

TCMT 110208 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	0.10	2.00	0.15	0.45	0.43	180	400	0.2 to 1	0.18	
			180		2.00		0.40	0.35		350			
			210		2.00		0.40	0.35		200			
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.10	2.00	0.12	0.40	0.35	120	300	0.2 to 1	0.15	
			230		2.00		0.40	0.29		250			
			280		1.50		0.38	0.29		210			
			320		1.50		0.35	0.23		180			
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.10	2.00	0.12	0.40	0.29	70	190	0.2 to 1	0.12	
			280		1.50		0.38	0.29		150			
			320		1.50		0.35	0.20		130			
			350		1.50		0.32	0.17		100			
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.10	2.00	0.15	0.38	0.31	170	270	0.2 to 1	0.15	
			230 to 270		1.80		0.12	0.35		0.24			210
			316 Ti 630 (F16PH)		-----		1.50	0.12		0.32			0.20
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.10	2.00	0.15	0.38	0.27	170	250	0.2 to 1	0.15	
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.10	2.00	0.15	0.35	0.27	170 120	250 210	0.2 to 1	0.15	
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.10	2.00	0.15	0.40	0.46	170	280	0.2 to 1	0.18	
		EN - GJL 250						0.43		250			
		EN - GJL 300						0.43		230			
Nodular Cast Iron	10	EN - GJS 400	210	0.10	2.00	0.15	0.40	0.35	120	230	0.2 to 1	0.15	
		EN - GJS 600						0.29		190			
		EN - GJS 800						0.29		150			
Nickel Based Alloys	11	Inconel 625	-----	0.10	1.50	0.15	0.32	0.17	25	35	0.2 to 1	0.12	
		Inconel 718						0.17		40			
		Hastelloy C						0.20		65			
Titanium Based Alloys	12	TiAl 6 V4	-----	0.10	1.50	0.12	0.35	35	60	0.2 to 1	0.14		
		T40					0.35		0.17			28	40

*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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