamp Ultra+ holders

Applications

External turning, parting, and grooving

Internal turning and grooving

Face turning and grooving

Insert Widths

3,4,5, and 6 mm

Grades

TT6080 – PVD coated for cast iron

TT3010 – PVD coated for super alloys

TT9080 – PVD coated for general purpose in variety of materials

Materials

- Steel
- Stainless Steel
- Cast Iron
- Super Alloys

TCLAMP ULTRA+™

New TDXY Insert for Grooving and Turning Applications

» Low cutting force when grooving and flat bottom surface machining.

» Reinforced edge increases tool life.

» Fully compatible with all TClamp Ultra+ holders.

See it in action! »

Ingersoll launches the new TDXY insert for multi-purpose grooving and turning applications

Ingersoll 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, including external, internal, and face grooving as well as turning applications. The insert's reinforced cutting edge and optimized chipbreaker allow for higher feed rates resulting in improved productivity when turning.

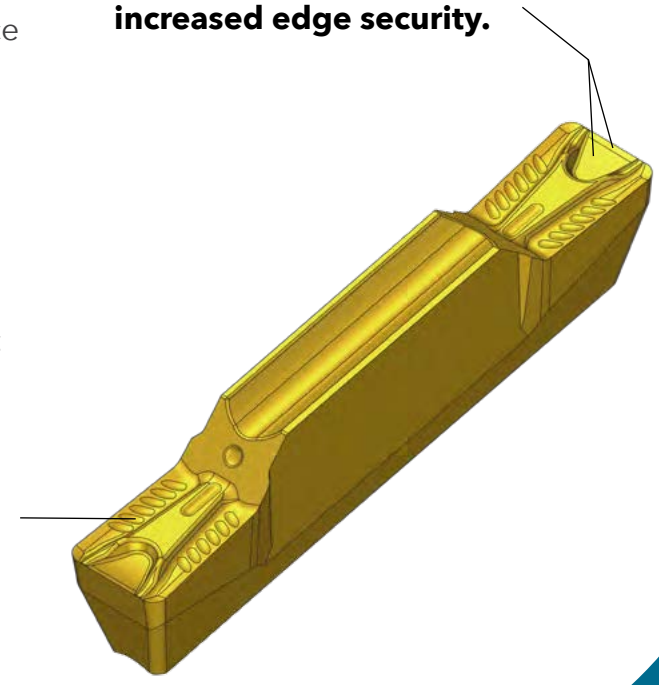
The insert line enables good performance in both continuous and interrupted cutting conditions; the straight front cutting edge shape not only enables a flat bottom surface when grooving but also improves tool life by minimizing chipping and notch wear.

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

Features & Benefits

- Straight front cutting edge and wide chipbreaker design provides:
  - » Low cutting force on grooving applications.
  - » Good chip control on external face grooving applications.
  - » Flat bottom surface machining.
- Special side chipbreaker design provides:
  - » Good chip control for turning applications.
  - » Medium to high feed rates in turning
  - » Low cutting force during turning.
- The reinforced cutting edge increases tool life.
- Ideal for machining steel, stainless steel, cast iron, and super alloys.

Strong front geometry for increased edge security.



Reinforced side cutting edge for excellent chip evacuation and higher feed rates.

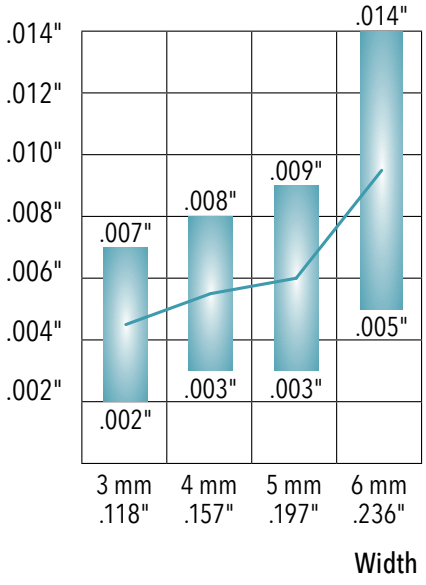
Multifunctional Chip Breaker Features

Chip breakers	Applications and Features
 TDXY	- Suitable for wide groove side turning - Good chip control when face grooving and face turning - Flat bottom surface machining - Steel, cast iron, stainless steel and heat resistant alloys
 TDXC	- Stable cutting edge and flat bottom surface machining in grooving and parting - Covers C-type chip breaker applications including a built-in chip breaker for turning applications - Medium-to-high feed range - Steel, cast iron, stainless steel and heat resistant alloys
 TDXU	- 1st choice for general purpose machining in groove-turn applications - Multifunctional chip breaker for external, internal and face machining - Low cutting force and good chip control - Medium-to-hign feed grooving, low-to-medium feed turning - Steel, stainless steel and heat resistant alloys
 TDXT	- 1st choice for turning and grooving of cast iron - Turning and grooving with various geometries - Cast iron and steel - High feed rate for turning

Recommended Application Range - TDXY Type

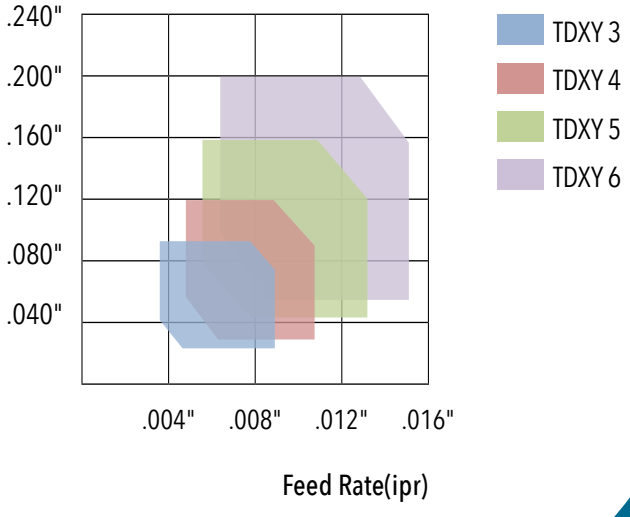
- Grooving

Feed Rate (ipr)



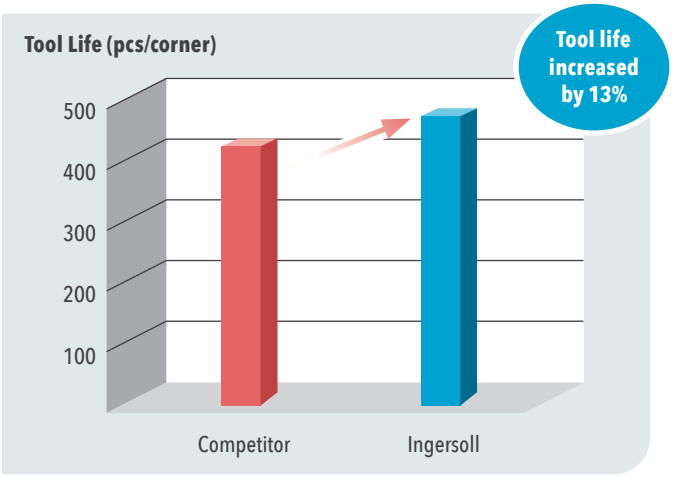
- Turning

Depth of cut (inch)



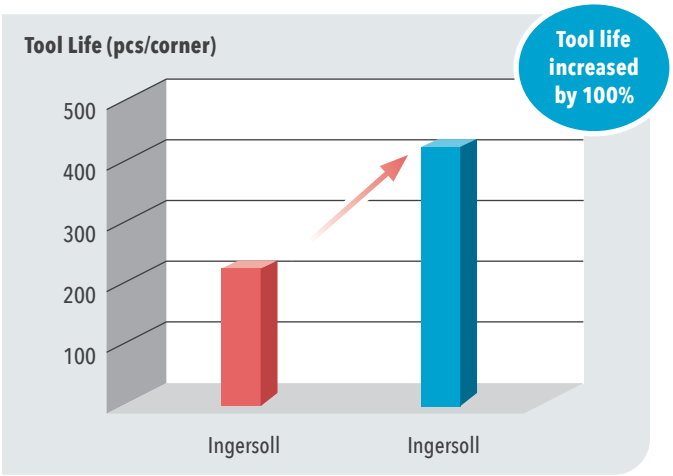
Case Study 1

	Competitor	Ingersoll
Material	AISI 1053	
Application	Face Grooving & Turning	
Insert	Double-ended Insert (PVD Coated)	TDXY4E-0.8 TT9080
Cutting Speed, V (SFM)	300	
Feed Rate, f (ipr)	.008	
Depth of Cut, ap (in.)	.040	
Coolant	Wet	
Tool Life (pcs/corner)	400	450



Case Study 2

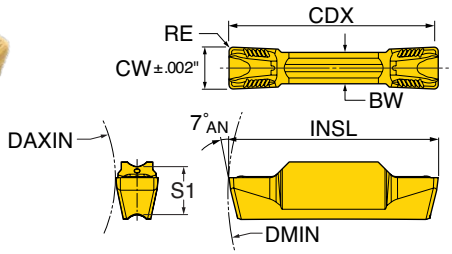
	Ingersoll	Ingersoll
Material	AISI 1020	
Application	Face Grooving & Turning	
Insert	TDXT4E-0.4 TT9080	TDXY4E-0.4 TT9080
Cutting Speed, V (SFM)	475	
Feed Rate, f (ipr)	.008	
Depth of Cut, ap (in.)	.006	
Coolant	Wet	
Tool Life (pcs/corner)	200	400
Chip curl	Loose curl	Optimal curl



OD Groove | OD Groove/ Turn | Parting | ID Groove/ Turn | Face Groove/ Turn

Series TDXY

DOUBLE-ENDED INSERTS FOR GROOVING, TURNING, FACE GROOVING & PARTING



Size	Dimensions (inch)				
	CW Cutting Width	RE Corner Radius	BW Body Width	INSL Insert Length	S1 Thickness
3E-0.4	.118	.016	.087	.787	.185
4E-0.4	.157	.016	.118	.787	.185
4E-0.8	.157	.031	.118	.787	.185
5E-0.4	.197	.016	.157	.984	.205
5E-0.8	.197	.031	.157	.984	.205
6E-0.4	.236	.016	.197	.984	.205
6E-0.8	.236	.031	.197	.984	.205

Designation	SSC Insert Seat Size	DAXIN Axial Groove I.D. Min.	DMIN Min. Bore Dia.	Turning				Grooving			PVD Coated		
				a_p (inch) Depth of Cut		f_n (ipr) Feed Rate		CDX Cutting Depth	f_n (ipr) Feed Rate		TT6080	TT3010	TT9080
				Min.	Max.	Min.	Max.	Max.	Min.	Max.			
TDXY3E-0.4	3	.709	.945	.020	.071	.007	.008	.748	.002	.007	•	•	•
TDXY4E-0.4	4	.709	.827	.020	.094	.008	.011	.748	.003	.008	•	•	•
TDXY4E-0.8	4	.709	.827	.040	.094	.009	.011	.748	.003	.008	•	•	•
TDXY5E-0.4	5	.787	1.181	.020	.118	.009	.013	.945	.003	.009	•	•	•
TDXY5E-0.8	5	.787	1.181	.040	.118	.010	.015	.945	.003	.009	•	•	•
TDXY6E-0.4	6	.709	1.220	.020	.142	.010	.015	.945	.005	.014	•	•	•
TDXY6E-0.8	6	.709	1.220	.040	.142	.010	.017	.945	.005	.014	•	•	•

For cutting speed guidelines, please scan or click the QR code.

• = Standard Items

Scan for cutting speed guidelines