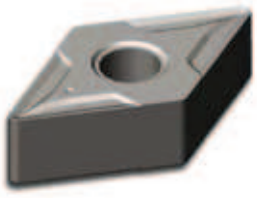
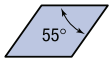
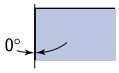


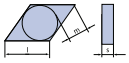
D N M G



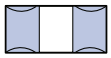
Shape
55° Diamond



Clearance Angle
0° No rake



Tolerance
d ± 0.05 m ± 0.08
s ± 0.13



Insert Type
Pin / Top clamp
Double sided

DNMG

Insert designation	Grade	l	s	r	Catalog Nr.	Page
DNMG 110404 NN	LT 10	11	4,76	0,4	T0000066	40
DNMG 110408 NN	LT 10	11	4,76	0,8	T0000675	41
DNMG 150404 NN	LT 10	15	4,76	0,4	T0000476	42
DNMG 150408 NN	LT 10	15	4,76	0,8	T0000475	43
DNMG 150412 NN	LT 10	15	4,76	1,2	T0001021	44
DNMG 150604 NN	LT 10	15	6,35	0,4	T0000583	45
DNMG 150608 NN	LT 10	15	6,35	0,8	T0000067	46
DNMG 150612 NN	LT 10	15	6,35	1,2	T0000672	47

Application Guide	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 110404 NN					
DNMG 110408 NN					
DNMG 150404 NN					
DNMG 150408 NN					
DNMG 150412 NN					
DNMG 150604 NN					
DNMG 150608 NN					
DNMG 150612 NN					
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

1 Not Recommended 2 Acceptable 3 Recommended 4 Excellent

NN All Purpose Chipbreaker

Machining Recommendation Guide - Please see Pg. 8

55° Diamond shape inserts. Suitable for roughing complex shapes operations such as Profiling, Copying and Finishing turning operations.

DNMG 110404 NN

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	0.20	3.0	0.11	0.23	0.60	180	350	2.0	0.18
			180		2.5		0.20	0.48		280		
			210		2.5		0.18	0.48		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.20	2.5	0.11	0.20	0.48	120	280	2.0	0.15
			230		2.5		0.20	0.40		250		
			280		2.0	0.09	0.18	0.40		210		
			320		2.0		0.16	0.32		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.20	2.5	0.09	0.18	0.40	70	190	2.0	0.12
			280		2.5		0.16	0.40		150		
			320		2.0		0.14	0.28		130		
			350		2.0		0.14	0.24		100		
			400	0.20	1.8	0.05	0.12	0.20	50	90	1.7	0.11
			480		1.5		0.10	0.17	40	80	1.4	0.09
			550		1.4		0.08	0.13	30	70	1.2	0.07
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.20	2.5	0.10	0.18	0.32	170	270	2.0	0.15
	5	X2 CrNiMo 17 2 2 316	230 to 270		2.0	0.09	0.16	0.24	160	210	2.0	0.12
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		2.0	0.09	0.14	0.20	70	150	2.0	0.12
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	2.0	0.15
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	2.0	0.12
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.20	3.0	0.08	0.20	0.64	170	250	2.0	0.18
		GG 25						0.60		230		
		GG 30						0.60		210		
Nodular Cast Iron	10	GGG 40	210	0.20	2.5	0.08	0.18	0.48	120	230	2.0	0.15
		GGG 50	260					0.40		190		
		GGG 70	310					0.40		150		
		G-X260NiCr42	450	0.20	1.5	0.05	0.10	0.17	30	70	1.4	0.09
Nickel Based Alloys	11	Inconel 625	--------	0.20	2.0	0.10	0.16	0.24	25	35	2.0	0.12
		Inconel 718						0.24	28	40		
		Hastelloy C						0.28	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.20	2.0	0.09	0.16	0.28	35	60	2.0	0.14
		T40					0.14	0.24	28	40	2.0	0.12

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 110404 NN	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 [mm^2]	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	0.50	5.0	0.21	0.45	1.8	180	350	3.0	0.35
			180		5.0		0.45	1.8		300		
			210		4.0		0.40	1.5		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.50	5.0	0.21	0.40	1.2	120	280	3.0	0.30
			230		4.0		0.40	1.2		250		
			280		4.0	0.18	0.35	1.2		210		
			320		3.5		0.35	1.0		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.50	4.0	0.18	0.40	1.2	70	190	2.5	0.28
			280		4.0		0.40	1.2		150		
			320		3.0		0.35	0.8		130		
			350		3.0		0.35	0.8		100		
			400	0.50	2.5	0.11	0.30	0.6	50	90	2.0	0.25
			480		2.0		0.25	0.4	40	80	1.7	0.20
			550		1.7		0.20	0.3	30	70	1.0	0.18
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.50	5.0	0.20	0.40	1.0	170	270	3.0	0.35
	5	X2 CrNiMo 17 2 2 316	230 to 270		4.0	0.18	0.35	0.8	160	210	3.0	0.32
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		4.0	0.18	0.35	0.6	70	150	2.5	0.28
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.50	4.0	0.22	0.35	0.9	170	250	3.0	0.32
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.50	4.0	0.22	0.35	0.9	170	250	3.0	0.32
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.50	5.0	0.15	0.60	2.0	170	250	3.0	0.35
		GG 25						1.8		230		
		GG 30						1.8		210		
Nodular Cast Iron	10	GGG 40	210	0.50	5.0	0.15	0.50	1.5	120	230	3.0	0.30
		GGG 50	260					1.3		190		
		GGG 70	310					1.2		150		
		G-X260NiCr42	450	0.50	1.7	0.11	0.25	0.4	30	50	1.0	0.18
Nickel Based Alloys	11	Inconel 625	--------	0.50	3.0	0.20	0.35	0.7	25	35	2.0	0.28
		Inconel 718						0.7	28	40		
		Hastelloy C						0.8	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.50	3.0	0.18	0.35	0.8	35	60	2.0	0.30
		T40					0.30	0.6	28	40	2.0	0.28

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

DNMG 150404 NN

Material Group	Group No	Material Examples*	Brinell hardness	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, Ck45 1020, 1045	150	0.20	3.0	0.11	0.23	0.60	180	350	2.0	0.18
			180		2.5		0.20	0.48		280		
			210		2.5		0.18	0.48		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.20	2.5	0.11	0.20	0.48	120	280	2.0	0.15
			230		2.5		0.20	0.40		250		
			280		2.0	0.09	0.18	0.40		210		
			320		2.0		0.16	0.32		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.20	2.5	0.09	0.18	0.40	70	190	2.0	0.12
			280		2.5		0.16	0.40		150		
			320		2.0		0.14	0.28		130		
			350		2.0		0.14	0.24		100		
			400	0.20	1.8	0.05	0.12	0.20	50	90	1.7	0.11
			480		1.5		0.10	0.17	40	80	1.4	0.09
			550		1.4		0.08	0.13	30	70	1.2	0.07
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.20	2.5	0.10	0.18	0.32	170	270	2.0	0.15
	5	X2 CrNiMo 17 2 2 316	230 to 270		2.0	0.09	0.16	0.24	160	210	2.0	0.12
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		2.0	0.09	0.14	0.20	70	150	2.0	0.12
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	2.0	0.15
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	2.0	0.12
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.20	3.0	0.08	0.20	0.64	170	250	2.0	0.18
		GG 25						0.60		230		
		GG 30						0.60		210		
Nodular Cast Iron	10	GGG 40	210	0.20	2.5	0.08	0.18	0.48	120	230	2.0	0.15
		GGG 50	260					0.40		190		
		GGG 70	310					0.40		150		
		G-X260NiCr42	450	0.20	1.5	0.05	0.10	0.17	30	70	1.4	0.09
Nickel Based Alloys	11	Inconel 625	--------	0.20	2.0	0.10	0.16	0.24	25	35	2.0	0.12
		Inconel 718						0.24	28	40		
		Hastelloy C						0.28	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.20	2.0	0.09	0.16	0.28	35	60	2.0	0.14
		T40					0.14	0.24	28	40	2.0	0.12

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 150404 NN	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 [mm^2]	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	0.50	5.0	0.21	0.45	1.8	180	350	3.0	0.35
			180		5.0		0.45	1.8		300		
			210		4.0		0.40	1.5		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.50	5.0	0.21	0.40	1.2	120	280	3.0	0.30
			230		4.0		0.40	1.2		250		
			280		4.0	0.18	0.35	1.2		210		
			320		3.5		0.35	1.0		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.50	4.0	0.18	0.40	1.2	70	190	2.5	0.28
			280		4.0		0.40	1.2		150		
			320		3.0		0.35	0.8		130		
			350		3.0		0.35	0.8		100		
			400	0.50	2.5	0.11	0.30	0.6	50	90	2.0	0.25
			480		2.0		0.25	0.4	40	80	1.7	0.20
			550		1.7		0.20	0.3	30	70	1.0	0.18
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.50	5.0	0.20	0.40	1.0	170	270	3.0	0.35
	5	X2 CrNiMo 17 2 2 316	230 to 270		4.0	0.18	0.35	0.8	160	210	3.0	0.32
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		4.0	0.18	0.35	0.6	70	150	2.5	0.28
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.50	4.0	0.22	0.35	0.9	170	250	3.0	0.32
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.50	4.0	0.22	0.35	0.9	170	250	3.0	0.32
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.50	5.0	0.15	0.60	2.0	170	250	3.0	0.35
		GG 25						1.8		230		
		GG 30						1.8		210		
Nodular Cast Iron	10	GGG 40	210	0.50	5.0	0.15	0.50	1.5	120	230	3.0	0.30
		GGG 50	260					1.3		190		
		GGG 70	310					1.2		150		
		G-X260NiCr42	450	0.50	1.7	0.11	0.25	0.4	30	50	1.0	0.18
Nickel Based Alloys	11	Inconel 625	--------	0.50	3.0	0.20	0.35	0.7	25	35	2.0	0.28
		Inconel 718						0.7	28	40		
		Hastelloy C						0.8	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.50	3.0	0.18	0.35	0.8	35	60	2.0	0.30
		T40					0.30	0.6	28	40	2.0	0.28

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 150408 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

DNMG 150412 NN

Material Group	Group No	Material Examples*	Brinell hardness	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, Ck45 1020, 1045	150	0.50	5.0	0.27	0.68	3.1	180	330	4.0	0.50
			180		5.0		0.68	3.1		280		
			210		5.0		0.60	2.6		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.50	5.0	0.27	0.60	2.6	120	280	4.0	0.45
			230		5.0		0.60	2.0		250		
			280		5.0	0.23	0.53	2.0		210		
			320		4.0		0.53	1.7		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.50	5.0	0.23	0.60	2.0	70	190	4.0	0.40
			280		5.0		0.60	2.0		150		
			320		4.0		0.53	1.6		130		
			350		4.0		0.53	1.6		100		
			400	0.50	3.5	0.14	0.45	1.2	50	90	3.4	0.36
			480		3.0		0.35	0.9	40	80	2.9	0.30
			550		2.5		0.28	0.6	30	70	2.5	0.25
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.50	5.0	0.26	0.52	1.7	170	270	4.0	0.40
	5	X2 CrNiMo 17 2 2 316	230 to 270		5.0	0.23	0.46	1.4	160	210	4.0	0.36
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		5.0	0.23	0.46	1.0	70	150	4.0	0.32
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.50	5.0	0.29	0.46	1.5	170	250	4.0	0.35
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.50	5.0	0.29	0.46	1.5	170	250	4.0	0.35
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.50	5.0	0.20	0.90	3.0	170	250	4.0	0.60
		GG 25						2.7		230		
		GG 30						2.7		210		
Nodular Cast Iron	10	GGG 40	210	0.50	5.0	0.20	0.70	2.3	120	230	4.0	0.50
		GGG 50	260					2.0		190		
		GGG 70	310					1.8		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	--------	0.50	5.0	0.26	0.46	1.4	25	35	3.0	0.38
		Inconel 718						1.4	28	40		
		Hastelloy C						1.6	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.50	5.0	0.23	0.46	1.6	35	60	3.0	0.38
		T40					0.39	1.2	28	40	3.0	0.32

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 150412 NN	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	0.20	3.0	0.11	0.23	0.60	180	350	2.0	0.18
			180		2.5		0.20	0.48		280		
			210		2.5		0.18	0.48		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.20	2.5	0.11	0.20	0.48	120	280	2.0	0.15
			230		2.5		0.20	0.40		250		
			280		2.0	0.09	0.18	0.40		210		
			320		2.0		0.16	0.32		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.20	2.5	0.09	0.18	0.40	70	190	2.0	0.12
			280		2.5		0.16	0.40		150		
			320		2.0		0.14	0.28		130		
			350		2.0		0.14	0.24		100		
			400	0.20	1.8	0.05	0.12	0.20	50	90	1.7	0.11
			480		1.5		0.10	0.17	40	80	1.4	0.09
			550		1.4		0.08	0.13	30	70	1.2	0.07
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.20	2.5	0.10	0.18	0.32	170	270	2.0	0.15
	5	X2 CrNiMo 17 2 2 316	230 to 270		2.0	0.09	0.16	0.24	160	210	2.0	0.12
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		2.0	0.09	0.14	0.20	70	150	2.0	0.12
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	2.0	0.15
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.20	2.0	0.11	0.18	0.28	170	250	2.0	0.12
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.20	3.0	0.08	0.20	0.64	170	250	2.0	0.18
		GG 25						0.60		230		
		GG 30						0.60		210		
Nodular Cast Iron	10	GGG 40	210	0.20	2.5	0.08	0.18	0.48	120	230	2.0	0.15
		GGG 50	260					0.40		190		
		GGG 70	310					0.40		150		
		G-X260NiCr42	450	0.20	1.5	0.05	0.10	0.17	30	70	1.4	0.09
Nickel Based Alloys	11	Inconel 625	--------	0.20	2.0	0.10	0.16	0.24	25	35	2.0	0.12
		Inconel 718						0.24	28	40		
		Hastelloy C						0.28	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.20	2.0	0.09	0.16	0.28	35	60	2.0	0.14
		T40					0.14	0.24	28	40	2.0	0.12

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 150604 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

DNMG 1500608 NN

Material Group	Group No	Material Examples*	Brinell hardness	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, Ck45 1020, 1045	150	0.50	5.0	0.21	0.45	1.8	180	350	3.0	0.35
			180		5.0		0.45	1.8		300		
			210		4.0		0.40	1.5		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.50	5.0	0.21	0.40	1.2	120	280	3.0	0.30
			230		4.0		0.40	1.2		250		
			280		4.0	0.18	0.35	1.2		210		
			320		3.5		0.35	1.0		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.50	4.0	0.18	0.40	1.2	70	190	2.5	0.28
			280		4.0		0.40	1.2		150		
			320		3.0		0.35	0.8		130		
			350		3.0		0.35	0.8		100		
			400	0.50	2.5	0.11	0.30	0.6	50	90	2.0	0.25
			480		2.0		0.25	0.4	40	80	1.7	0.20
			550		1.7		0.20	0.3	30	70	1.0	0.18
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.50	5.0	0.20	0.40	1.0	170	270	3.0	0.35
	5	X2 CrNiMo 17 2 2 316	230 to 270		4.0	0.18	0.35	0.8	160	210	3.0	0.32
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		4.0	0.18	0.35	0.6	70	150	2.5	0.28
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.50	4.0	0.22	0.35	0.9	170	250	3.0	0.32
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.50	4.0	0.22	0.35	0.9	170	250	3.0	0.32
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.50	5.0	0.15	0.60	2.0	170	250	3.0	0.35
		GG 25						1.8		230		
		GG 30						1.8		210		
Nodular Cast Iron	10	GGG 40	210	0.50	5.0	0.15	0.50	1.5	120	230	3.0	0.30
		GGG 50	260					1.3		190		
		GGG 70	310					1.2		150		
		G-X260NiCr42	450	0.50	1.7	0.11	0.25	0.4	30	50	1.0	0.18
Nickel Based Alloys	11	Inconel 625	--------	0.50	3.0	0.20	0.35	0.7	25	35	2.0	0.28
		Inconel 718						0.7	28	40		
		Hastelloy C						0.8	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.50	3.0	0.18	0.35	0.8	35	60	2.0	0.30
		T40					0.30	0.6	28	40	2.0	0.28

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 150608 NN	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 [mm^2]	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	0.50	5.0	0.27	0.68	3.1	180	330	4.0	0.50
			180		5.0		0.68	3.1		280		
			210		5.0		0.60	2.6		250		
Alloy Steel	2	42 CrMo 4 St 50-2 Ck60 1060 4140	180	0.50	5.0	0.27	0.60	2.6	120	280	4.0	0.45
			230		5.0		0.60	2.0		250		
			280		5.0	0.23	0.53	2.0		210		
			320		4.0		0.53	1.7		180		
High Alloy Steel	3	X40 CrMoV 5 1 H 13 40 NiCrMo 6 4340 S 2-10-1-8 HSS M42	220	0.50	5.0	0.23	0.60	2.0	70	190	4.0	0.40
			280		5.0		0.60	2.0		150		
			320		4.0		0.53	1.6		130		
			350		4.0		0.53	1.6		100		
			400	0.50	3.5	0.14	0.45	1.2	50	90	3.4	0.36
			480		3.0		0.35	0.9	40	80	2.9	0.30
			550		2.5		0.28	0.6	30	70	2.5	0.25
Austenitic Stainless Steel	4	X5 CrNi 18 9 304	210 to 250	0.50	5.0	0.26	0.52	1.7	170	270	4.0	0.40
	5	X2 CrNiMo 17 2 2 316	230 to 270		5.0	0.23	0.46	1.4	160	210	4.0	0.36
	6	X6 CrNiMoTi 17 12 2 316 Ti Duplex / Nitronic	-------		5.0	0.23	0.46	1.0	70	150	4.0	0.32
Ferritic Stainless Steel	7	X8 Cr 7 430	Annealed	0.50	5.0	0.29	0.46	1.5	170	250	4.0	0.35
Martensitic Stainless Steel	8	X15 Cr 13 410	Annealed	0.50	5.0	0.29	0.46	1.5	170	250	4.0	0.35
			Treated						120	190		
Grey Cast Iron	9	GG 20	140 to 230	0.50	5.0	0.20	0.90	3.0	170	250	4.0	0.60
		GG 25						2.7		230		
		GG 30						2.7		210		
Nodular Cast Iron	10	GGG 40	210	0.50	5.0	0.20	0.70	2.3	120	230	4.0	0.50
		GGG 50	260					2.0		190		
		GGG 70	310					1.8		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	--------	0.50	5.0	0.26	0.46	1.4	25	35	3.0	0.38
		Inconel 718						1.4	28	40		
		Hastelloy C						1.6	40	65		
Titanium Based Alloys	12	TiAl 6 V4	--------	0.50	5.0	0.23	0.46	1.6	35	60	3.0	0.38
		T40					0.39	1.2	28	40	3.0	0.32

Insert designation	Super Finishing	Finishing	Semi Finishing	Roughing	Interrrupted Cut
DNMG 150612 NN	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4