

KNUX 160405 R11

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	Ck 15 9SMnPb28	150	0.20	5.0	0.12	0.30	0.80	180	330	1 to 3	0.16
			180		4.0		0.28	0.80		280		
			210		4.0		0.25	0.70		250		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.20	4.0	0.10	0.28	0.80	120	280	1 to 2.5	0.15
			230		4.0		0.25	0.70		250		
			280		3.0	0.08	0.22	0.60		210		
			320		3.0		0.20	0.50		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.20	3.0	0.08	0.23	0.50	70	190	1 to 2	0.12
			280		3.0		0.21	0.00		150		
			320		3.0		0.18	0.30		130		
			350		3.0		0.16	0.00		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.20	4.0	0.12	0.23	0.70	170	270	1 to 3	0.16
	5	316 / 316 L	230 to 270		3.0	0.10	0.21	0.50	160	210	1 to 2.5	0.14
	6	316 Ti 630 (F16PH)	-----		3.0	0.08	0.18	0.40	70	150	1 to 2	0.20
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.20	3.0	0.10	0.22	0.50	170	250	1 to 2.5	0.15
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.20	3.0	0.10	0.22	0.50	170 120	250 190	1 to 2.5	0.15
Grey Cast Iron	9	EN - GJL 200 EN - GJL 250 EN - GJL 300	140 to 230	0.20	5.0	0.12	0.30	0.80 0.70 0.60	170	250 230 210	1 to 3	0.16
Nodular Cast Iron	10	EN - GJS 400 EN - GJS 600 EN - GJS 800	210 260 310	0.20	4.0	0.10	0.25	0.70 0.60 0.50	120	230 190 150	1 to 2.5	0.13
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastello y C	-----	0.20	3.0	0.08	0.22	0.40 0.40 0.50	25 28 40	35 40 65	0.5 to 2	0.12
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.20	3.0	0.08	0.23 0.21	0.50 0.40	35 28	60 40	0.5 to 2	0.12



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

