DNMG 110408 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	0.20	3.50	0.21	0.45	0.90	180	400	1 to 3	0.28
			180		3.50		0.45	0.90		350		
			210		3.00		0.40	0.80		200		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.20	3.50	0.20	0.40	0.80	120	300	1 to 3	0.25
			230		3.00		0.40	0.80		250		
			280		3.00		0.35	0.70		210		
			320		2.50		0.35	0.70		180		
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.20	3.00	0.18	0.40	0.80	70	190	0.5 to 2.5	0.23
			280		3.00		0.40	0.80		150		
			320		2.50		0.35	0.70		130		
			350		2.50		0.35	0.70		100		
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.20	3.00	0.20	0.40	0.80	170	270	0.5 to 2.5	0.25
	5	316 / 316 L	230 to 270		3.00	0.18	0.35	0.70	170	210	0.5 to 2.5	0.23
	6	316 Ti 630 (F16PH)	--------		2.50	0.18	0.35	0.70	80	130	0.5 to 2.5	0.23
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	3.00	0.20	0.35	0.80	170	250	0.5 to 2.5	0.28
Martensitic Stainless Steel	8	410 / 420	Annealed	0.50	3.00	0.20	0.35	0.80	170	250	0.5 to 2.5	0.28
			Treated						120	210		
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.20	# REF!	0.15	0.50	0.90	170	280	0.5 to 3	0.30
		EN - GJL 250						0.80		250		
		EN - GJL 300						0.80		230		
Nodular Cast Iron	10	EN - GJS 400	210	0.20	# REF!	0.15	0.40	0.80	120	230	0.5 to 2.5	0.28
		EN - GJS 600	260					0.80		190		
		EN - GJS 800	310					0.70		150		
Nickel Based Alloys	11	Inconel 625	--------	# REF!	2.50	0.20	0.35	0.70	25	35	0.5 to 2.8	0.23
		Inconel 718						0.70		40		
		Hastelloy C						0.70		65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.25	2.50	0.18	0.35	0.70	35	60	0.5 to 2.5	0.23
		T40					0.32	0.70	28	40	0.5 to 2.5	0.23

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

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
DNMG 110408 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

Lamina Technologies