NPA

NEW

Member IMC Group Ingersoll Cutting Tools

New Product Announcement

MILLING - INDEXABLE

Cutter Series

2F5D / 2F6D
12F1D

Insert Series

TCHW11_W: Multi-Purpose
TCHW11_PW: Non-Ferrous
TCHW11_R-WCT: CBN Tipped
TCHW11_WCT - PCD Tipped

Diameter Range

30.00 - 125.00 mm

Depth of Cut Range

0.30 mm Max Depth of Cut

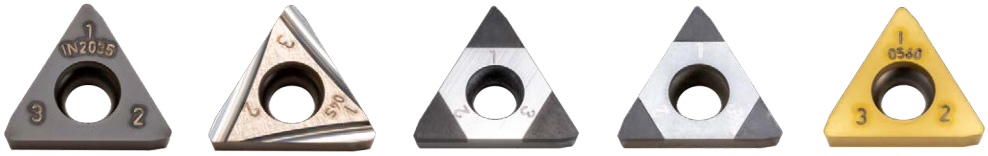
Corner Radii

0.2, 0.4, 0.8 mm R

Materials

- Steel
- Stainless Steel
- Cast Iron
- Non-Ferrous
- High-Temp Alloys
- Hardened Steel

MICROMILL™

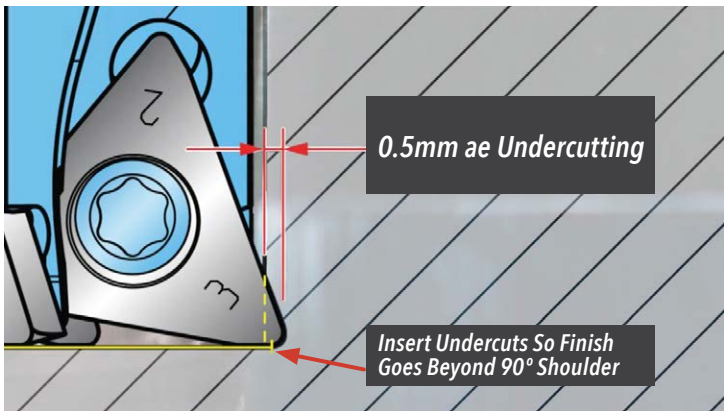


CARBIDE CBN PCD CERMET

Fixed Pocket Face Finishing Mills with Undercut capability; Produces "grind quality finish" beyond the 90° shoulder

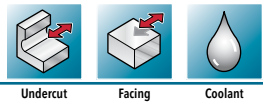
Features & Benefits:

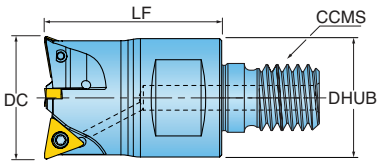
» Produces 10-32 Ra finishes
» Eliminates grind operations and minimizes polish times
» Fixed pocket design requires NO adjustment; minimizes set up time
» Diverse insert variety for utmost performance cutting all materials
» Cutters with Coolant Through the tool



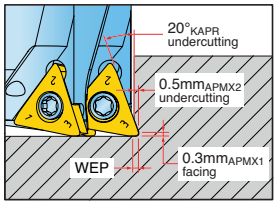
See the full line »

12F1D - Finish & Undercut End Mill



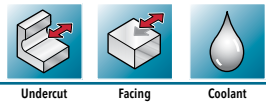


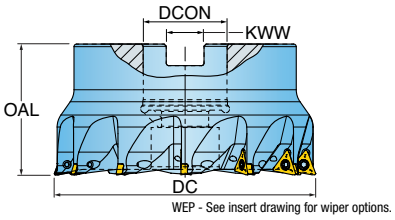
WEP - See insert drawing for wiper options.

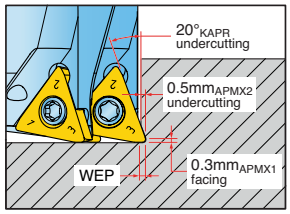


Part Number	DC Cutting Dia. (mm)	LF Finctional Length (mm)	ZEFF Effective Teeth	CCMS Connection Code Machine Side
12F1D030043X8R00	30.00 mm	43.0 mm	4	TopOn M16
12F1D035043X8R00	35.00 mm	43.0 mm	4	TopOn M16
12F1D040043X8R00	40.00 mm	43.0 mm	5	TopOn M16
12F1D042043X8R00	42.00 mm	43.0 mm	5	TopOn M16

2F5D / 2F6D - Finish & Undercut Face Mill



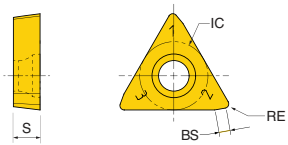




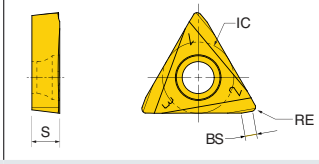
Part Number	DC Cutting Dia. (mm)	OAL Overall Length (mm)	ZEFF Effective Teeth	DCON Shank Dia. (mm)	KWW Keyway (mm)
2F5D050R00	50.00 mm	40.00 mm	7	22.000 mm	10.40 mm
2F6D050R00	50.00 mm	40.00 mm	5	22.000 mm	10.40 mm
2F5D063R00	63.00 mm	40.00 mm	9	22.000 mm	10.40 mm
2F6D063R00	63.00 mm	40.00 mm	6	22.000 mm	10.40 mm
2F5D080R00	80.00 mm	50.00 mm	10	27.000 mm	12.40 mm
2F6D080R00	80.00 mm	50.00 mm	7	27.000 mm	12.40 mm
2F5D100R00	100.00 mm	50.00 mm	12	32.000 mm	14.40 mm
2F6D100R00	100.00 mm	50.00 mm	8	32.000 mm	14.40 mm
2F5D125R00	125.00 mm	63.00 mm	14	40.000 mm	16.40 mm
2F6D125R00	125.00 mm	63.00 mm	10	40.000 mm	16.40 mm

Inserts

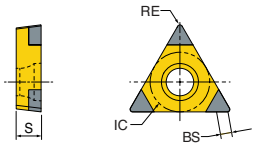
TCHW11-R-W



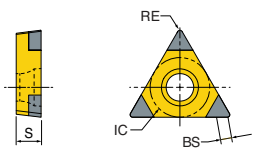
TCHH11-FR-PW



TCHW11_R-WCT



TCHW11_WCT



Part Number	Application	RE/BCH Corner Radius/ Chamfer	BS Wiper Length	IC Inscribed Circle Dia.	S Thickness	NOI Number of Indexes	IH Insert Hand	Grades						
								PCD	CBN	Cermet	Carbide			
								IN90D	IN80B	IN0560	IN04S	IN2504	IN2036	IN4004
TCHH110204FR-PW	Non-Ferrous	0.40	1.00	6.35	2.40	3	Right				•			
TCHW110202R-WCT	CBN Tipped	0.20	1.00	6.35	2.50	3	Right		•					
TCHW110204R-W	Multi-Purpose	0.40	1.00	6.35	2.50	3	Right			•		•	•	•
TCHW110204R-WCT	CBN Tipped	0.40	1.00	6.35	2.50	3	Right		•					
TCHW110204-WCT	PCD Tipped	0.40	1.00	6.35	2.50	3	Right	•						
TCHW110208R-WCT	CBN Tipped	0.80	1.00	6.35	2.50	3	Right		•					

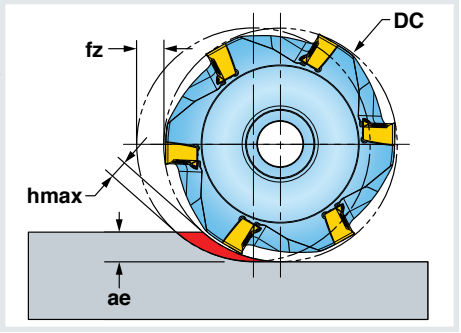
Hardware

					Optional			
Part Number	 Insert Screw	 Driver Handle	 Driver Bit	 Retention Bolt	 TopOn Wrench	 Torque Driver Handle	 Preset Torque Adapter	 Torque Driver Bit
2F5D050R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M10x25-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F6D050R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M10x25-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F5D063R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M10x25-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F6D063R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M10x25-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F5D080R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M12x35-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F6D080R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M12x35-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F5D100R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M16x30-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F6D100R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M16x30-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F5D125R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M20x40-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
2F6D125R00	SM25-064-00	DS-A00T	DS-T08W	ISO4762M20x40-12.9	-	DS-A00-.25-S	DS-T08B	DT-11-.25
12F1D030043X8R00	SM25-064-00	DS-A00T	DS-T08W	-	622 MM	DS-A00-.25-S	DS-T08B	DT-11-.25
12F1D035043X8R00	SM25-064-00	DS-A00T	DS-T08W	-	622 MM	DS-A00-.25-S	DS-T08B	DT-11-.25
12F1D040043X8R00	SM25-064-00	DS-A00T	DS-T08W	-	622 MM	DS-A00-.25-S	DS-T08B	DT-11-.25
12F1D042043X8R00	SM25-064-00	DS-A00T	DS-T08W	-	622 MM	DS-A00-.25-S	DS-T08B	DT-11-.25

11 mm • Operating Guidelines

CHIP THINNING

Ingersoll Cutting Tools' **Chip Thinning Calculator** is recommended to ensure hmax is greater than .002".



Materials				Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	Harder «----------» Tougher						Coolant
						PCD	CBN	Cermet	Carbide			
ISO	Mat'l Group #VDI 3323	Type	Examples			IN90D	IN80B	IN0560	IN04S	IN2504 IN4004	IN2036	
P	1–5	Non-alloy steel	1018, A36, 1045, A572, 1070	800-1650	.003 - .004			1				No
				650-800						1		
	6–9	Low-alloy steel	4140, 4340, P20, 8620, 300M	650-800				1				
				525-650						1		
	10, 11	High-alloy steel	H13, A2, D2, M2, T1	525-600				1				
				350-425						1		
M	12, 13	Stainless steel (ferritic and martensitic)	410, 416, 440	250-425	.003 - .006						1	Yes
	14	Stainless steel (austenitic)	303, 304, 316, 15-5, 17-4									May not be required at high speeds
K	15, 16	Gray cast iron	CLS. 20, 30, 45	600-800	.003 - .006					1		No
				1800-3000			1					
	17-18	Nodular cast iron	60-40-18, 100-70-03	450-700						1		
N	21–30	Aluminum	7075, 6061	1000-5000	.002 - .006	1			1			Yes
S	31–35	High-temp alloys	Inconel, Hastelloy, Monel	80-150	0.003						1	Yes
	36, 37	Titanium alloys	6Al-4V, 5Al-5Mo-5V-3Cr	100-200								
H	38	Hardened Steel <54 HRC	Hardox 400, 500, W1	200-350	0.003		1			2		No
	39	Hardened Steel <63 HRC	HSS, 90 MnV8	150-250								

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.