

VBMT 160404 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	0.50	3.00	0.11	0.23	0.52	180	400	1 to 2.5	0.15	
			180		3.00		0.20	0.52		350			
			210		3.00		0.18	0.40		200			
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	0.50	4.00	0.11	0.20	0.40	120	300	1 to 2.5	0.12	
			230		3.00		0.20	0.34		250			
			280		3.00		0.18	0.34		210			
			320		2.00		0.16	0.28		180			
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	0.50	3.00	0.09	0.18	0.34	70	190	1 to 2.5	0.12	
			280		3.00		0.16	0.34		150			
			320		2.00		0.14	0.24		130			
			350		2.00		0.14	0.21		100			
Austenitic Stainless Steel	4	303 / 304 304 L	210 to 250	0.50	3.00	0.10	0.18	0.28	170	270	1 to 3	0.15	
			230 to 270		3.00		0.09	0.16		0.21			210
			316 Ti 630 (F16PH)		-----		2.00	0.09		0.14			0.17
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	3.00	0.11	0.18	0.24	170	250	1 to 2.5	0.13	
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	3.00	0.11	0.18	0.24	170 120	250 210	1 to 2.5	0.13	
Grey Cast Iron	9	EN - GJL 200 EN - GJL 250 EN - GJL 300	140 to 230	0.50	3.00	0.10	0.23	0.55	170	280	1 to 3	0.15	
			0.52					250					
			0.52					230					
Nodular Cast Iron	10	EN - GJS 400 EN - GJS 600 EN - GJS 800	210	0.50	3.00	0.10	0.20	0.40	120	230	1 to 2.5	0.13	
			260					0.35		190			
			310					0.35		150			
Nickel Based Alloys	11	Inconel 625 Inconel 718 Hastelloy C	-----	0.50	2.00	0.09	0.16	0.21	25	35	1 to 2	0.12	
			0.21					40					
			0.24					65					
Titanium Based Alloys	12	TiAl 6 V4 T40	-----	0.50	2.00	0.09	0.16	35	60	1 to 2	0.12		
			0.14				0.21		28			40	1 to 2

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

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrupted Cut
VBMT 160404 NN					
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4



Lamina Technologies



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