



Cutter Style:
DG5P (High Density)
DG6P (Low Density)
1DG1P

Insert Series:
UNEU1307R-M
UNEU1307R-MM
UNEU1307R-MR

Grades:
IN2505
IN2504
IN2530
IN2035
IN7035

Applications:
Die & Mold
Aerospace
General Purpose

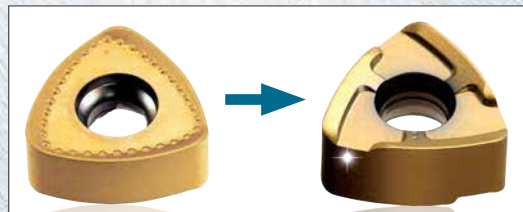


PERFORMANCE! PRODUCTIVITY! ECONOMY!

UNEU1307R, 13MM IC Insert for Maximum 2 mm Depth High Feed Milling Applications Now Available!

Features and 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



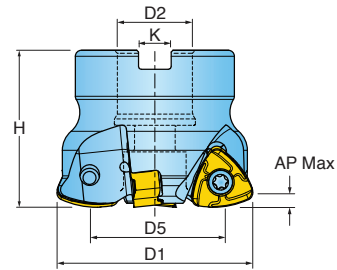
UNEU1307R

Improved Performance!

**NEW
PRODUCT
ANNOUNCEMENT
2016**

POWER FEED 15+™ SERIES DG5P, DG6P

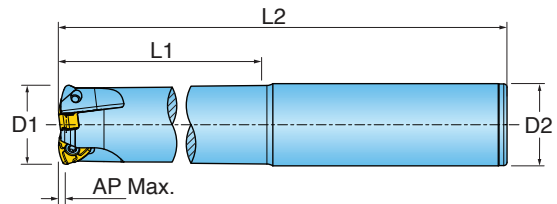
HIGH FEED FACE MILLS



Cutter Number	D1 Diameter	Number Effective	H Effective Extension	D5 Effective Diameter	AP Max.	D2 Bore Dia.	K Keyway	Coolant
DG6P-20R01	2.000	3	1.570	1.233	.078 (2mm)	0.750	0.312	Yes
DG5P-20R01	2.000	4	1.570	1.233	.078 (2mm)	0.750	0.312	Yes
DG6P-25R01	2.500	4	1.570	1.723	.078 (2mm)	0.750	0.312	Yes
DG5P-25R01	2.500	5	1.570	1.723	.078 (2mm)	0.750	0.312	Yes
DG6P-30R01	3.000	5	1.750	2.218	.078 (2mm)	1.000	0.375	Yes
DG6P-30R02	3.000	5	2.000	2.218	.078 (2mm)	1.250	0.500	Yes
DG6P-40R01	4.000	6	2.375	3.212	.078 (2mm)	1.500	0.625	Yes
DG5P-40R01	4.000	7	2.375	3.212	.078 (2mm)	1.500	0.625	Yes
DG6P-60R01	6.000	7	2.375	5.209	.078 (2mm)	1.500	0.625	Yes

POWER FEED 15+™ SERIES 1DG1P

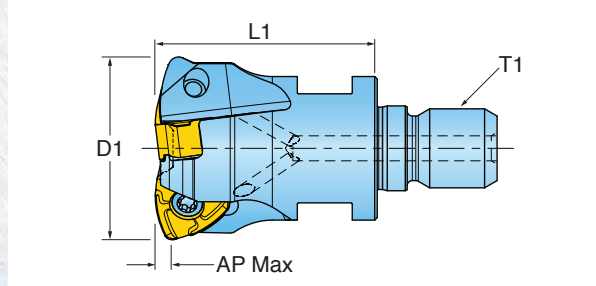
HIGH FEED END MILLS



Cutter Number	D1 Nom. Dia.	Number Effective	D2 Shank Size/Style	L2 Overall Length	L1 Extension Length	AP Max.	Coolant
1DG1P-1503386R01	1.500	3	1.5 Weldon	6.000	3.340	.078 (2mm)	Yes
1DG1P-1507355R01	1.500	3	1.5 Cylindrical	10.000	7.340	.078 (2mm)	Yes

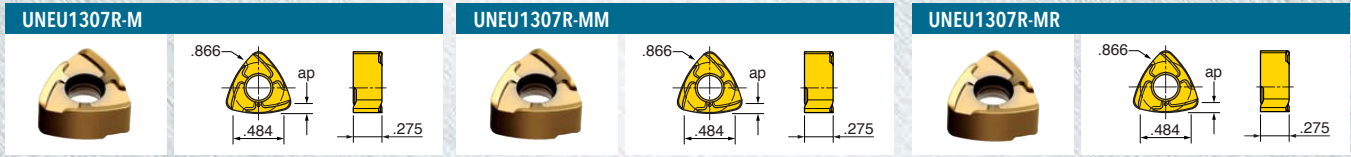
POWER FEED 15+™ SERIES 1DG1P

HIGH FEED MODULAR END MILLS, TOP-ON™



Cutter Number	D1 Nom. Dia.	Number Effective	L1 Extension Length	T1 Adaption	AP Max.
1DG1P-15017X8R01	1.500	3	1.750	M16	.078 (2mm)



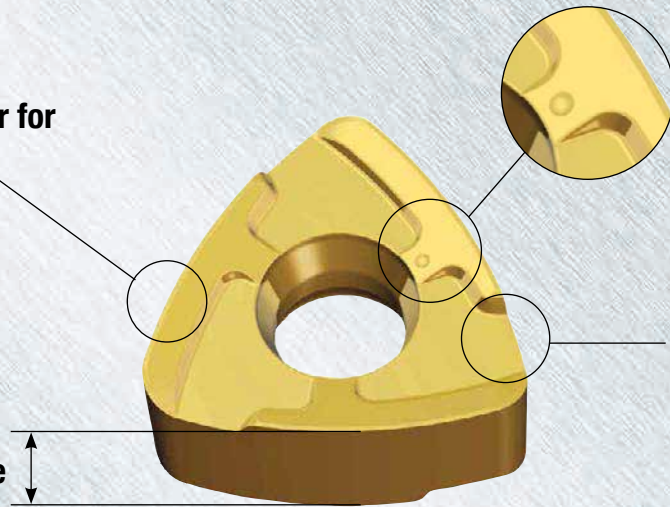


Part Number	Applications	Max DOC	Grade				
			IN2505	IN2504	IN2530	IN2035	IN7035
UNEU1307R-M	Multi-Purpose	.078 (2mm)	•	•	•	•	•
UNEU1307R-MM	Multi-Purpose - Keen Edge	.078 (2mm)			•	•	•
UNEU1307R-MR	Heavy Duty	.078 (2mm)	•			•	•

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 Strong, 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





Thicker insert (7mm) enables stable machining



Unique reinforced design for anti-breakage

Unique pocket seat design for stable machining

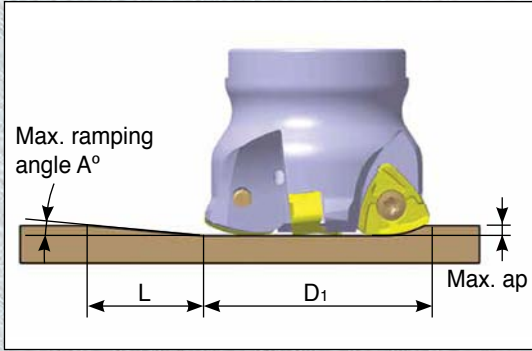
POWERFEED13+™ HARDWARE

Cutter Number	 Screw	 Driver	 Retention Bolt	 Coolant Bolt (Optional)	
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-1503386R01	SM50-106-50	DS-0034	n/a	n/a	
1DG1P-1507355R01	SM50-106-50	DS-0034	n/a	n/a	
1DG1P-15017X8R01	SM50-106-50	DS-0034	n/a	n/a	

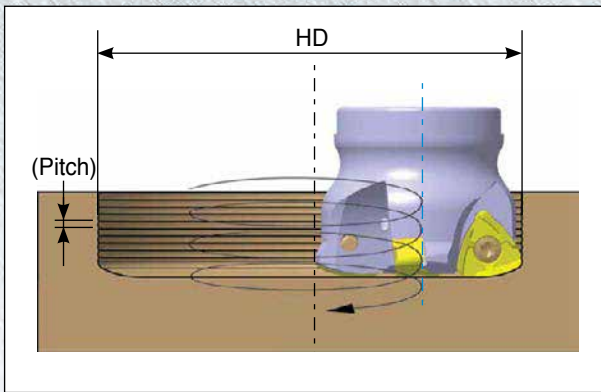
POWERFEED13+™ OPERATING GUIDELINES

Material	Brinnell Hardness	SFM	Feed per Insert	IN2505	IN2504	IN2530	IN2035	IN7035	Coolant	
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	0.010 - .140	1	3	2			
	Tool Steel P20 - H13	250-470	165 - 655		1	3	2			
Hardened Steel	All		150 - 400	.020 - .050	2	1				
Stainless Steel	300 Series, 304, 316		260 - 560	.020 - .100	4	5	3	1	2	YES
	400 Series 15-5 PH, 17-4 PH		330 - 685		4	5	3	1	2	
Nickel Alloys	Inconel 600, 706, 718, 903, Hastelloy		60 - 150	.015 - .080	4	5	3	1	2	
Titanium	6AL-4V		80 - 120	.010 - .030	4	5	3	1	2	

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.

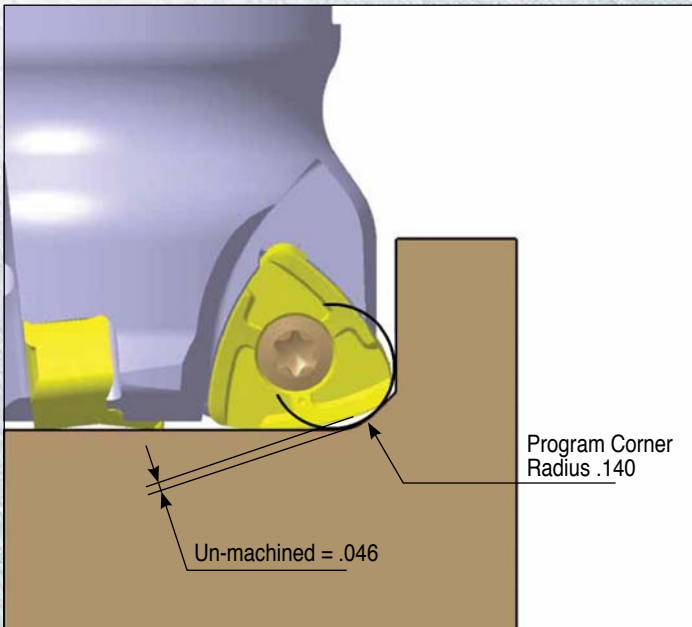


D1 Cutter Diameter	A° Max. Ramping Angle	L	Max. AP
1.50	1.5	2.97	.078
2.00	.8	5.58	.078
2.50	.6	7.44	.078
3.00	.4	11.17	.078
4.00	.3	14.89	.078
6.00	.2	22.34	.078



D1 Cutter Diameter	MIN. Diameter Milled Hole	*MIN. Advance Per Cutter Path Rev. (APCPR)	MAX. Diameter Milled Hole	*MAX. Advance Per Cutter Path Rev. (APCPR)
1.50	1.98	.039	3.00	.123
2.00	2.94	.041	4.00	.087
2.50	3.92	.046	5.00	.082
3.00	4.91	.041	6.00	.065
4.00	6.91	.047	8.00	.065
6.00	10.91	.053	12.00	.065

*Note: Utilizing the Min. APCPR when milling the Max. diameter hole will promote smooth efficient milling.



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)