

TNMP 160408 NN

Machining Conditions

Material Group	Group No	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm²]	V _c [m/min]		Optimal cutting conditions	
				min	max	min	max		min	max	d.o.c	feed
Low Carbon Steel	1	Ck 15 9SMnPb28	150	0.50	5.0	0.21	0.45	1.3	180	330	1.5 to 3	0.30
			180		4.0		0.45	1.2		280		
			210		4.0		0.40	1.2		250		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.50	5.0	0.21	0.40	1.2	120	280	1.5 to 3	0.30
			230		4.0		0.40	1.0		250		
			280		4.0	0.18	0.35	0.8		210		
			320		3.0		0.35	0.8		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	4.0	0.18	0.40	1.0	70	190	1.5 to 3	0.28
			280		4.0		0.40	0.8		150		
			320		3.0		0.35	0.7		130		
			350		3.0		0.35	0.7		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.50	4.0	0.20	0.40	0.8	170	270	1.5 to 3	0.32
	5	316 / 316 L	230 to 270		3.0	0.18	0.35	0.7	160	210	1.5 to 3	0.28
	6	316 Ti 630 (F16PH)	-----		3.0	0.18	0.35	0.5	70	150	1.5 to 3	0.25
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	4.0	0.22	0.35	0.8	170	250	1.5 to 3	0.28
Martensitic Stainless Steel	8	410 / 420	Annealed	0.50	4.0	0.22	0.35	0.8	170	250	1.5 to 3	0.28
			Treated						120	190		
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.50	5.0	0.15	0.60	1.7	170	250	1.5 to 3	0.35
		EN - GJL 250						1.5		230		
		EN - GJL 300						1.5		210		
Nodular Cast Iron	10	EN - GJS 400	210	0.50	5.0	0.15	0.50	1.3	120	230	1.5 to 3	0.30
		EN - GJS 600	260					1.1		190		
		EN - GJS 800	310					1.0		150		
Nickel Based Alloys	11	Inconel 625	-----	0.50	3.0	0.20	0.35	0.6	25	35	1.5 to 3	0.28
		Inconel 718						0.6	28	40		
		Hastello y C						0.7	40	65		
Titanium Based Alloys	12	TiAl 6 V4	-----	0.50	3.0	0.18	0.35	0.7	35	60	1.5 to 3	0.30
		T40					0.30	0.5	28	40	1.5 to 3	0.28

*For all material types and standards, see pages 240 to 245.

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
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