

# DNMG 150408 NN

## Machining Conditions

Material Group	Group No.	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Optimal cutting conditions		
				min	max	min	max		min	max	d.o.c	feed	
Low Carbon Steel	1	Ck15 9SMnPb28	150	0.50	5.00	0.21	0.45	1.50	180	400	1.5 to 3	0.32	
			180		5.00		0.45	1.50		350			
			210		4.00		0.40	1.30		200			
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.50	5.00	0.21	0.40	1.00	120	300	1.5 to 3	0.30	
			230		4.00		0.40	1.00		250			
			280		4.00		0.35	1.00		210			
			320		3.50		0.35	0.80		180			
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	4.00	0.18	0.40	1.00	70	190	1.5 to 3	0.28	
			280		4.00		0.40	1.00		150			
			320		3.00		0.35	0.70		130			
			350		3.00		0.35	0.70		100			
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.50	5.00	0.20	0.40	0.80	170	270	1.5 to 3	0.32	
			230 to 270		4.00		0.18	0.35		0.70			210
			316 Ti 630 (F16PH)		-----		4.00	0.18		0.35			0.50
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	4.00	0.22	0.35	0.80	170	250	1.5 to 3	0.28	
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	4.00	0.22	0.35	0.80	170 120	250 210	1.5 to 3	0.28	
Grey Cast Iron	9	EN - GJL 200 EN - GJL 250 EN - GJL 300	140 to 230	0.50	5.00	0.15	0.60	1.70	170	280	1.5 to 3	0.35	
			1.50					250					
			1.50					230					
Nodular Cast Iron	10	EN - GJS 400 EN - GJS 600 EN - GJS 800	210	0.50	5.00	0.15	0.50	1.30	120	230	1.5 to 3	0.30	
			260					1.10		190			
			310					1.00		150			
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastelloy C	-----	0.50	3.00	0.20	0.35	0.60	25	35	1.5 to 3	0.28	
			0.60					40					
			0.70					65					
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.50	3.00	0.18	0.35	35	60	1.5 to 3	0.30		
			0.30				0.50		28			40	1.5 to 3

\*For all material types and standards, see pages 155 to 158.

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
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