NPA

EXPANSION

New Product Announcement

Member IMC Group Ingersoll Cutting Tools

PARTING & GROOVING

Insert Widths

0.063" (1.6 mm)
0.079" (2 mm)
0.118" (3 mm)

Chip Breakers

SFC - Frontal land geometry suitable for higher feed rates

SFJ - Sharp cutting edge for gummy materials

Max. Cutting Dia.

Up to 4.72" (1.20 mm)

Holders

Inch: 0.750", 1.00", 1.25"
Metric: 20 mm, 25 mm, 32 mm

Grades

TT9080 – PVD coated for general purpose in variety of materials

TT8020 – PVD coated with very tough substrate for difficult applications

K10 – uncoated for aluminum alloys and non-ferrous materials

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See it in action! »

WINCUT™

Featuring CUTSFEED™ Inserts

Single-Ended Rigid Inserts and Holders for Parting and Deep Grooving with Unique Adapters

» Stable insert clamping with 3-point contact area
» Very rigid triangular blades and dedicated holders with thru coolant
» Improved productivity due to hi-feed machining capability
» Straighter cuts, better surface finish, longer tool life

WINSFEED™ ADVANCED MACHINING

ingersoll-imc.com

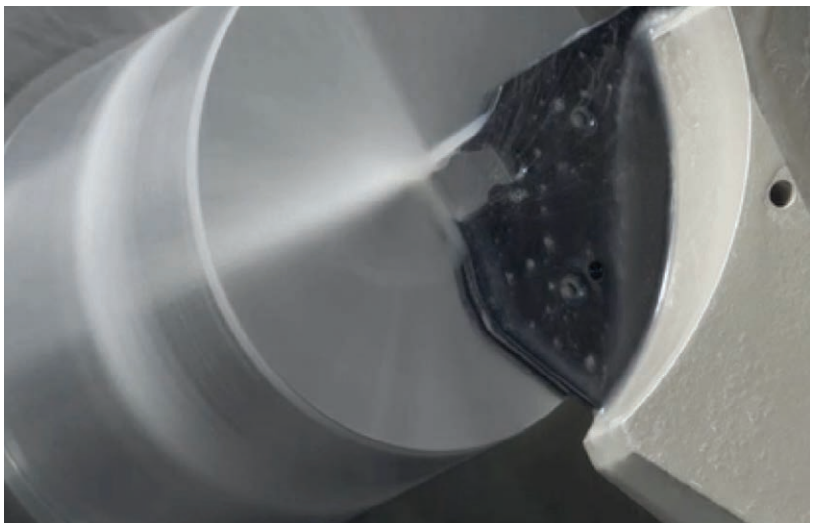
Ingersoll has developed a unique triangular blade and block holding system for parting and deep grooving using internal high-pressure coolant

The new line features blades with three insert pockets and dedicated blocks that enable very stable machining in parting and deep grooving applications. **WinCut** ensures an excellent surface finish with minimal vibration, even in hi feed or interrupted cutting conditions.
Reinforced blocks, designed to support the special triangular blades, firmly seat the blade on two sides (the drophead and the turret). The blades are available with internal coolant-thru channels directed to the insert's cutting edge, significantly increasing productivity and tool life.

WinCut blades accept **CutSFeed** inserts for maximum stability, or **T-Clamp Ultra+** inserts for users already familiar with that product line.

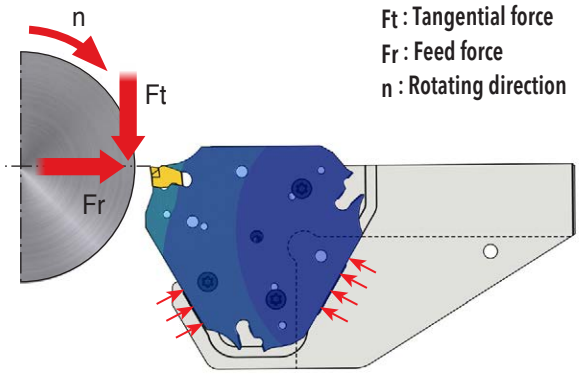
Features & Benefits

- Triangular blade with 3 insert pockets
- Capable of parting off work piece up to Ø120 mm (4.72") using 2 mm or 3 mm wide inserts
- Direct lubrication to the cutting zone from the blade's top and bottom coolant channels for excellent chip evacuation and long tool life
- Stable clamping provides excellent surface finish and straightness
- Maximum productivity in high-speed, high feed machining conditions
- User-friendly insert clamping system
- 3 times more rigid compared to conventional blades
- WinCut triangle blades are available for either CutSFeed (first choice) or T-Clamp Ultra+ inserts
- Compatible with a wide variety of machines including multitasking and general CNC machines
- Superior rigidity compared to conventional block and blade system

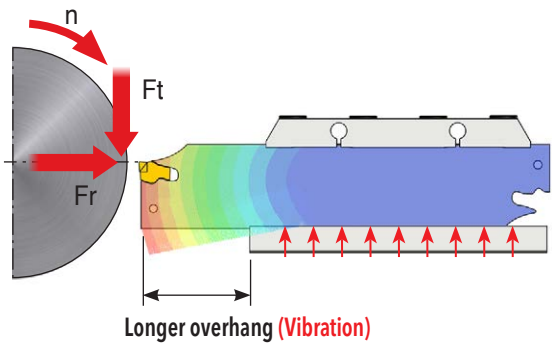


Features

- Rigidity: Triangular blade vs Conventional blade

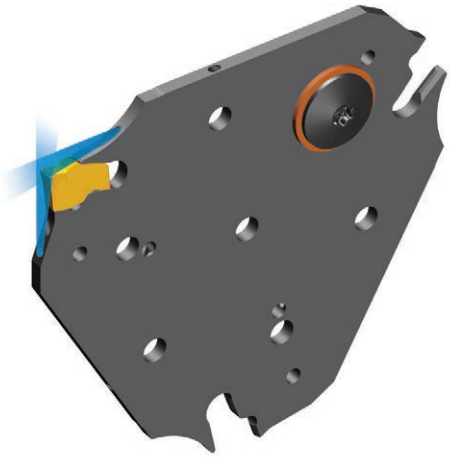


Triangular blade with enhanced rigidity
and stable support structure
(No vibration)

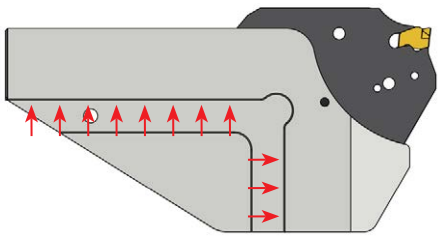


Conventional blade

- Directed coolant supply to the cutting zone

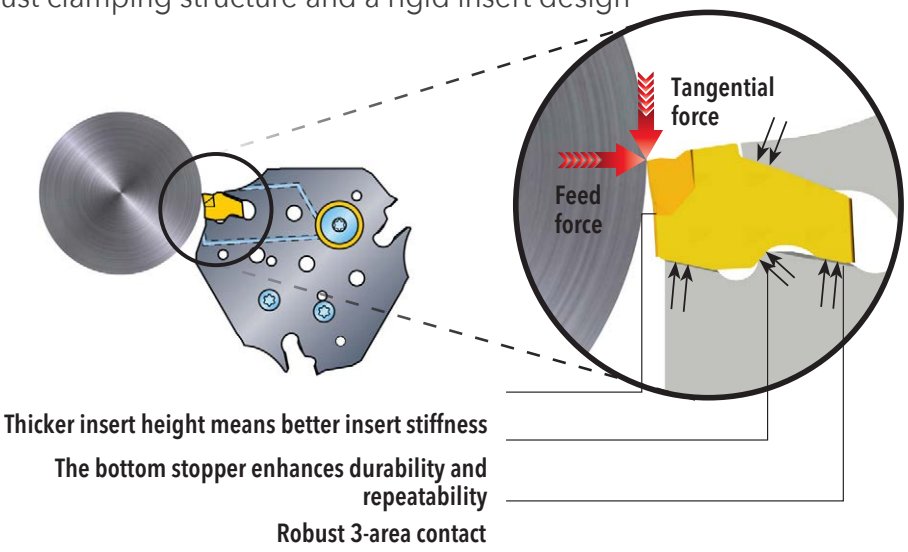


- Blocks with stable tightening and rigid support structures

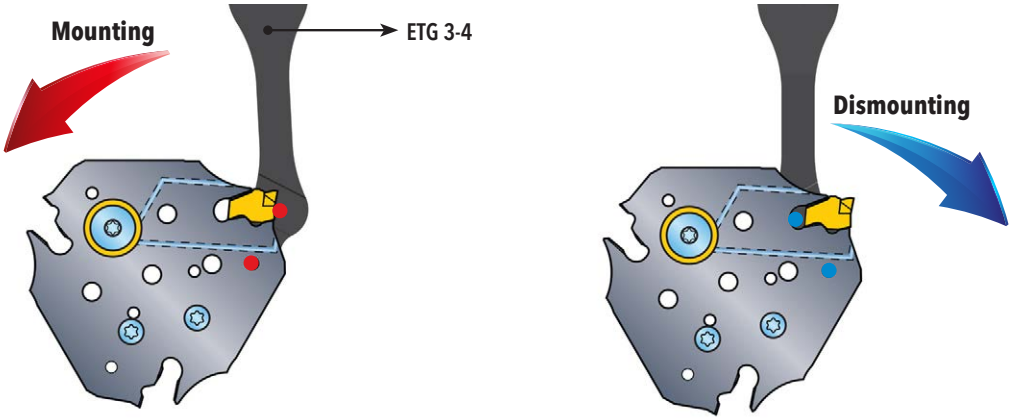


Features

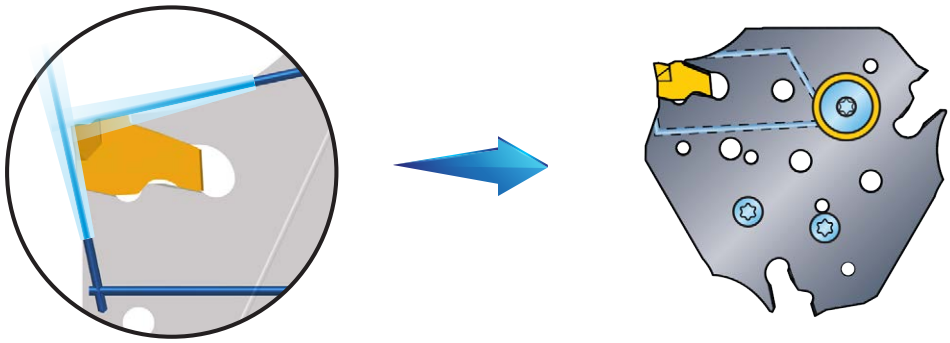
- Robust clamping structure and a rigid insert design



- Convenient insert clamping method



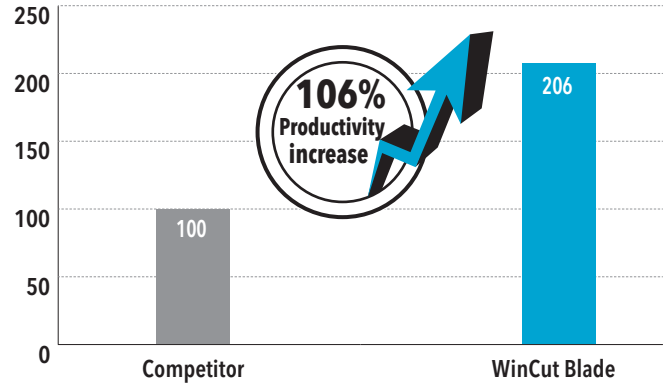
- Upper and lower dual high pressure coolant channels



CASE STUDY 1 - CONVENTIONAL BLADE VS. WINCUT TRIANGULAR BLADE

		Competitor	Ingersoll
Material		AISI 316L	
Operation		Parting	
Insert		Single-ended insert (Width 3mm)	SFC 3 TT9080 (Width 3mm)
Holder		Parting Blade and blocks	SFTB D82-3 + THTBR 20-D82-TB
Cutting speed	V (sfm)	295	395
Feed rate	f (ipr)	.004	.007
Depth of cut	ap (inch)	1.00"	1.00"
Tool life (pcs/corner)		120	120

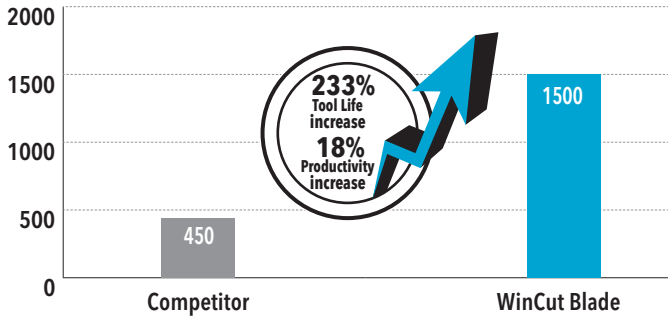
Productivity



CASE STUDY 2 - CONVENTIONAL BLADE VS. WINCUT TRIANGULAR BLADE

		Competitor	Ingersoll
Material		DIN 1.4571 (Stainless Steel)	
Operation		Parting	
Insert		Double-ended insert (Width 2mm)	SFC 2 TT9080 (Width 2mm)
Holder		Normal Parting Blade	SFTB D82-2-TB + THTBR 25-D82-TB
Cutting speed	V (sfm)	360	425
Feed rate	f (ipr)	.005	.005
Depth of cut	ap (inch)	.512"	.512"
Coolant		External Coolant	COOLBURST™ Internal high-pressure coolant
Tool life (pcs/corner)		450	1500

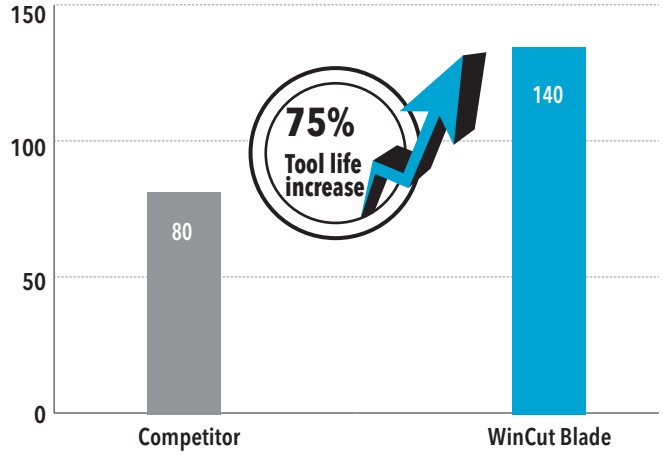
Tool life (pcs/corner)



CASE STUDY 3 - CONVENTIONAL BLADE VS. WINCUT TRIANGULAR BLADE

		Competitor	Ingersoll
Material		AISI 304	
Operation		Parting	
Insert		Single-ended insert (Width 3mm)	SFC 3 TT9080 (Width 3mm)
Holder		Blade	SFTB D52-3
Cutting speed	V (sfm)	490	490
Feed rate	f (ipr)	.006	.006
Depth of cut	ap (inch)	.98"	.98"
Coolant		Wet	Wet
Tool life (pcs/corner)		80	140

Tool life (pcs/corner)



INSERT CHIP CONTROL BY FEED RATE

		Ingersoll
Material		AISI 1045
Operation		Grooving
Insert		SFC 1.6 TT9080 (Width 1.6mm)
Cutting speed	V (sfm)	460
Feed rate	f (ipr)	.002", .003", .004", .005", .006", .008"
Depth of cut	ap (inch)	.400"
Coolant		wet

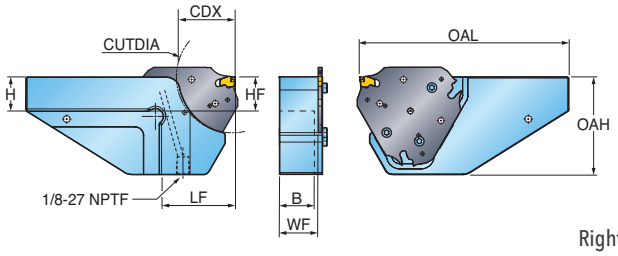
Feed f (ipr)			
			
	.002	.003	.004
			
	.005	.006	.008

- **Excellent chip control in high feed rate conditions**

Parting Grooving Coolant

Series THTBR/L-TB

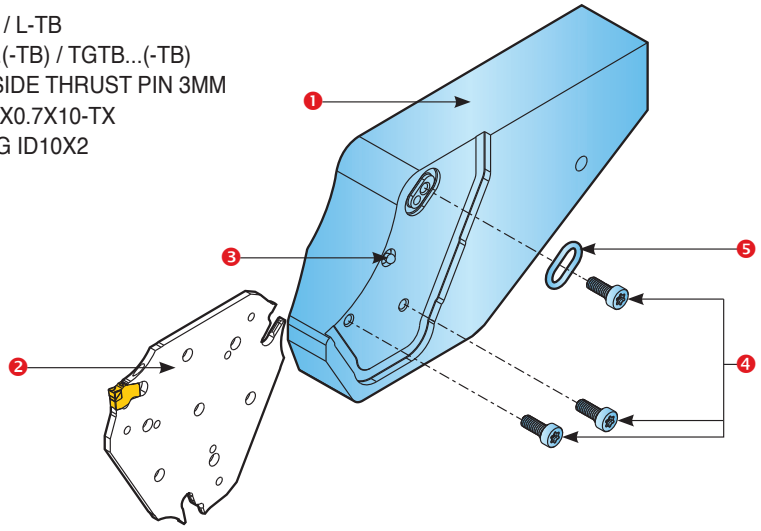
HOLDERS FOR TRIANGULAR BLADE WITH HIGH-PRESSURE COOLANT



Right hand shown

Part Number	Dimension (inch)								Blade
	H Shank Height	HF Functional Height	B Shank Width	OAL Overall Length	OAH Overall Height	WF Functional Width	LF Functional Length	CUTDIA Cutting Diameter	
INCH									
THTBR/L 19-D52-TB	.750	.750	.689	5.0	2.05	.925	1.57	2.05	SFTB, TGTB
THTBR/L 25.4-D52-TB	1.00	1.00	.886	5.4	2.05	1.122	1.57	2.05	
THTBR/L 19-D82-TB	.750	.750	.689	5.5	2.84	.925	2.03	3.23	
THTBR/L 25.4-D82-TB	1.00	1.00	.886	6.0	2.84	1.122	2.03	3.23	
THTBR/L 25.4-D120-TB	1.00	1.00	.886	6.5	3.74	1.122	2.64	4.72	SFTB
THTBR/L 31.8-D120-TB	1.25	1.25	1.142	6.5	3.74	1.378	2.64	4.72	

1. Block: THTBR / L-TB
2. Blade: SFTB...(-TB) / TGTB...(-TB)
3. Locating pin: SIDE THRUST PIN 3MM
4. Screw: SH M4X0.7X10-TX
5. O-ring: O-RING ID10X2



Hardware

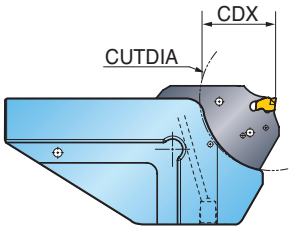
	Locating Pin	Screw	O-Ring	Torx Driver
THTBR/L-TB	Side Thrust Pin 3mm	SH M4X0.7X10-TX	O-Ring ID10X2	T 20

TABLE TO DETERMINE DEPTH OF CUT FOR GROOVING AS FUNCTION OF WORKPIECE DIAMETER (CUTDIA)

CDX	CUTDIA (Max)		
Cutting Depth Max.	SFTB D52	SFTB D83	SFTB D120
0.197	9.45	N.L.	N.L.
0.236	6.46	N.L.	N.L.
0.276	5.39	145.12	305.20
0.315	4.65	44.33	101.61
0.354	4.13	28.90	60.94
0.394	3.70	20.63	43.50
0.433	3.39	16.06	33.86
0.472	3.15	13.19	27.72
0.512	2.91	11.18	23.50
0.551	2.76	9.72	20.39
0.591	2.60	8.62	18.03
0.630	2.52	7.76	16.18
0.669	2.40	7.09	14.69
0.709	2.32	6.10	13.46
0.748	2.24	6.06	12.44
0.787	2.20	5.67	11.57
0.827	2.17	5.31	10.87
0.866	2.13	5.04	10.20
0.906	2.09	4.80	9.65
0.945	2.05	4.57	9.17
0.984	2.05	4.49	8.74
1.024	2.05	4.25	8.35

CDX	CUTDIA (Max)	
Cutting Depth Max.	SFTB D83	SFTB D120
1.063	4.09	7.99
1.102	3.98	7.68
1.142	3.86	7.40
1.181	3.78	7.17
1.220	3.66	6.93
1.260	3.58	6.73
1.299	3.54	6.54
1.339	3.46	6.38
1.378	3.43	6.22
1.417	3.39	6.06
1.457	3.35	5.94
1.496	3.31	5.83
1.535	3.27	5.71
1.575	3.23	5.63
1.614	3.23	5.51

CDX	CUTDIA (Max)
Cutting Depth Max.	SFTB D120
1.654	5.35
1.693	5.28
1.732	5.24
1.772	5.16
1.811	5.12
1.850	5.04
1.890	5.00
1.929	4.96
2.008	4.92
2.047	4.88
2.087	4.84
2.165	4.80
2.244	4.76
2.362	4.72

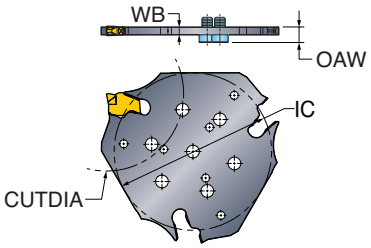


N.L. = No Limit

Parting Grooving

Series SFTB

TRIANGULAR BLADES FOR CUTSFEED INSERT



Part Number	Insert Seat Size	Dimension (inch)				Insert
		IC Diameter	WB Body Width	CUTDIA Cutting Diameter	OAW Overall Width	
INCH						
SFTB D52-2	2	2.094	.071	2.05	.193	SFC, SFJ
SFTB D52-3	3	2.094	.098	2.05	.220	
SFTB D82-2	2	2.531	.071	3.23	.193	
SFTB D82-3	3	2.531	.098	3.23	.220	
SFTB D120-2	2	3.364	.071	4.72	.193	
SFTB D120-3	3	3.364	.098	4.72	.220	

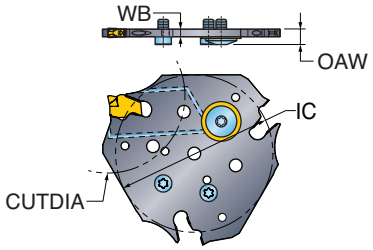
Hardware

	 Extractor (sold separately)
SFTB	ETG 3-4

Parting Grooving Coolant

Series SFTB-TB

TRIANGULAR BLADES FOR CUTSFEED INSERT WITH HIGH-PRESSURE COOLANT



Part Number	Insert Seat Size	Dimension (inch)				Insert
		IC Diameter	WB Body Width	CUTDIA Cutting Diameter	OAW Overall Width	
INCH						
SFTB D52-2-TB	2	2.094	.071	2.05	.193	SFC, SFJ
SFTB D52-3-TB	3	2.094	.098	2.05	.220	
SFTB D82-2-TB	2	2.531	.071	3.23	.193	
SFTB D82-3-TB	3	2.531	.098	3.23	.220	
SFTB D120-2-TB	2	3.364	.071	4.72	.193	
SFTB D120-3-TB	3	3.364	.098	4.72	.220	

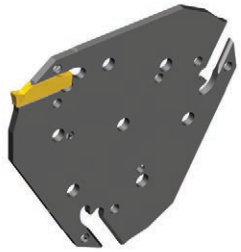
Hardware

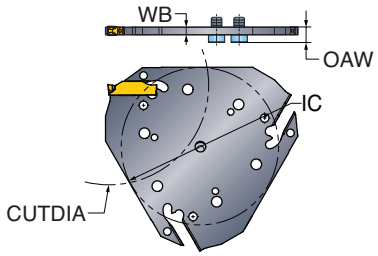
	 Extractor (sold separately)
SFTB	ETG 3-4

Parting Grooving

Series TGTB

TRIANGULAR BLADES FOR T-CLAMP INSERT





Part Number	Insert Seat Size	Dimension (inch)				Insert
		IC Diameter	WB Body Width	CUTDIA Cutting Diameter	OAW Overall Width	
INCH						
TGTB D52-2	2	2.094	.071	2.05	.193	TDC/J/T* TDXU/XT TSC/J
TGTB D52-3	3	2.094	.098	2.05	.220	
TGTB D82-2	2	2.531	.071	3.23	.193	
TGTB D82-3	3	2.531	.098	3.23	.220	

Hardware

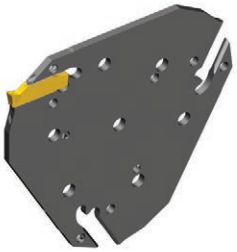
Part Number	 Extractor
TGTB	EDG-33B

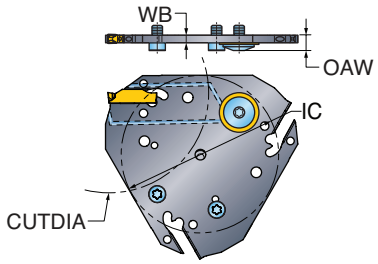
**Extractor sold separately - Refer to Ingersoll website for all T-ClampUltra+ insert options.*

Parting Grooving Coolant

Series TGTB-TB

TRIANGULAR BLADES FOR T-CLAMP INSERT WITH HIGH-PRESSURE COOLANT





Part Number	Insert Seat Size	Dimension (inch)				Insert
		IC Diameter	WB Body Width	CUTDIA Cutting Diameter	OAW Overall Width	
INCH						
TGTB D52-2-TB	2	2.094	.071	2.05	.193	TDC/J/T* TDXU/XT TSC/J
TGTB D52-3-TB	3	2.094	.098	2.05	.220	
TGTB D82-2-TB	2	2.531	.071	3.23	.193	
TGTB D82-3-TB	3	2.531	.098	3.23	.220	

Hardware

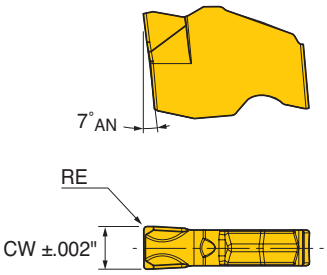
Part Number	 Extractor
TGTB	EDG-33B

**Extractor sold separately - Refer to Ingersoll website for all T-ClampUltra+ insert options.*

Parting Grooving

Series SFC

SINGLE-ENDED CUTSFEED INSERTS WITH C-TYPE CHIP BREAKER



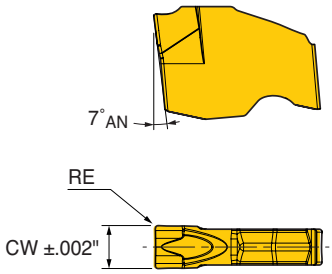
Part Number	Insert Seat Size	Dimension (inch)			Grade		
		CW Cutting Width	RE Corner Radius	Feed (ipr)	TT9080	TT8020	K10
INCH							
SFC 1.6	1	.063" (1.6 mm)	.008" (.2 mm)	.002-.006	•	•	
SFC 2	2	.079" (2 mm)	.008" (.2 mm)	.003-.008	•	•	•
SFC 3	3	.118" (3 mm)	.008" (.2 mm)	.004-.010	•	•	•

• = Standard Item

Parting Grooving

Series SFJ

SINGLE-ENDED CUTSFEED INSERTS WITH J-TYPE CHIP BREAKER



Part Number	Insert Seat Size	Dimension (inch)			Grade		
		CW Cutting Width	RE Corner Radius	Feed (ipr)	TT9080	TT8020	K10
INCH							
SFJ 2	2	.079" (2mm)	.008" (.2mm)	.002-.006	•	•	
SFJ 3	3	.118" (3mm)	.008" (.2mm)	.003-.008	•	•	•

• = Standard Item

COOLBURST CONNECTORS

Fig.1 - STRAIGHT MALE CONNECTORS

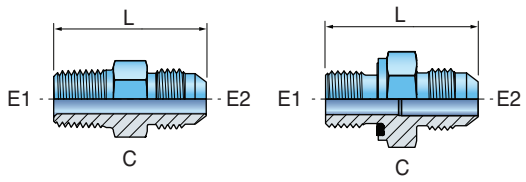
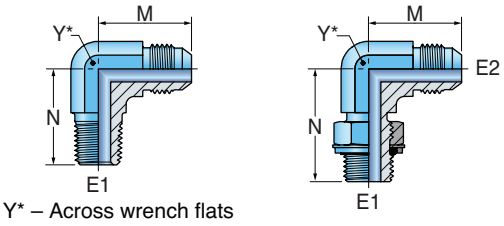


Fig. 1A Fig. 1B

Fig.2 - ELBOW MALE CONNECTORS



Y* – Across wrench flats

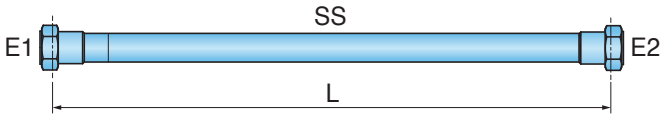
Fig. 2A Fig. 2B

Figure	Part Number	End Size		C (hex)	L	Max Pressure (psi)
		E1	E2			
1A	TB-4-FTX-S	1/8-27 NPTF	1/4 (37° Flare)	1/2"	1.22"	6000
1B	TB-4F42EDMX-S	1/8-28 BSPP	1/4 (37° Flare)	14mm	30.2mm	7200

Figure	Part Number	End Size		Y	M	N	Max Pressure (psi)
		E1	E2				
2A	TB-4-CTX-S	1/8-27 NPTF	1/4 (37° Flare)	7/16"	0.89"	0.78"	6000
2B	TB-4C4OMX-S	1/8-28 BSPP	1/4 (37° Flare)	11mm	22.6mm	26.5mm	3600

** All connectors ordered separately*

COOLBURST FLEXIBLE HIGH-PRESSURE HOSES



Part Number	Dimension (inch)			Max Pressure (psi)
	L	E1	E2	
TB-HOSE-7/16-7/16-8.0SS	8.0"	1/4 (37° Flare)	1/4 (37° Flare)	3000
TB-HOSE-7/16-7/16-10.0SS	10.0"	1/4 (37° Flare)	1/4 (37° Flare)	3000

** All hoses ordered separately*