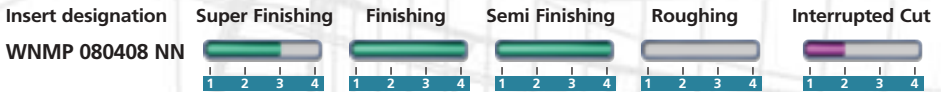


WNMP 080408 NN

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	Ck 15 9SMnPb28	150	0.50	5.00	0.21	0.45	1.80	180	400	1.5 to 3	0.35
			180		5.00		0.45	1.50		350		
			210		4.00		0.40	1.50		200		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.50	5.00	0.21	0.40	1.50	120	300	1.5 to 3	0.30
			230		4.00		0.40	1.20		250		
			280		3.50	0.18	0.35	1.20		210		
			320			0.35	1.00	180				
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	4.00	0.18	0.40	1.20	70	190	1.5 to 3	0.28
			280		4.00		0.40	1.20		150		
			320		3.00		0.35	0.80		130		
			350		3.00		0.35	0.80		100		
Austenitic Stainless Steel	4	303 / 304 304 L	Annealed	0.50	5.00	0.20	0.40	1.00	170	270	1.5 to 3	0.35
	5	316 / 316 L	Annealed		4.00	0.18	0.35	0.80	170	210	1.5 to 3	0.32
	6	316 Ti 630 (F16PH)	Annealed		4.00	0.18	0.35	0.60	80	130	1.5 to 3	0.28
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	4.00	0.22	0.35	0.90	170	250	1.5 to 3	0.32
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	4.00	0.22	0.35	0.90	170 120	250 210	1.5 to 3	0.32
Grey Cast Iron	9	EN - GJL 200 EN - GJL 250 EN - GJL 300	140 to 230	0.50	5.00	0.15	0.60	2.00	170	280	1.5 to 3	0.35
								1.80		250		
								1.80		230		
Nodular Cast Iron	10	EN - GJS 400 EN - GJS 600 EN - GJS 800	210	0.50	5.00	0.15	0.50	1.50	120	230	1.5 to 3	0.30
								1.30		190		
								1.20		150		
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastelloy C	-----	0.50	3.00	0.20	0.35	0.70	25	35	1.5 to 3	0.28
								0.70		40		
								0.80		65		
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.50	3.00	0.18	0.35	35	60	1.5 to 3	0.30	
							0.30		0.60			28

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



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