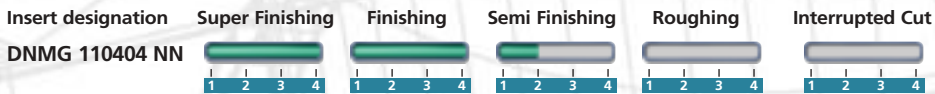


# DNMG 110404 NN

## 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	0.20	3.00	0.10	0.22	0.50	180	400	1 to 3	0.18
			180		3.00		0.22	0.50		350		
			210		2.40		0.20	0.40		200		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.20	3.00	0.10	0.20	0.40	120	300	1 to 2.5	0.15
			230		2.40		0.20	0.30		250		
			280		2.40		0.17	0.30		210		
			320		2.10		0.17	0.30		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.20	2.40	0.09	0.20	0.30	70	190	0.5 to 1.5	0.13
			280		2.40		0.20	0.30		150		
			320		1.80		0.17	0.20		130		
			350		1.80		0.17	0.20		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.20	3.00	0.10	0.20	0.30	170	270	1 to 2.5	0.18
			230 to 270		2.40		0.09	0.17		210		
			316 Ti 630 (F16PH)		2.40		0.09	0.17		0.20		
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.20	2.40	0.11	0.17	0.20	170	250	0.5 to 1.5	0.15
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.20	2.40	0.11	0.17	0.20	170 120	250 210	0.5 to 1.5	0.15
Grey Cast Iron	9	EN - GJL 200 EN - GJL 250 EN - GJL 300	140 to 230	0.20	3.00	0.07	0.30	0.50	170	280	1 to 3	0.18
			0.50					250				
			0.50					230				
Nodular Cast Iron	10	EN - GJS 400 EN - GJS 600 EN - GJS 800	210	0.20	3.00	0.07	0.25	0.40	120	230	0.5 to 2	0.15
			260					0.30		190		
			310					0.30		150		
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastelloy C	-----	0.25	1.80	0.10	0.17	0.20	25	35	0.5 to 1.5	0.13
			0.20					40				
			0.20					65				
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.25	1.80	0.09	0.17	35	60	0.5 to 1.5	0.15	
			0.15				0.20		28			40

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



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