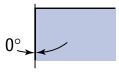
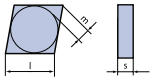
C N M M

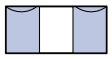
Shape
80° Diamond



Clearance Angle
0° No rake



Tolerance
d ± 0.05 m ± 0.08
s ± 0.13



Insert Type
Pin / Top clamp
Double sided

CNMM –

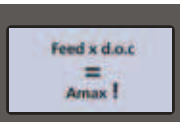
Insert designation	Grade	l	s	r	Catalog Nr.	Page
CNMM 120408 NR	LT 10	12	4,76	0,8	T0000669	30
CNMM 120412 NR	LT 10	12	4,76	1,2	T0000671	31

NR Roughing chip breaker

Application Guide	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
CNMM 120408 NR					
CNMM 120412 NR					
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

80° Diamond shape, single sided inserts. Strong cutting edge for roughing operations which includes interrupted cut, high feeds and high depth of cut.

1 Not Recommended 2 Acceptable 3 Recommended 4 Excellent



Machining Recommendation Guide - Please see Pg. 8

CNMM 120408 NR

Material Group	Group No	Material Examples*	Brinell hardness	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	Ck15, Ck45 1020, 1045	150	1.20	7.0	0.30	0.60	3.0	180	330	5.0	0.45
			180		7.0		0.60	2.6		280		
			210		7.0		0.60	2.4		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	1.00	7.0	0.28	0.52	2.2	120	280	5.0	0.36
			230		7.0		0.40	2.0		250		
			280		7.0	0.25	0.38	1.6		210		
			320		7.0		0.32	1.4		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.80	7.0	0.25	0.42	1.8	70	190	5.0	0.35
			280		7.0		0.34	1.4		150		
			320		5.0		0.30	1.2		130		
			350		5.0		0.28	1.1		100		
			400	0.80	4.0	0.15	0.24	0.9	50	90	3.0	0.21
			480		3.5		0.20	0.8	40	80	2.5	0.18
			550		3.0		0.18	0.6	30	70	2.0	0.16
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	1.00	7.0	0.25	0.42	1.8	170	270	5.0	0.32
	5	X2 CrNiMo 17 2 2 316	230 to 270		5.0	0.23	0.38	1.6	160	210	5.0	0.28
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		5.0	0.21	0.35	1.4	70	150	5.0	0.25
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	1.00	7.0	0.23	0.42	1.8	170	250	5.0	0.32
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	1.00	7.0	0.23	0.42	1.8	170	250	5.0	0.32
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	1.00	7.0	0.23	0.60	2.8	170	250	5.0	0.40
		GG 25						2.6		230		
		GG 30						2.4		210		
Nodular Cast Iron	10	GGG 40	210	0.80	7.0	0.21	0.50	2.6	120	230	5.0	0.38
		GGG 50	260					2.4		190		
		GGG 70	310					2.2		150		
		G-X260NiCr42	450	0.50	1.8	0.06	0.15	0.3	30	50	1.2	0.12
Nickel Based Alloys	11	Inconel 625	-------	0.80	5.0	0.26	0.38	1.2	25	35	3.0	0.32
		Inconel 718						1.2	28	40		
		Hastelloy C						1.4	40	65		
Titanium Based Alloys	12	TiAl 6 V4	-------	0.80	5.0	0.23	0.38	1.4	35	60	3.0	0.32
		T40					0.34	1.0	28	40	3.0	0.30

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
CNMM 120408 NR	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

Material Group	Group No	Material Examples*	Brinell hardness	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	Ck15, Ck45 1020, 1045	150	1.50	7.0	0.35	0.80	3.5	180	330	5.0	0.60
			180		7.0		0.80	3.2		280		
			210		7.0		0.80	2.8		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	1.20	7.0	0.32	0.70	3.0	120	280	5.0	0.42
			230		7.0		0.65	2.6		250		
			280		7.0	0.30	0.55	2.3		210		
			320		7.0		0.50	2.1		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	1.00	7.0	0.28	0.60	2.6	70	190	4.0	0.35
			280		7.0		0.50	2.3		150		
			320		5.0		0.40	2.0		130		
			350		5.0		0.35	1.8		100		
			400	1.00	4.0	0.17	0.32	1.5	50	90	3.5	0.29
			480		3.5		0.30	1.2	40	80	3.0	0.27
			550		3.0		0.25	1.0	30	70	2.5	0.23
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	1.50	7.0	0.28	0.58	2.8	170	270	4.0	0.32
	5	X2 CrNiMo 17 2 2 316	230 to 270		5.0	0.25	0.52	2.2	160	210	4.0	0.28
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		5.0	0.25	0.50	1.9	70	150	4.0	0.25
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	1.20	7.0	0.28	0.52	2.8	170	250	4.0	0.32
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	1.20	7.0	0.28	0.52	2.8	170	250	4.0	0.32
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	1.50	7.0	0.28	0.90	3.8	170	250	4.0	0.40
		GG 25						3.5		230		
		GG 30						3.2		210		
Nodular Cast Iron	10	GGG 40	210	1.20	7.0	0.22	0.75	3.5	120	230	4.0	0.38
		GGG 50	260					3.2		190		
		GGG 70	310					3.0		150		
		G-X260NiCr42	450	1.00	2.4	0.12	0.24	0.5	30	50	1.2	0.18
Nickel Based Alloys	11	Inconel 625	--------	1.20	5.0	0.28	0.45	1.4	25	35	3.0	0.32
		Inconel 718						1.6	28	40		
		Hastelloy C						1.6	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	1.20	5.0	0.25	0.45	1.2	35	60	3.0	0.32
		T40					0.40	1.0	28	40	3.0	0.30

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
CNMM 120412 NR	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4