

PERFORMANCE! PRODUCTIVITY! ECONOMY!

13MM IC INSERT FOR 2MM MAX. DEPTH
HIGH-FEED MILLING APPLICATIONS



Insert Series:

UNEU1307R-M
UNEU1307R-MM
UNEU1307R-MR

Face Mills:

DG5P (High Density)
DG6P (Low Density)

Face Mills:

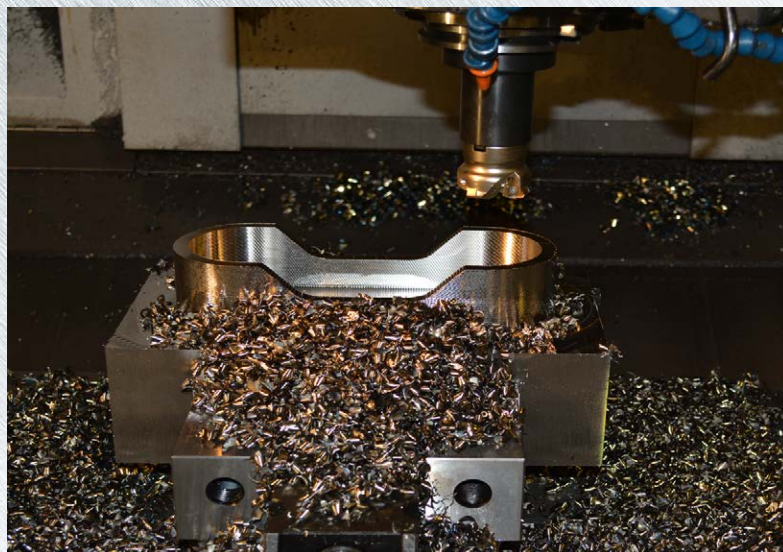
1DG1P

Grades:

IN2505
IN2504
IN2530
IN2035
IN7035
IN2510 NEW

Applications:

Die & Mold
Aerospace
General Purpose



Features & Benefits

- Improved high feed milling up to 2mm DOC (.078)
- Double sided insert technology, offering 6 cutting edges for great economy
- Unique insert seating design provides excellent stability in the cut
- Thicker insert and larger M5 insert screw offer increased strength
- High rake chip former for smooth, free cutting, shearing action during machining
- Premium insert grades
- Three cutting edge styles for application flexibility
- Coarse and fine pitch cutter for various material types
- Through coolant cutter bodies

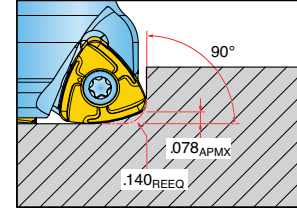
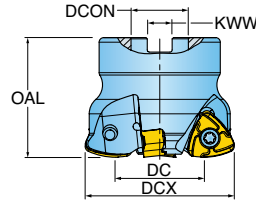
PRODUCT
ANNOUNCEMENT

UPDATE

2020

POWERFEED13+™ SERIES DG5P, DG6P

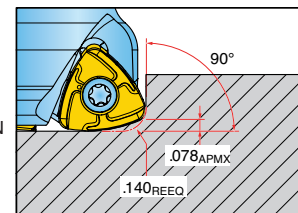
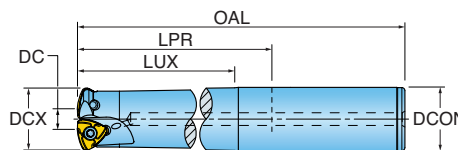
HIGH FEED FACE MILLS



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	OAL Overall Length	ZEFF Effective Teeth	DCON Bore Diameter	KWW Keyway	REEQ Program Radius Equivalent	CSP Coolant
DG6P-20R01	2	1.233	.078 (2 mm)	1.57	3	0.750	0.31	0.140	Yes
DG5P-20R01	2	1.233	.078 (2 mm)	1.57	4	0.750	0.31	0.140	Yes
DG6P-25R01	2.5	1.723	.078 (2 mm)	1.57	4	0.750	0.31	0.140	Yes
DG5P-25R01	2.5	1.723	.078 (2 mm)	1.57	5	0.750	0.31	0.140	Yes
DG6P-30R01	3	2.218	.078 (2 mm)	1.75	5	1.000	0.38	0.140	Yes
DG6P-30R02	3	2.218	.078 (2 mm)	2.00	5	1.250	0.50	0.140	Yes
DG6P-40R01	4	3.212	.078 (2 mm)	2.38	6	1.500	0.63	0.140	Yes
DG5P-40R01	4	3.212	.078 (2 mm)	2.38	7	1.500	0.63	0.140	Yes
DG6P-60R01	6	5.209	.078 (2 mm)	2.38	7	1.500	0.63	0.140	Yes

POWERFEED13+™ SERIES 1DG1P (CYLINDRICAL STYLE)

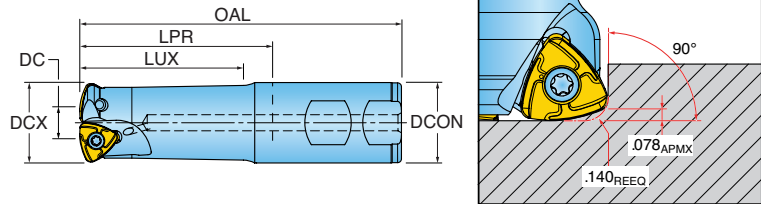
HIGH FEED END MILLS



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	OAL Overall Length	LPR Protruding Length	LUX Usuable Length Max.	ZEFF Effective Teeth	REEQ Program Radius Equivalent	DCON Shank Diameter	CSP Coolant
1DG1P-12047S9R01	1.25	0.497	.078 (2 mm)	8.00	4.75	4.72	2	0.140	1.250 Cylindrical	Yes
1DG1P-15073S5R01	1.5	0.755	.078 (2 mm)	10.00	7.34	5.73	3	0.140	1.500 Cylindrical	Yes

POWER FEED 13+™ SERIES 1DG1P (WELDON STYLE)

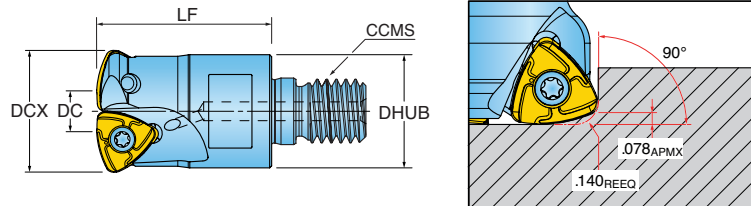
HIGH FEED END MILLS



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	LUX Usuable Length Max.	LPR Protruding Length	OAL Overall Length	ZEFF Effective Teeth	REEQ Program Radius Equivalent	DCON Shank Diameter	RMPX Ramp Angle Max.	CSP Coolant
1DG1P-1202781R01	1.250	0.497	2.54	2.75	5.00	2	0.140	1.250	0.7	Yes
1DG1P-1503386R01	1.500	0.755	3.25	3.34	6.00	3	0.140	1.500	1.5	Yes

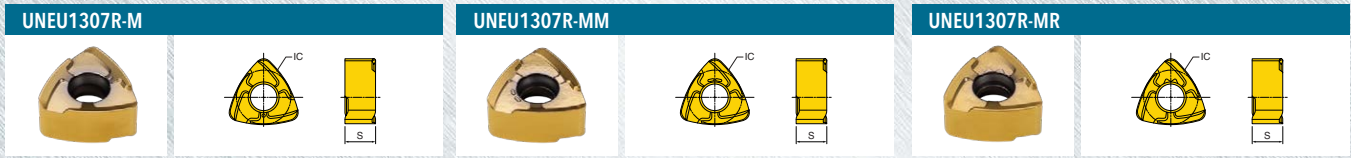
POWER FEED 13+™ SERIES 1DG1P (MODULAR STYLE)

HIGH FEED MODULAR END MILLS



Part Number	DCX Cutting Dia. Max.	DC Cutting Dia.	APMX Depth of Cut Max.	LF Functional Length	ZEFF Effective Teeth	REEQ Program Radius Equivalent	DHUB Hub Diameter	CCMS Connection Code	CSP Coolant
1DG1P-12017X8R01	1.250	0.497	.078 (2 mm)	1.75	2	0.140	1.14	M16	Yes
1DG1P-15017X8R01	1.500	0.755	.078 (2 mm)	1.75	3	0.140	1.14	M16	Yes

POWER FEED 13⁺ INSERTS



Part Number	Application	IC Inscribed Circle Dia.	S Thickness (To Cutting Edge)	APMX Depth of Cut Max.	IH Insert Hand	Grade	IN2505	IN2504	IN2510	IN2530	IN2035	IN7035
UNEU1307R-M	Multi-Purpose	0.484	0.275	.078 (2mm)	Right		•	•	•	•	•	•
UNEU1307R-MM	Multi-Purpose - Keen Edge	0.484	0.275	.078 (2mm)	Right					•	•	•
UNEU1307R-MR	Heavy Duty	0.484	0.275	.078 (2mm)	Right		•			•	•	•

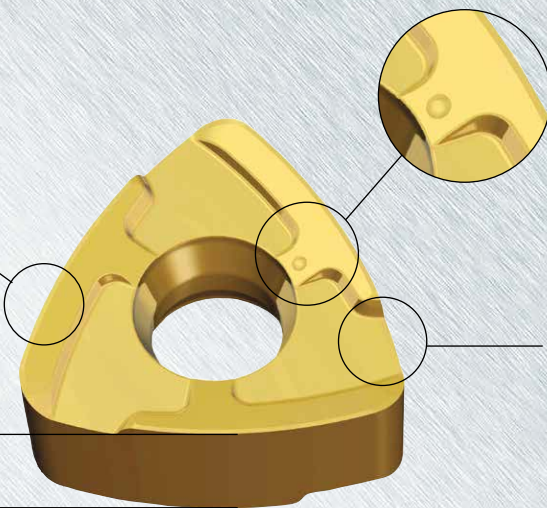
Detail	Insert Number	Program Corner Radius	Description
	UNEU1307R-M	.140	Multi-Purpose Extra strong positive rake face geometry for machining steel and various high temp alloys
	UNEU1307R-MM	.140	Multi-Purpose - Keen Edge Stong, positive rake face geometry well-suited to machine steels and high temp alloys. The keen edge promotes lower cutting forces and free shearing action.
	UNEU1307R-MR	.140	Heavy Duty Strong edge preparation for aggressive machining in steel applications. Well suited for abusive cutting conditions.

High rake chip former for smooth machining





Unique reinforced design for anti-breakage

Thicker insert (7mm) enables stable machining

Unique pocket seat design for stable machining



POWER FEED 13+™ HARDWARE

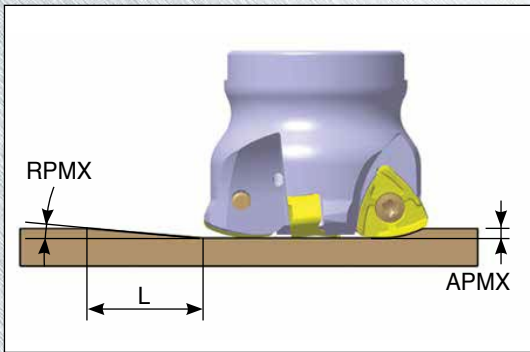
					
	Insert Screw	Driver	Retention Bolt	Optional Coolant Bolt	
DG6P-20R01	SM50-106-50	DS-0034	SD06-46	SD-06-89	
DG5P-20R01	SM50-106-50	DS-0034	SD06-46	SD-06-89	
DG6P-25R01	SM50-106-50	DS-0034	SD06-46	SD-06-89	
DG5P-25R01	SM50-106-50	DS-0034	SD06-46	SD-06-89	
DG6P-30R01	SM50-106-50	DS-0034	SD08-46	SD-08-92	
DG6P-30R02	SM50-106-50	DS-0034	SD08-46	SD-08-92	
DG6P-40R01	SM50-106-50	DS-0034	SD-12-82	SD-12-99	
DG5P-40R01	SM50-106-50	DS-0034	SD-12-82	SD-12-99	
DG6P-60R01	SM50-106-50	DS-0034	SD-12-82	SD-12-99	
1DG1P-1202781R01	SM50-106-50	DS-0034	-	-	
1DG1P-1204759R01	SM50-106-50	DS-0034	-	-	
1DG1P-12017X8R01	SM50-106-50	DS-0034	-	-	
1DG1P-1503386R01	SM50-106-50	DS-0034	-	-	
1DG1P-1507355R01	SM50-106-50	DS-0034	-	-	
1DG1P-15017X8R01	SM50-106-50	DS-0034	-	-	

POWER FEED 13+™ OPERATING GUIDELINES

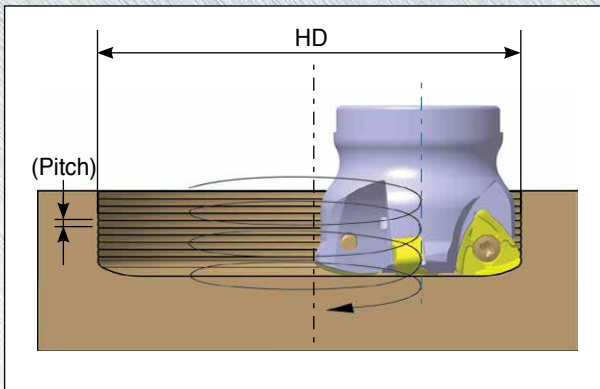
Series DG6P, 1DG1P					IN2505	IN2504	IN2510	IN2530	IN2035	IN7035	Coolant
Material	Brinnell Hardness	SFM	Feed per Insert								
Cast Iron	Gray	190 - 550	450-1300	.020 - .160	2		1				No
	Nodular	140 - 200	330 - 820	.020 - .120	2		1				
Steel	Low Carbon 1018, 8620	85-225	430 - 985	.020 - .180	1			2			No
	High Carbon F-6180	275-375	390 - 820	.015 - .157	1			2			
	Alloyed Steel 4140	375-480	195 - 460	.010 - .140	1	3		2			
	Tool Steel P20 - H13	250-470	165 - 655		1	3		2			
Stainless Steel	300 Series, 304, 316	-	260 - 560	.020 - .100	4	5		3	1	2	Yes
	400 Series 15-5PH, 17-4 PH	-	330 - 685		4	5		3	1	2	
	13-8PH	-	200 - 600		4			3	1	2	
Nickel Alloys	Inconel 600, 706, 718, 903, Hastelloy	-	60 - 150	.015 - .080	4	5		3	1	2	Yes
Titanium	6AL-4V	-	80 - 120	.010 - .030	4	5		3	1	2	Yes
Hard Steel	All		150 - 400	.020 - .050	2	1					No

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.

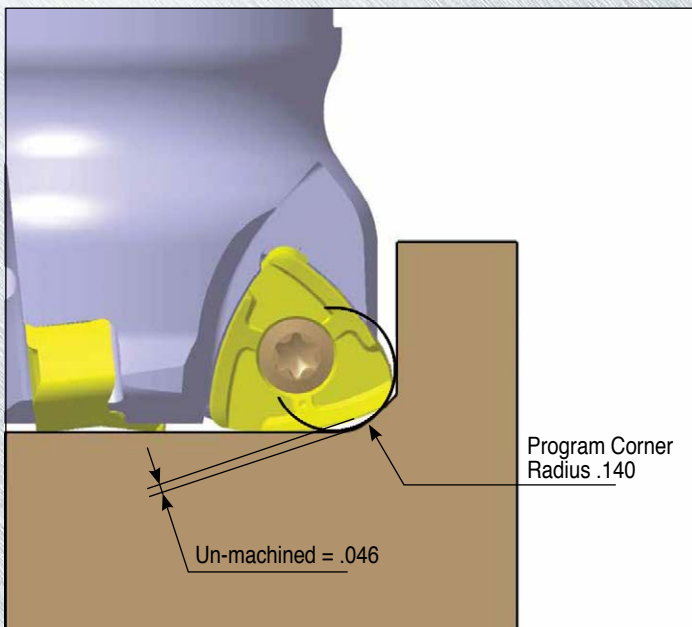
POWER FEED 13+ PROGRAMMING TECHNICAL DATA



DCX Cutting Dia. Max.	RMPX Ramp Angle Max.	L	APMX Depth of Cut Max.
1.25	.9	4.97	.078
1.50	1.5	2.97	.078
2.00	.8	5.58	.078
2.50	.6	7.44	.078
3.00	.4	11.17	.078
4.00	.3	14.89	.078
6.00	.2	22.34	.078



DCX Cutting Dia. Max.	MIN. Diameter Milled Hole	APCPR *MAX. Advance Per Cutter Path Rev.	MAX. Diameter Milled Hole	APCPR *MAX. Advance Per Cutter Path Rev.
1.25	1.56	.015	2.500	.060
1.50	1.98	.039	3.00	.065
2.00	2.94	.041	4.00	.065
2.50	3.92	.046	5.00	.065
3.00	4.91	.041	6.00	.065
4.00	6.91	.047	8.00	.065
6.00	10.91	.053	12.00	.065



Programming Tips:

- During programming verify the tool is defined correctly within the CAM system
- Maintain the shortest allowable tool length (L/D Ratio) for maximum rigidity
- Climb cut when possible
- Utilize favorable stock entry techniques to increase tool life (Example: Ramping, horizontal arcing and vertical arcing)