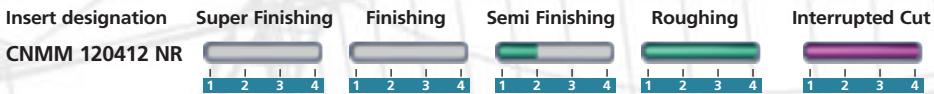


# CNMM 120412 NR

## Machining Conditions

Material Group	Group No.	Material Examples*	Brinell hardness HB	d.o.c [mm]		feed [mm/rev]		A max [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Optimal cutting conditions	
				min	max	min	max		min	max	d.o.c	feed
Low Carbon Steel	1	Ck15 9SMnPb28	150	1.00	7.00	0.32	0.80	3.20	180	400	2 to 5	0.50
			180		7.00		0.80	3.20		350		
			210		7.00		0.70	3.00		200		
Alloy Steel	2	42 CrMo 4 100 Cr 6 32 NiCrMo 14.5	180	1.00	7.00	0.30	0.80	3.00	120	300	2 to 5	0.45
			230		7.00		0.80	2.80		250		
			280		7.00	0.28	2.80	210				
			320		5.00	0.60	2.40	180				
High Alloy Steel	3	X38 CrMoV 5 X210 CrW 12 X90 CrMoV 8	220	1.00	7.00	0.24	0.80	2.80	70	190	2 to 5	0.40
			280		7.00		0.70	2.80		150		
			320		5.00		0.60	2.40		130		
			350		5.00		0.50	2.00		100		
Austenitic Stainless Steel	4	303 / 304 304 L	Annealed	0.50	7.00	0.32	0.52	2.40	170	270	2 to 5	0.45
	5	316 / 316 L	Annealed		6.00	0.30	0.48	2.00	170	210	2 to 5	0.38
	6	316 Ti 630 (F16PH)	Annealed		5.00	0.28	0.46	1.60	80	130	2 to 5	0.32
Ferritic Stainless Steel	7	430 / 439 / 444	Annealed	0.50	7.00	0.30	0.60	2.40	170	250	2 to 5	0.35
Martensitic Stainless Steel	8	410 / 420	Annealed Treated	0.50	7.00	0.30	0.60	2.40	170 120	250 210	2 to 5	0.35
Grey Cast Iron	9	EN - GJL 200	140 to 230	0.50	7.00	0.30	0.90	4.00	170	280	2 to 5	0.60
		EN - GJL 250						3.80		250		
		EN - GJL 300						3.60		230		
Nodular Cast Iron	10	EN - GJS 400	210	0.50	7.00	0.26	0.70	3.80	120	230	2 to 5	0.50
		EN - GJS 600						3.20		190		
		EN - GJS 800						2.80		150		
Nickel Based Alloys	11	Inconel 625	-----	0.50	5.00	0.28	0.50	1.80	25	35	2 to 5	0.38
		Inconel 718						1.80		40		
		Hastelloy C						2.20		65		
Titanium Based Alloys	12	TiAl 6 V4	-----	0.50	5.00	0.28	0.50	2.20	35	60	2 to 5	0.38
		T40					0.45	1.80	28	40	2 to 5	0.32

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



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