NPA

NEW

Member IMC Group Ingersoll Cutting Tools

New Product Announcement

PARTING & GROOVING

Series
TDMV

Features
Double-Ended
Compatible with all T-Clamp Ultra+ Holders

Applications
Backward & Forward Turning
Profiling
Undercutting
Parting

Insert Width
2.8 mm (.110")

Corner Radii
.2 mm (.008"), .4 mm (.016")

Grade
TT9080 – General Purpose

Recommended Holders
TGFR/L
TGEUR/L
TGFPR/L

TCLAMP VT™

Multifunctional V-Type Insert (TDMV)

- One insert for backward/ forward turning, profiling, undercutting, and parting.
- Optimized chip breaker provides superior chip control.
- Compatible with standard T-ClampUltra+ holders.

See it in action! »

WINSFEED™ ADVANCED MACHINING

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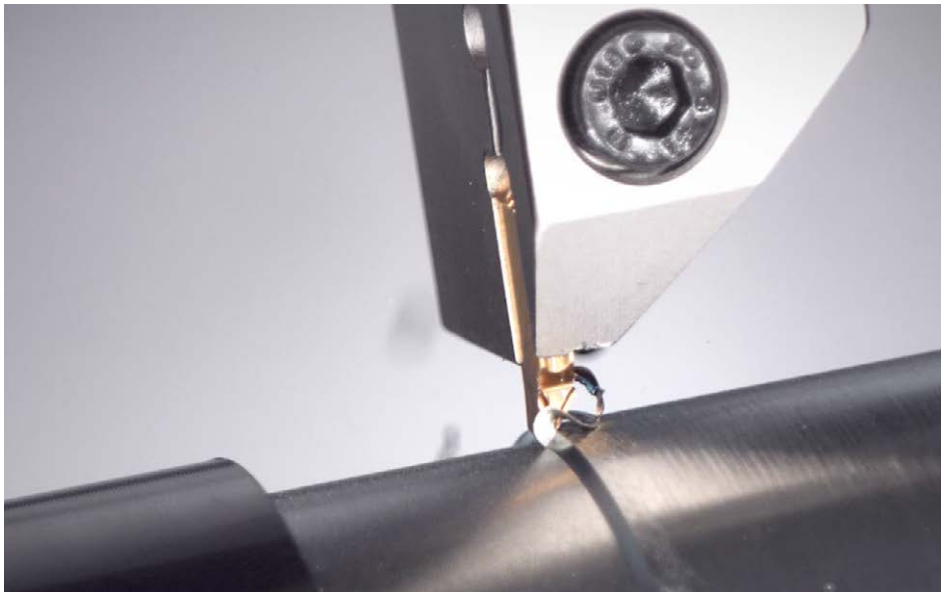
Multifunctional V-Type Insert (TDMV)

Ingersoll introduces the V-type T-CLAMP insert that maximizes productivity by minimizing tool change through multifunctional machining.

In addition to operating on narrow grooving on typical CNC lathes, the new V-shaped TDMV inserts are suitable with a wide range of applications on Swiss automatic lathes, with a concentration on miniature product machining. The V-shaped TDMV insert line is a multi-purpose option and the optimal tool for innovation in the groove machining segment in order to meet various customers' needs.

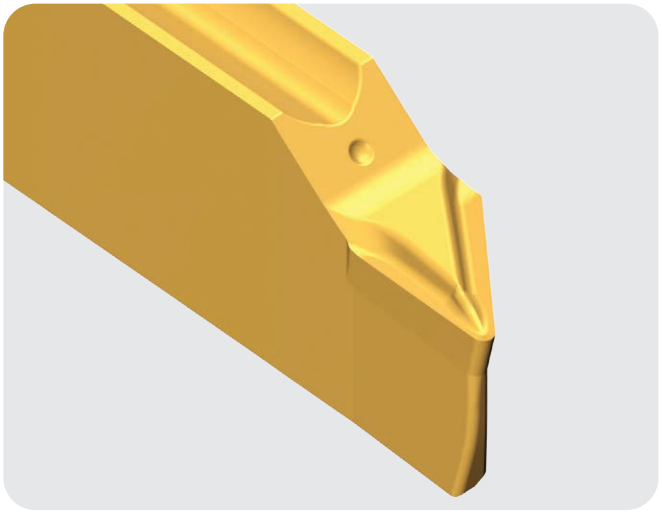


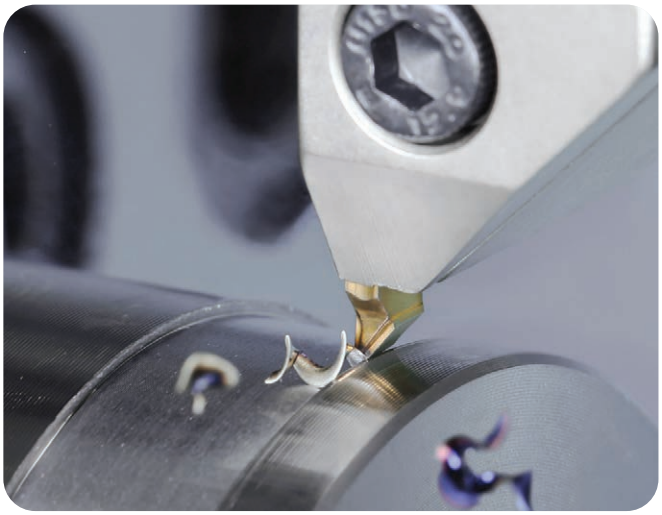
Features & Benefits

- Versatile chip breaker: forward/backward turning, profiling, end facing and parting
- Optimized chip breaker design for bi-directional turning enables superior chip control
- Insert's 2.8 mm edge width allows for a variety of tasks in tight spaces
- Roughing and finishing capable with a cutting depth of up to 2.5 mm
- Available in 4 insert types: R/L-handed, Corner R0.2, R0.4
- Multi-application machining reduces tool cost and equipment downtime while maximizing productivity gains
- Compatible with standard TGFR/L holders, maximizing performance when using internal high-pressure feed-type holders

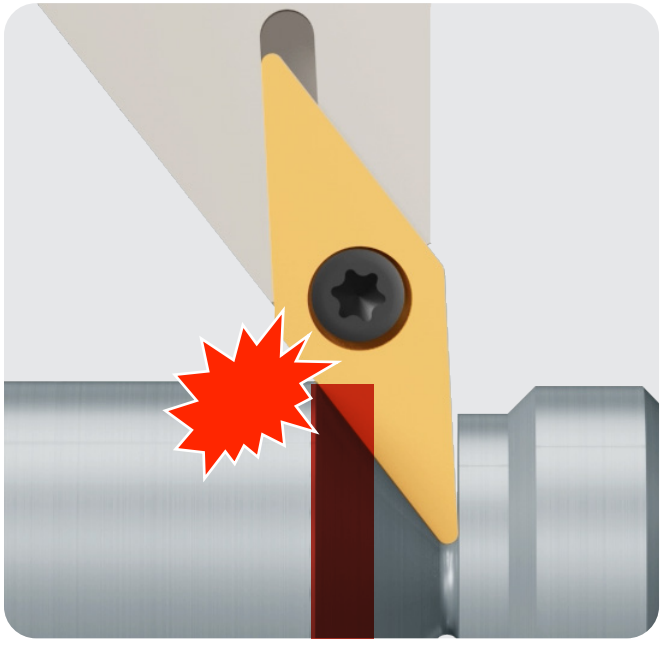
Features

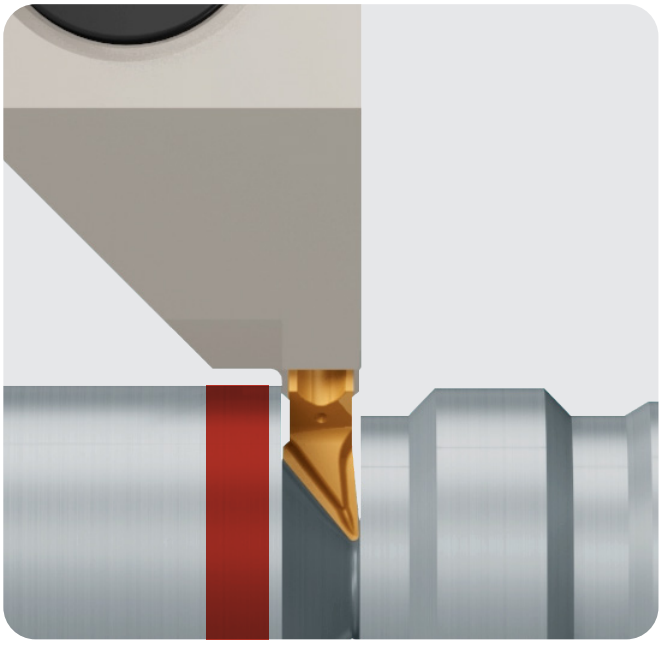
- V-shape geometry and optimized chip breaker for excellent chip control in bi-directional turning



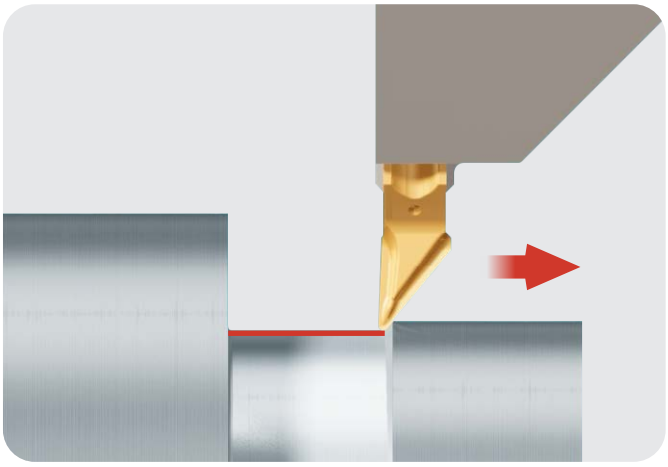


- 2.8 mm width of cut inserts for interference-free machining in confined areas when compared to conventional ISO V-type inserts

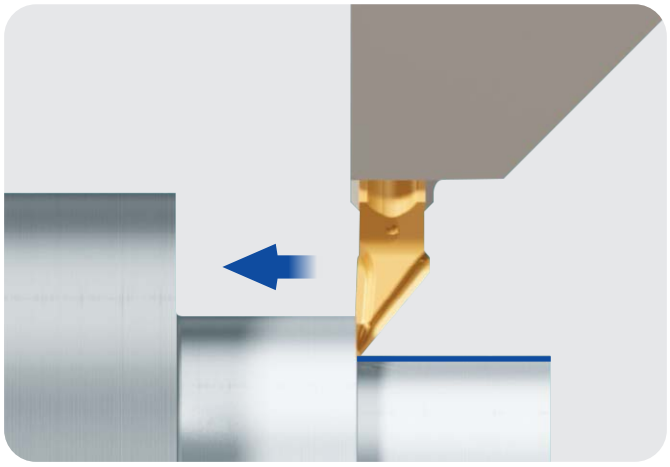




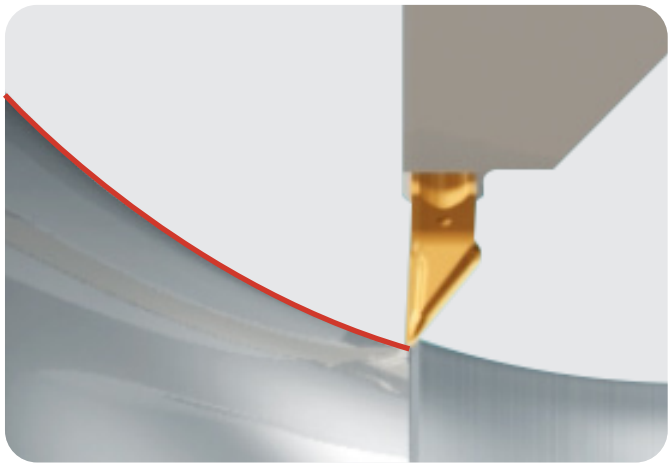
Various Applications



Backward turning

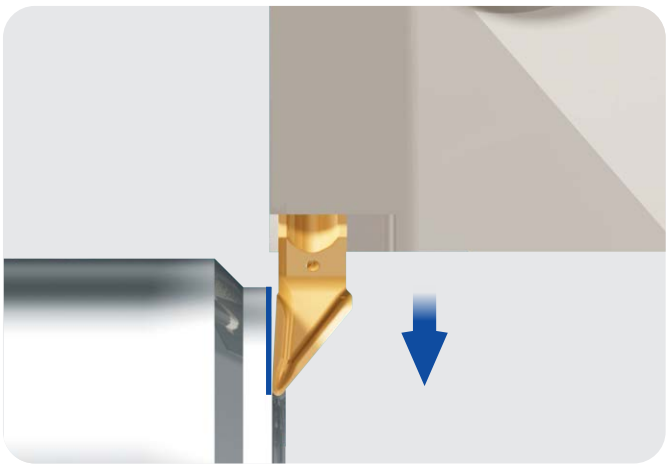


Forward turning

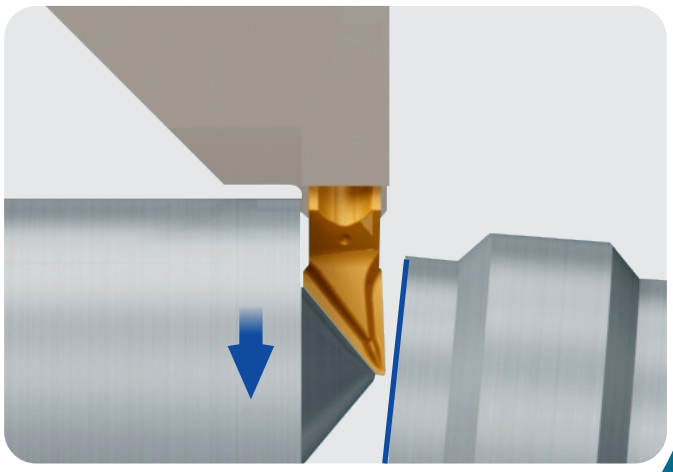


Profiling

Undercut



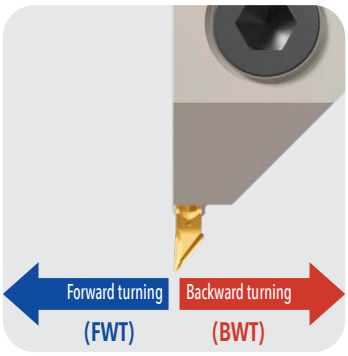
Face grooving

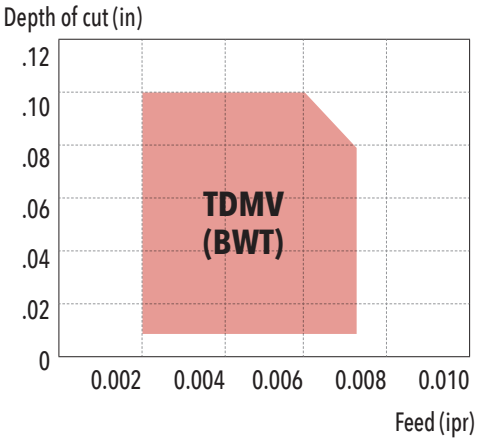


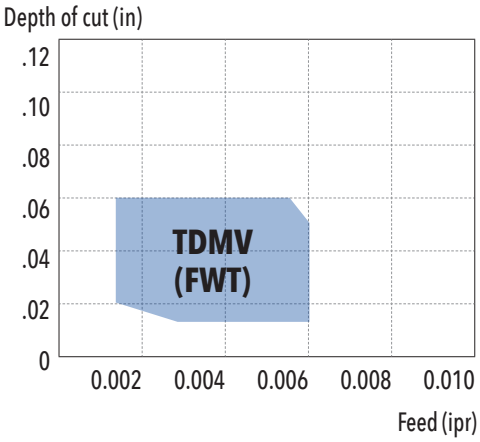
Parting

Recommended Application Range

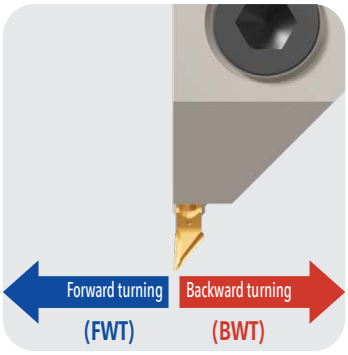
TDMV 2.8E-0.2-R/L

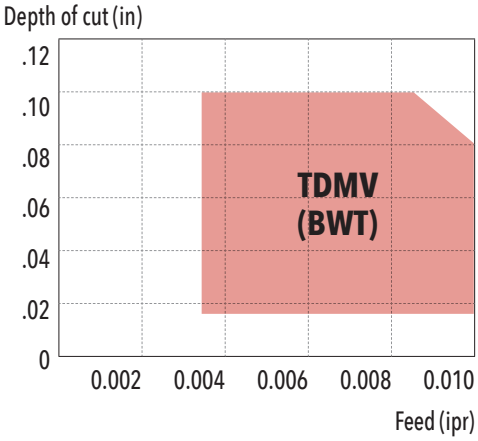


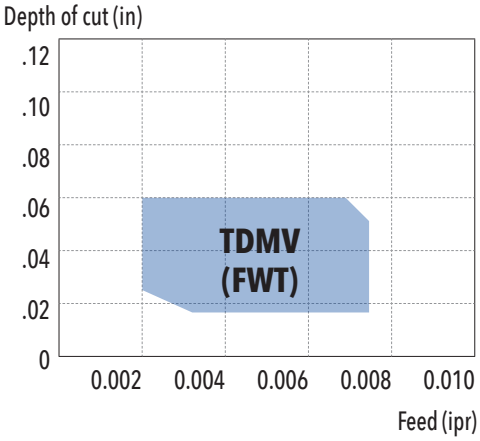




TDMV 2.8E-0.4-R/L



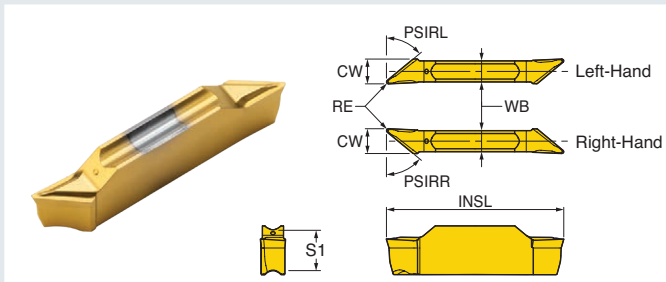




Backward/ Forward Turning | Profiling | Undercutting | Parting

Series TDMV

DOUBLE-ENDED INSERTS FOR TURNING AND GROOVING WITH V-TYPE SHAPE



Size	Dimensions (inch)					
	CW Cutting Width	RE Corner Radius	PSIRR/L Cutting Edge Angle Major	WB Body Width	INSL Insert Length	S1 Thick. (Overall)
2.8E-0.2	.110	.008	50°	.094	.790	.185
2.8E-0.4	.110	.016	50°	.094	.790	.185

Part Number	SSC Insert Seat Size	BWT(1)				FWT(2)				Grade
		ap (inch)		fn (ipr)		ap (inch)		fn (ipr)		TT9080
		Min.	Max.	Feed Min.	Feed Max.	Min.	Max.	Feed Min.	Feed Max.	
INCH										
TDMV 2.8E-0.2-R/L	3	0.008	0.100	0.002	0.007	0.012	0.060	0.001	0.006	•
TDMV 2.8E-0.4-R/L	3	0.016	0.100	0.003	0.010	0.016	0.060	0.002	0.007	•

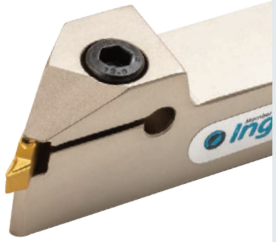
• = Standard Items

(1) BWT = backward turning
(2) FWT = forward turning

Recommended Holders

TGFR/L

TGEUR/L



TGFPR/L

- If using with standard TTER/L type holders, the bottom support blade must be modified to account for lead angle on insert.
- For complete list of recommended holders, please visit the eCatalog at www.ingersoll-imc.com.

Operating Guidelines

ISO	Material		Condition	Tensile strength (N/mm2)	HB Hardness	Material No.	VC Cutting Speed (SFM)
							TT9080
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	330-655
		>=0.25%C	Annealed	650	190	2	330-590
		<0.55%C	Quenched and tempered	850	250	3	260-525
		>=0.55%C	Annealed	750	220	4	260-525
			Quenched and tempered	1000	300	5	230-425
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6	330-525
			Quenched and tempered	930	275	7	260-525
				1000	300	8	260-490
				1200	350	9	260-425
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	295-425
			Quenched and tempered	1100	325	11	165-260
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	260-560
			Martensitic	820	240	13	260-490
			Austenitic	600	180	14	260-560
K	Gray cast iron (GG)		Ferritic		160	15	330-755
			Pearlitic		250	16	295-590
	Cast iron nodular (GGG)		Ferritic		180	17	490-820
			Pearlitic		260	18	330-755
	Malleable cast iron		Ferritic		130	19	295-590
			Pearlitic		230	20	295-590
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	
			Electrolitic copper		100	28	
	Non-metallic		Duroplastics, fiber plastics			29	
			Hard rubber			30	
S	High temp. alloys	Fe based	Annealed		200	31	100-165
			Cured		280	32	65-130
		Ni or Co based	Annealed		250	33	65-100
			Cured		350	34	50-65
			Cast		320	35	50-65
	Titanium, Ti alloys			Rm 400		36	425-560
			Alpha+beta alloys cured	Rm 1050		37	130-230
H	Hardened steel		Hardened		55HRC	38	
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.