

VNMG 160408 NN

Machining Conditions

Material Group	Group No.	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm ²]	V _c [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	1.40	180	400	1 to 3	0.32			
			180		5.00		0.40	1.40		350					
			210		4.00		0.40	1.20		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 to 3	0.30			
			230		4.00		0.40	0.90		250					
			280		4.00	0.18	0.35	0.90		210					
			320		3.50	0.35	0.70	180							
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	4.00	0.18	0.35	0.90	70	190	1 to 2.5	0.28			
			280		4.00		0.35	0.90		150					
			320		3.00		0.30	0.60		130					
			350		3.00		0.30	0.70		100					
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.50	5.00	0.20	0.40	0.70	170	270	1 to 3	0.30			
			230 to 270		4.00		0.18	0.35		0.60			210	1 to 2.5	0.25
			316 Ti 630 (F16PH)		4.00		0.18	0.28		0.50			80	130	1 to 2.5
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	4.00	0.22	0.35	0.70	170	250	1 to 3	0.28			
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	4.00	0.22	0.35	0.70	170 120	250 210	1 to 3	0.28			
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.50	5.00	0.15	0.50	1.50	170	280	1 to 3	0.32			
		EN - GJL 250						1.40		250					
		EN - GJL 300						1.40		230					
Nodular Cast Iron	10	EN - GJS 400	210	0.50	5.00	0.15	0.50	1.20	120	230	1 to 2.5	0.28			
		EN - GJS 600						1.00		190					
		EN - GJS 800						0.90		150					
Nickel Based Alloys	11	Inconel 625	-----	0.50	3.00	0.20	0.35	0.50	25	35	1 to 2.5	0.25			
		Inconel 718						0.50		40					
		Hastelloy C						0.60		65					
Titanium Based Alloys	12	TiAl 6 V4	-----	0.50	3.00	0.18	0.35	35	60	1 to 2.5	0.25				
		T40					0.30		0.50			28	40	1 to 2.5	0.22

*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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Lamina Technologies

