

MILLING - INDEXABLE

Cutter Series (Depth of Cut)

EN5J Face Mills (.315")

Insert Series

CGM324R045-M (13 mm)

Geometry

M: General Purpose

Diameter Range

2.000-6.000"

Lead Angle

45°

Corner Geometry

.060" Chamfer

Materials

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

MAXSPEED™

NEW MaxSpeed 45° Lead Angle Face Mill

- » Reinforced cutting edge boosts performance in all milling applications.
- » Positive rake face geometry and a "softened" workpiece entry allow for higher chip loads and feed rates.
- » Standard cutters are available for RH spindles.



See it in
action! »



SPEEDUP™
HIGH SPEED & FEED
EXPANSION

ingersoll-imc.com



Overview

Ingersoll's popular **MaxSFeed** series continues to grow and now features a new line of 45° lead angle milling cutters.

The new EN5J series has been developed with the dovetailed seating profile to ensure maximum performance.

A new insert has been added as well:

» **CGM324R045-M** for general purpose milling

FEATURES & BENEFITS:

- Dovetailed insert mounting increases edge-life and improves reliability through optimal insert clamping.
- 45° lead angle series utilizes a new 13 mm CGM insert.
- Suitable for a wide variety of materials including: steel, stainless steel, and irons.
- Cutter bodies are constructed with premium grade steel for maximum tool life.
- Cutting action feels smoother and more relaxed, and higher metal removal rates deliver increased productivity.

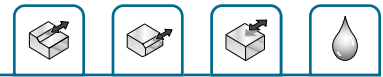


SCAN/CLICK/TAP to view the expanded **MaxSFeed** indexable milling product line →

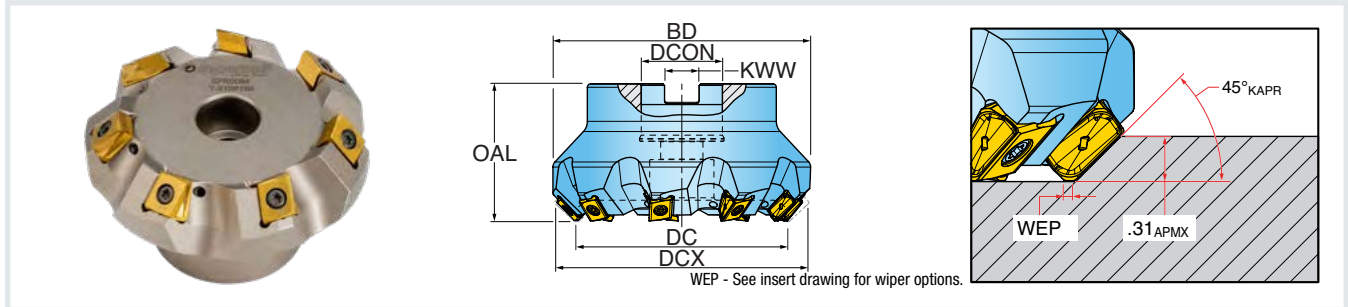


Series EN5J

Lead Angle Chamfer Face Coolant



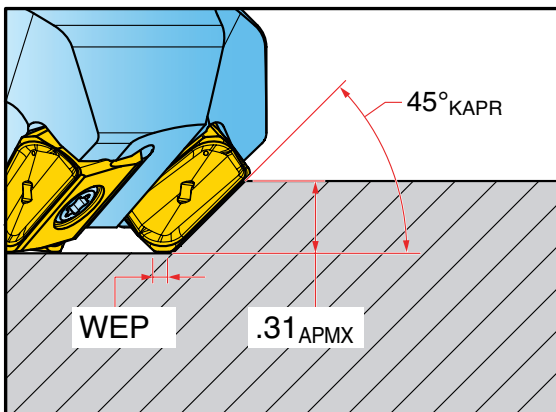
FACE MILL - 45° LEAD ANGLE



Part Number	DC Cutting Diameter	DCX Cutting Diameter Max.	OAL Overall Length	ZEFF Effective Teeth	BD Body Diameter	DCON Bore Diameter	KWW Keyway
INCH							
EN5J-02R01	2.000	2.642	2.000	5	2.775	1.000	0.375
EN5J-02R02	2.500	3.140	2.000	6	3.275	1.000	0.375
EN5J-03R01	3.000	3.639	2.375	7	3.775	1.000	0.375
EN5J-04R01	4.000	4.367	2.375	9	4.775	1.500	0.625
EN5J-05R01	5.000	5.636	2.375	11	5.775	1.500	0.625
EN5J-06R01	6.000	6.635	2.375	12	6.775	1.500	0.625

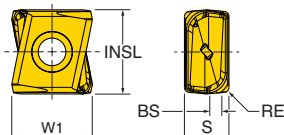
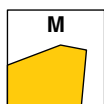
Insert screw tightening torque: 30-35 in lb

ENLARGED FROM ABOVE TO SHOW DETAILS:



Insert

CGM324R045-M



Part Number	Application	RE Corner Radius	BS Wiper Length	INSL Insert Length	W1 Insert Width	S Thickness	Grades				
							IN2505	IN2510	IN2515	IN2530	IN2540
CGM324R045-M	Standard	0.010	0.060	0.531	0.508	0.281	•	•	•	•	•

Hardware

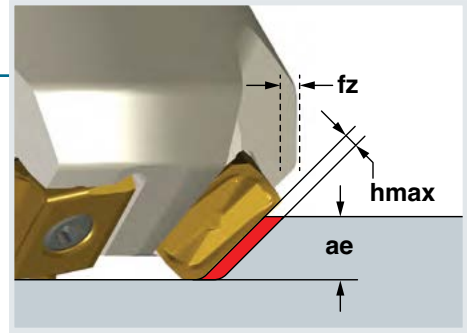
Part Number	Optional							
	Insert Screw*	Driver Handle	Driver Bit	Retention Bolt	Coolant Retention Bolt	Torque Driver Handle	Preset Torque Adapter	Torque Driver Bit
EN5J-02R01	SM40-123-H0	DS-A00T	DS-T15B	SD08-48	-	DS-A00-.25-T	DT-35-.25	DS-T15B
EN5J-02R02	SM40-123-H0	DS-A00T	DS-T15B	SD08-48	-	DS-A00-.25-T	DT-35-.25	DS-T15B
EN5J-03R01	SM40-123-H0	DS-A00T	DS-T15B	SD08-43	-	DS-A00-.25-T	DT-35-.25	DS-T15B
EN5J-04R01	SM40-123-H0	DS-A00T	DS-T15B	SD12-89	CZ-0097	DS-A00-.25-T	DT-35-.25	DS-T15B
EN5J-05R01	SM40-123-H0	DS-A00T	DS-T15B	SD12-89	CZ-0097	DS-A00-.25-T	DT-35-.25	DS-T15B
EN5J-06R01	SM40-123-H0	DS-A00T	DS-T15B	SD12-89	CZ-0097	DS-A00-.25-T	DT-35-.25	DS-T15B

*Insert screw tightening torque: 30-35 in lb

13 mm (45°) • Operating Guidelines

CHIP THINNING

Ingersoll Cutting Tools' **Chip Thinning Calculator** is recommended to ensure h_{max} is greater than .003". ▶



ISO	Materials			Vc Cutting Speed SFM	Hex Max. Chip Thickness (inch)	fz* Feed/Tooth (inch)	Harder «-----» Tougher					Coolant	Geometry 
	Mat'l Group #VDI 3323	Type	Examples				IN2510	IN2540	IN2515	IN2505	IN2530		
P	1-5	Non-alloy steel	1018, A36, 1045, A572, 1070	400-850	.005-.014	.007-.020	-	3	-	1	2	No	1
	6-9	Low-alloy steel	4140, 4340, P20, 8620, 300M	350-700	.005-.012	.007-.017	-	3	-	1	2	No	1
	10, 11	High-alloy steel	H13, A2, D2, M2, T1	300-600	.005-.012	.007-.017	-	3	-	1	2	No	1
M	12, 13	Stainless steel (ferritic and martensitic)	410, 416, 440	350-700	.005-.012	.007-.017	-	-	-	2	1	Yes	1
	14	Stainless steel (austenitic)	303, 304, 316, 15-5, 17-4	300-600	.005-.012	.007-.017	-	-	-	2	1	May not be required at high speeds	1
K	15, 16	Gray cast iron	CLS. 20, 30, 45	400-750	.005-.015	.007-.021	1	-	2	-	-	No	1
	17-18	Nodular cast iron	60-40-18, 100-70-03	300-650	.005-.015	.007-.021	-	2	1	-	-	No	1
N	21-30	Aluminum	7075, 6061	1000+	.004-.015	.0055-.021	1	-	2	-	-	Yes	1
S	31-35	High-temp alloys	Inconel, Hastelloy, Monel	75-150	.004-.008	.0055-.011	-	-	-	2	1	Yes	1
	36, 37	Titanium alloys	6Al-4V, 5Al-5Mo-5V-3Cr	75-200	.004-.008	.0055-.011	-	-	-	2	1	Yes	1
H	38, 39	Hardened steel >48	A2, O1, D2	150-400	.002-.004	.003-.0055	-	-	-	1	2	No	1

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.