

PARTING & GROOVING

Number of Cutting Edges

2

Insert Widths

.079" (2 mm) **NEW**

.118" (3 mm)

.157" (4 mm)

60° Partial Profile Threading

Cutting Depths

Grooving: Up to .236"
(6 mm)

Turning: .016~.095"
(0.4~2.4 mm)

Feed Rates

Grooving: .001~.010" ipr
(0.03~0.25 mm/rev)

Turning: .005~.010" ipr
(0.12~0.24 mm/rev)

Grades

TT9080 - General Purpose

Holders

Styles:

Parallel and Perpendicular

Shanks: 1.00", 20 mm, 25 mm

With or without CoolBurst
internal coolant

FACEFLEX™

Shallow Face and External Grooving Insert Line Expanded to 2 mm Width

- » Very rigid and robust clamping with anti-rotation pockets on insert bottom.
- » Thick insert design increases stiffness to protect against breakage.
- » Wide variety of applications including face grooving and turning, external turning and grooving, and threading.



See it in
action! »



WINSPEED™
ADVANCED MACHINING

ingersoll-imc.com

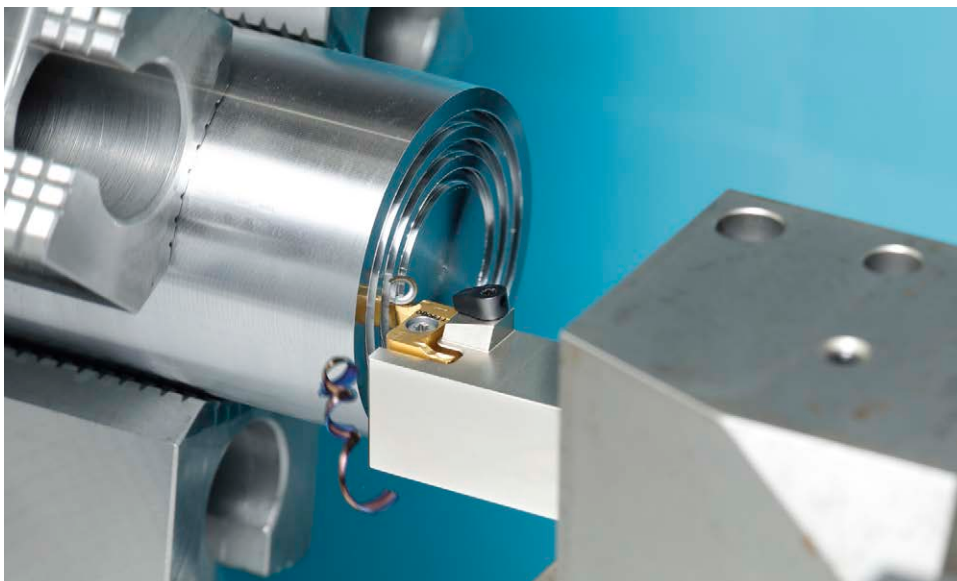


Face Grooving, External Grooving and External Threading System with Innovative 2-Edge Insert

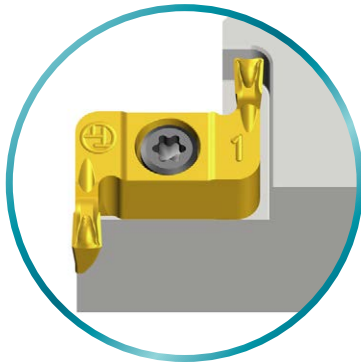
Ingersoll's new **FaceFlex** line

Features & Benefits

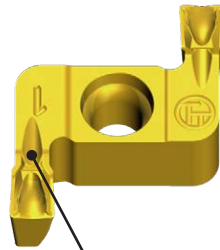
- Robust clamping includes anti-rotation triangular grooves on the bottom side of the insert along with a strong screw clamping design to eliminate movement in the pocket
- Thick insert design increases stiffness to protect against breakage. In the event of an edge failure, the insert can be rotated 180° without impacting seating stability
- Holder is designed without a need for an upper or lower clamping jaw
 - Excellent chip evacuation without interference of an upper jaw
 - Holder breakage is eliminated due to absence of a lower jaw
 - One holder used for multiple insert widths
- Wide variety of applications including face grooving and turning, external grooving and turning and external threading
- Insert widths 3mm & 4mm (.118" & .157") and 60° partial profile threading
- 1.00" parallel and perpendicular style holders, left and right-hand
- Optional  **COOLBURST**™ internal coolant supply for improved chip evacuation



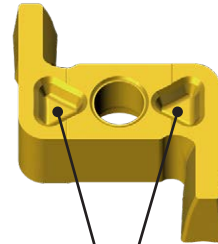
Insert Features



Screw clamping type.
Even with one damaged edge,
the other edge is usable.

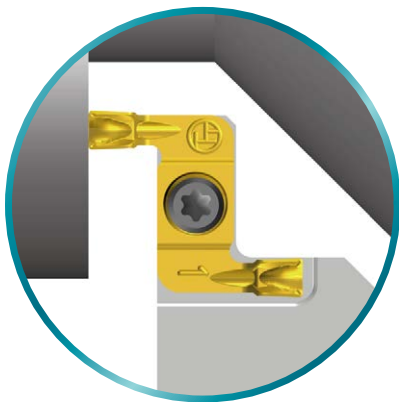


Coolant channel



Anti-rotation grooves

Various Applications



Threading

External grooving and
turning

Narrow space grooving

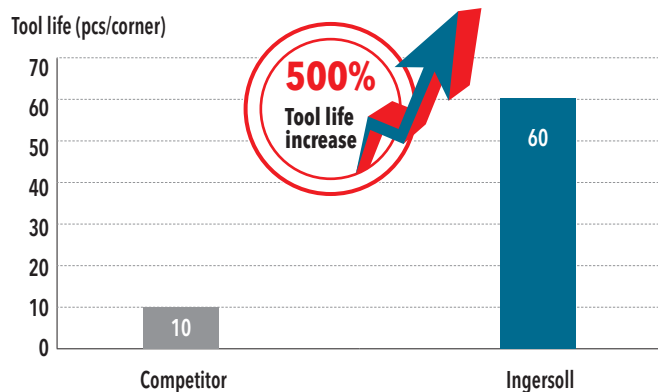
Face grooving and turning

Case Study 1

		Competitor	Ingersoll
Material		AISI 1045	
Operation		Face grooving	
Insert		Conventional grooving insert	TDFX 3E-0.3-D24R TT9080
Cutting speed	V (sfm)	650	650
Feed rate	f (ipr)	.004	.004
Depth of cut	ap (inch)	.157	.157
Coolant		wet	wet
Machined surface		 Noise & vibration	 Low noise & no vibration

Case Study 2

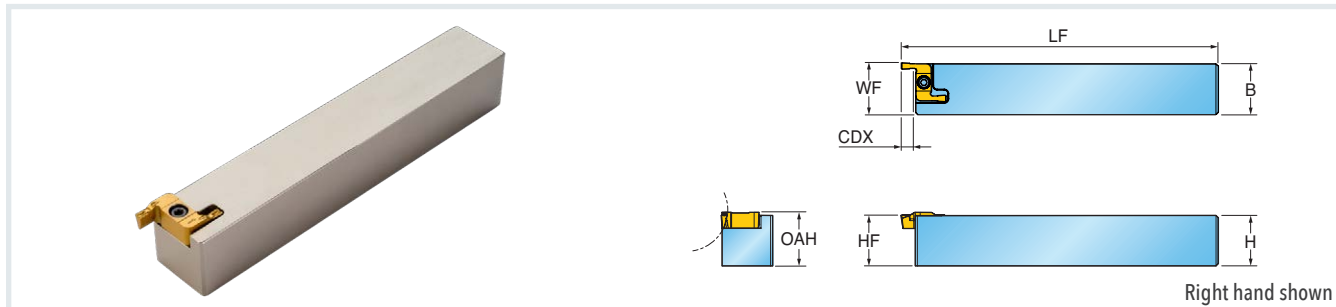
		Competitor	Ingersoll
Material		AISI 1045	
Operation		Face grooving	
Insert		Conventional grooving insert	TDFX 3E-0.3-D24R TT9080
Cutting speed	V (sfm)	650	650
Feed rate	f (ipr)	.004	.004
Depth of cut	ap (inch)	.157	.157
Coolant		wet	wet
Tool life (pass/corner)		10	60



Series TXFR/L



HOLDERS FOR SHALLOW FACE GROOVING, TURNING & EXTERNAL THREADING



Part Number	H Shank Height	HF Functional Height	B Shank Width	LF Functional Length	OAH Overall Height	WF Functional Width	CDX Cutting Depth Max.	Insert
INCH								
TXFR 25.4	1.000	1.000	1.000	6.28	1.04	1.020	.236	TD_X ...R
TXFL 25.4	1.000	1.000	1.000	6.28	1.04	1.020	.236	TD_X ...L

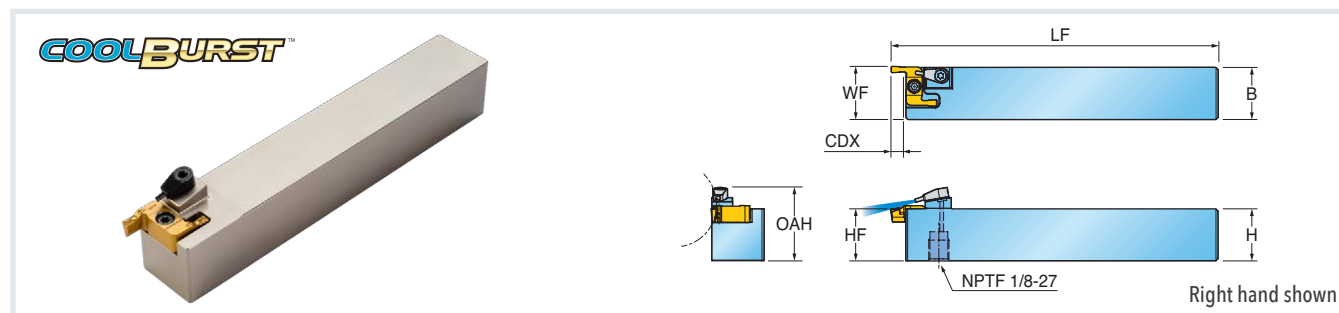
Hardware

Part Number	 Screw	 Torx Driver
TXFR 25.4	SM35-110-00	T 15
TXFL 25.4	TS 35110IL	T 15

Series TXFR/L-TB



HOLDERS FOR SHALLOW FACE GROOVING, TURNING & EXTERNAL THREADING WITH HIGH PRESSURE COOLANT



Part Number	H Shank Height	HF Functional Height	B Shank Width	LF Functional Length	OAH Overall Height	WF Functional Width	CDX Cutting Depth Max.	Insert
INCH								
TXFR 25.4-TB	1.000	1.000	1.000	6.28	1.04	1.020	.236	TD_X...R
TXFL 25.4-TB	1.000	1.000	1.000	6.28	1.04	1.020	.236	TD_X...L

Part Number	1000 psi flow rate (gpm)	1500 psi flow rate (gpm)	2000 psi flow rate (gpm)
TXFR 25.4-TB	19-26	26-34	30-38
TXFL 25.4-TB	19-26	26-34	30-38

Hardware

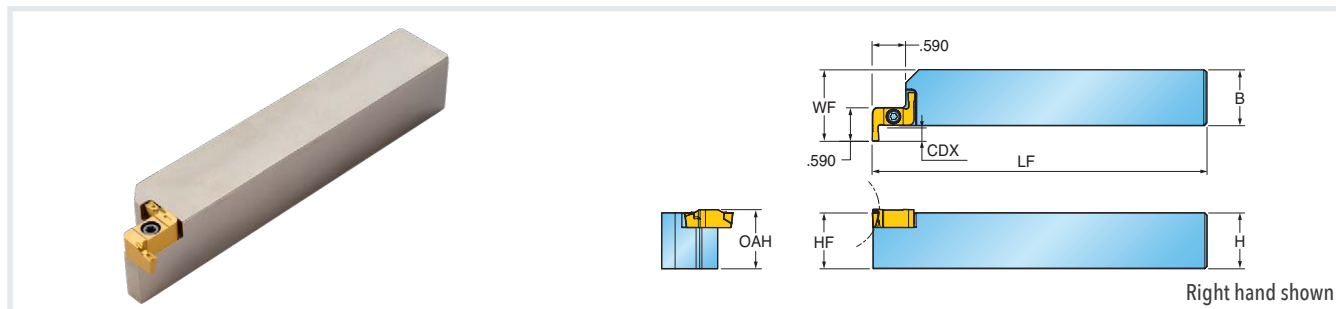
Part Number	 Screw	 Torx Driver	 Cooling Unit
TXFR 25.4-TB	SM35-110-00	T 15	S-CU-TB
TXFL 25.4-TB	TS 35110IL	T 15	S-CU-TB

Face Groove Face Groove/
Turn



Series TXFPR/L

PERPENDICULAR HOLDERS FOR SHALLOW FACE GROOVING & TURNING



Part Number	H Shank Height	HF Functional Height	B Shank Width	LF Functional Length	OAH Overall Height	WF Functional Width	CDX Cutting Depth Max.	Insert
INCH								
TXFR 25.4	1.000	1.000	1.000	6.0	1.04	1.275	.236	TDFX ...R
TXFL 25.4	1.000	1.000	1.000	6.0	1.04	1.275	.236	TDFX ...L

Hardware

Part Number	 Screw	 Torx Driver
TXFR 25.4	SM35-110-00	T 15
TXFL 25.4	TS 35110IL	T 15

Series TXFPR/L-TB

Face Groove

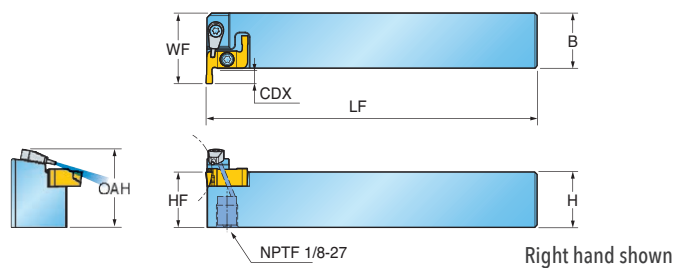
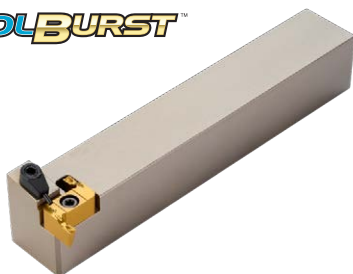
Face Groove/
Turn

Coolant



HOLDERS FOR SHALLOW FACE GROOVING, TURNING & EXTERNAL THREADING WITH HIGH PRESSURE COOLANT

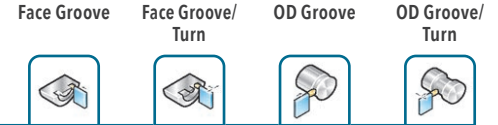
COOLBURST™



Part Number	H Shank Height	HF Functional Height	B Shank Width	LF Functional Length	OAH Overall Height	WF Functional Width	CDX Cutting Depth Max.	Insert
INCH								
TXFPR 25.4-TB	1.000	1.000	1.000	6.0	1.40	1.275	.236	TDFX ...R
TXFPL 25.4-TB	1.000	1.000	1.000	6.0	1.40	1.275	.236	TDFX ...L

Hardware

Part Number	 Screw	 Torx Driver	 Cooling Unit
TXFPR 25.4-TB	SM35-110-00	T 15	S-CU-TB
TXFPL 25.4-TB	TS 35110IL	T 15	S-CU-TB



Series TDFX

DOUBLE-ENDED INSERTS FOR EXTERNAL AND FACE GROOVING AND TURNING

Size	Dimensions (inch)				
	CW Cutting Width	RE Corner Radius	CDX Cutting Dep. Max.	DAXN Axial Groove Outside Dia. Min.	DAXN Axial Groove Outside Dia. Max.
2	.079" (2 mm)	.012	.236	.984	No Limit
3	.118" (3 mm)	.012	.236	.945	No Limit
4	.157" (4 mm)	.016	.236	1.260	No Limit

Right hand shown

Part Number	Turning		Grooving	Coated
	ap (inch)	Feed (ipr)	Feed (ipr)	TT9080
INCH				
TDFX 2E-0.3-D25R/L NEW	.016-.047	.005-.007	.001-.008	•
TDFX 3E-0.3-D24R/L	.016-.071	.006-.008	.003-.008	•
TDFX 4E-0.4-D32R/L	.020-.095	.006-.010	.004-.010	•

• = Standard Items

OD Groove/
Thread

Series TDGX



DOUBLE-ENDED THREADING INSERTS WITH 60° PARTIAL PROFILE

Size	Dimensions				
	RE Corner Radius	TPN Thread Pitch Min. (mm)	TPX Thread Pitch Max. (mm)	TPIN Threads Per Inch Min.	TPIX Threads Per Inch Max.
4	.05 mm (.002")	.45	3.5	8	56

Right hand shown

Part Number	Coated
	TT9080
INCH	
TDGX 4MT-0.05-R/L	•

• = Standard Items