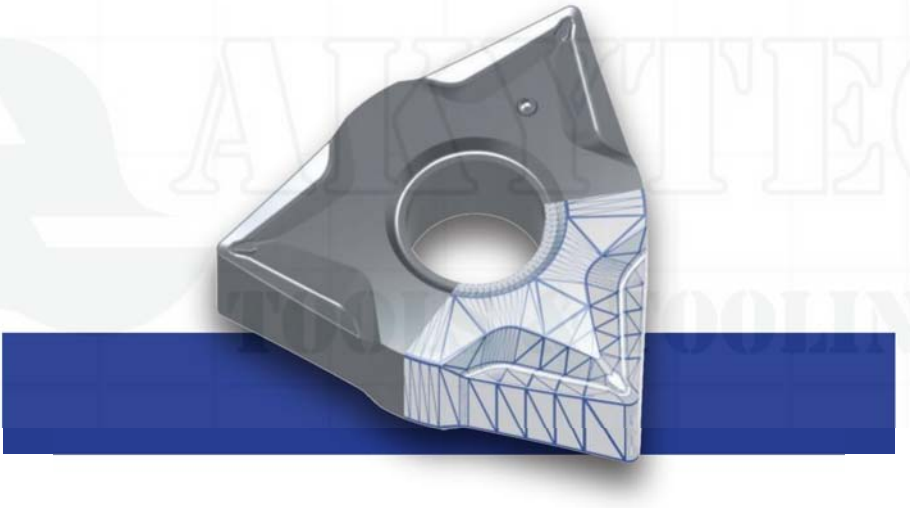
TURNING

LT 10 I 1000
LT 1005 I LT 1025



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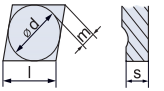
C C M T

NN Chipbreaker

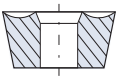
Shape

Clearance Angle



Tolerance

s ± 0.13
For l = 06/09, **d** ± 0.05 **m** ± 0.08
For l = 12, **d** ± 0.08 **m** ± 0.13



Fixing,, Chipbreaker

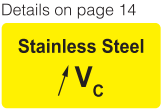
LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CCMT 060204 NN LT 10	6	2.38	0.4	T0000055	●	●	●
CCMT 09T304 NN LT 10	9	3.97	0.4	T0000056	●	●	●
CCMT 09T308 NN LT 10	9	3.97	0.8	T0000117	●	●	●
CCMT 120404 NN LT 10	12	4.76	0.4	T0001456	●	●	●
CCMT 120408 NN LT 10	12	4.76	0.8	T0001457	●	●	●
CCMT 120412 NN LT 10	12	4.76	1.2	T0001776	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CCMT 060204 NN LT 1000	6	2.38	0.4	T0001888	●	●	●
CCMT 09T304 NN LT 1000	9	3.97	0.4	T0001889	●	●	●
CCMT 09T308 NN LT 1000	9	3.97	0.8	T0001890	●	●	●
CCMT 120404 NN LT 1000	12	4.76	0.4	T0001891	●	●	●
CCMT 120408 NN LT 1000	12	4.76	0.8	T0001892	●	●	●
CCMT 120412 NN LT 1000	12	4.76	1.2	T0001893	●	●	●

80° diamond shape inserts with positive chipbreaker geometry. Very popular and useful for boring (even of small diameters), facing and external turning operations.

Machining Recommendations

Details on page 14



LT 10 and LT 1000

LT 10 and LT 1000

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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CCMT 060204 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	2.1	0.08	0.20	0.37	180	330	**1.0**	**0.14**	**300**
			2		190 HB	0.3	1.8	0.08	0.19	0.32	180	280	**1.0**	**0.14**	**260**
			3		250 HB	0.3	1.8	0.08	0.17	0.30	180	250	**1.0**	**0.14**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	1.8	0.08	0.17	0.31	120	280	**1.0**	**0.11**	**260**
			4,6		230 HB	0.3	1.8	0.08	0.17	0.30	120	250	**1.0**	**0.11**	**240**
			5,7		280 HB	0.3	1.4	0.08	0.15	0.25	120	210	**1.0**	**0.10**	**200**
			8		350 HB	0.3	1.4	0.08	0.15	0.22	120	180	1.0	0.10	180
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	1.8	0.07	0.15	0.25	70	190	**0.9**	0.08	180
			10		280 HB	0.3	1.8	0.07	0.14	0.25	70	150	**0.9**	0.08	140
			11		320 HB	0.3	1.4	0.07	0.12	0.20	70	130	**0.9**	0.08	120
			11		350 HB	0.3	1.4	0.07	0.12	0.16	70	110	**0.9**	0.08	110
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	1.8	0.06	0.15	0.20	170	270	1.0	0.07	260
			14		240 HB	0.3	1.8	0.06	0.15	0.16	160	220	1.0	0.06	210
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	1.4	0.06	0.12	0.12	80	150	**0.9**	0.06	140
			14		310 HB	0.3	1.4	0.06	0.12	0.12	70	140	**0.9**	0.06	140
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	1.8	0.06	0.15	0.20	170	250	**0.9**	0.07	240
			13		42 HRc	0.3	1.4	0.06	0.14	0.16	120	190	**0.8**	0.06	180
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	2.1	0.06	0.17	0.40	170	250	1.0	0.14	240
			15		200 HB	0.3	2.1	0.06	0.17	0.37	160	230	1.0	0.14	220
			16		250 HB	0.3	2.1	0.06	0.17	0.37	150	210	1.0	0.14	200
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	1.8	0.06	0.15	0.30	120	250	1.0	0.10	240
			17,19		200 HB	0.3	1.8	0.06	0.15	0.25	120	230	1.0	0.10	220
			18,20		250 HB	0.3	1.8	0.06	0.15	0.25	120	190	1.0	0.10	180
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	0.08	40
			33	Inconel 700	250 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	**0.08**	**40**
			34	Stellite 21	350 HB	0.3	1.4	0.07	0.13	0.16	23	45	**0.7**	**0.08**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	1.4	0.07	0.14	0.20	45	65	**0.7**	**0.11**	**60**
			37	T40	-	0.3	1.4	0.07	0.12	0.16	35	60	**0.7**	**0.08**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.3	0.04	0.10	0.12	50	100	**0.7**	**0.08**	**90**
			38		50 HRc	0.3	1.1	0.04	0.09	0.11	40	90	**0.6**	**0.06**	**80**
			38		55 HRc	0.0	1.0	0.04	0.08	0.08	40	80	**0.5**	**0.05**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.1	0.04	0.10	0.11	40	60	**0.6**	**0.08**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.0	0.04	0.08	0.08	30	50	**0.5**	**0.05**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	2.8	0.08	0.26	0.43	200	400	**1.0**	**0.18**	**350**

CCMT 09T304 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.0	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

CCMT 09T308 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.21	0.50	1.62	180	330	**3.0**	**0.32**	**240**
			2		190 HB	0.5	4.0	0.21	0.50	1.62	180	280	**3.0**	**0.32**	**220**
			3		250 HB	0.5	4.0	0.21	0.45	1.35	180	250	**3.0**	**0.32**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.21	0.45	1.08	120	280	**3.0**	**0.29**	**200**
			4,6		230 HB	0.5	3.2	0.21	0.45	1.08	120	250	**3.0**	**0.29**	**180**
			5,7		280 HB	0.5	3.2	0.18	0.40	1.08	120	210	**3.0**	**0.27**	**150**
			8		350 HB	0.5	2.8	0.18	0.40	0.90	120	180	**3.0**	**0.27**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.18	0.40	1.08	70	190	**2.5**	**0.27**	**140**
			10		280 HB	0.5	3.2	0.18	0.40	1.08	70	150	**2.5**	**0.27**	**120**
			11		320 HB	0.5	2.4	0.18	0.35	0.72	70	130	**2.5**	**0.25**	**100**
			11		350 HB	0.5	2.4	0.18	0.35	0.72	70	110	**2.5**	**0.25**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.20	0.40	1.08	170	270	**3.0**	**0.32**	**200**
			14		240 HB	0.5	4.0	0.20	0.40	0.90	160	220	**3.0**	**0.29**	**180**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.18	0.35	0.72	80	150	**2.5**	**0.25**	**100**
			14		310 HB	0.5	3.2	0.18	0.35	0.72	70	140	**2.5**	**0.25**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.22	0.40	0.90	170	250	**3.0**	**0.29**	**190**
			13		42 HRc	0.5	3.2	0.22	0.40	0.90	120	190	**2.5**	**0.29**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.15	0.60	1.80	170	250	**3.0**	**0.32**	**200**
			15		200 HB	0.5	4.0	0.15	0.60	1.62	160	230	**3.0**	**0.32**	**180**
			16		250 HB	0.5	4.0	0.15	0.55	1.62	150	210	**3.0**	**0.32**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.15	0.50	1.35	120	250	**3.0**	**0.27**	**180**
			17,19		200 HB	0.5	4.0	0.15	0.50	1.17	120	230	**3.0**	**0.27**	**160**
			18,20		250 HB	0.5	4.0	0.15	0.50	1.08	120	190	**3.0**	**0.27**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**32**
			33	Inconel 700	250 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**30**
			34	Stellite 21	350 HB	0.5	2.4	0.20	0.35	0.63	23	40	**2.0**	**0.25**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.2	0.20	0.40	0.72	45	65	**2.0**	**0.30**	**55**
			37	T40	-	0.5	2.4	0.20	0.35	0.63	35	55	**2.0**	**0.27**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.11	0.30	0.54	50	100	**2.0**	**0.23**	**80**
			38		50 HRc	0.5	1.6	0.11	0.25	0.36	40	90	**1.5**	**0.18**	**70**
			38		55 HRc	0.5	1.2	0.11	0.20	0.27	40	80	**1.0**	**0.16**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.6	0.11	0.25	0.36	40	60	**1.5**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.2	0.11	0.20	0.27	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.8	0.20	0.60	1.60	200	400	**3.0**	**0.36**	**280**

CCMT 120404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	2.0	0.13	180
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	1.7	0.10	180
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	1.7	0.10	140
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	1.7	0.10	120
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	1.7	0.10	110
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	2.0	0.09	260
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	2.0	0.08	210
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	1.7	0.08	140
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	1.7	0.08	140
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	1.7	0.09	240
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	1.5	0.08	180
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	2.0	0.18	240
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	2.0	0.18	220
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	2.0	0.18	200
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	2.0	0.13	240
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	2.0	0.13	220
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	2.0	0.13	180
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	1.3	0.10	40
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.0	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

CCMT 120408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

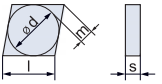
CCMT 120412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.60	2.16	180	330	**3.0**	**0.42**	**240**
			2		190 HB	0.5	5.0	0.21	0.60	2.16	180	280	**3.0**	**0.42**	**220**
			3		250 HB	0.5	5.0	0.21	0.54	1.80	180	250	**3.0**	**0.42**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.54	1.44	120	280	**3.0**	**0.38**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.54	1.44	120	250	**3.0**	**0.38**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.48	1.44	120	210	**3.0**	**0.36**	**150**
			8		350 HB	0.5	3.5	0.18	0.48	1.20	120	180	**3.0**	**0.36**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.48	1.44	70	190	**2.5**	**0.36**	**140**
			10		280 HB	0.5	4.0	0.18	0.48	1.44	70	150	**2.5**	**0.36**	**120**
			11		320 HB	0.5	3.0	0.18	0.42	0.96	70	130	**2.5**	**0.34**	**100**
			11		350 HB	0.5	3.0	0.18	0.42	0.96	70	110	**2.5**	**0.34**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.48	1.44	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.48	1.20	160	220	**3.0**	**0.35**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.42	0.96	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.42	0.96	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.48	1.20	170	250	**3.0**	**0.35**	**190**
			13		42 HRc	0.5	4.0	0.22	0.48	1.20	120	190	**2.5**	**0.35**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.72	2.40	170	250	**3.0**	**0.42**	**200**
			15		200 HB	0.5	5.0	0.15	0.72	2.16	160	230	**3.0**	**0.42**	**180**
			16		250 HB	0.5	5.0	0.15	0.66	2.16	150	210	**3.0**	**0.42**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.60	1.80	120	250	**3.0**	**0.36**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.60	1.56	120	230	**3.0**	**0.36**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.60	1.44	120	190	**3.0**	**0.36**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.42	0.84	25	45	**2.0**	**0.30**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.42	0.84	25	45	**2.0**	**0.30**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.42	0.84	23	40	**2.0**	**0.30**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.48	0.96	45	65	**2.0**	**0.35**	**55**
			37	T40	-	0.5	3.0	0.20	0.42	0.84	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.36	0.72	50	100	**2.0**	**0.30**	**80**
			38		50 HRc	0.5	2.0	0.11	0.30	0.48	40	90	**1.5**	**0.24**	**70**
			38		55 HRc	0.5	1.5	0.11	0.24	0.36	40	80	**1.0**	**0.22**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.30	0.48	40	60	**1.5**	**0.22**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.24	0.36	30	50	**1.0**	**0.18**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.72	2.20	200	400	**3.0**	**0.48**	**280**

C N M A

Shape

Clearance Angle



Tolerance
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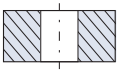
s ± 0.13



Fixing, Chipbreaker

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMA 120408 LT 1005	12	4.76	0.8	T0004050	●	●	●
CNMA 120412 LT 1005	12	4.76	1.2	T0004051	●	●	●

Strong edge preparation mainly for gray cast iron. For general purpose turning, facing and boring operations.

Machining Recommendations

Details on page 14

V_c ⇒ Productivity

F ⇒ Productivity

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

CNMA 120408 – **LT 1005**

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.40	1.4	270	450	**3.5**	**0.32**	**350**
			15		200 HB	0.7	6.0	0.20	0.38	1.2	200	320	**3.5**	**0.32**	**250**
			16		250 HB	0.7	6.0	0.20	0.36	1.2	170	240	**3.5**	**0.32**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.40	1.0	130	260	**2.5**	**0.30**	**240**
			17,19		200 HB	0.7	6.0	0.20	0.38	0.9	130	230	**2.5**	**0.30**	**210**
			18,20		250 HB	0.7	6.0	0.20	0.36	0.8	130	190	**2.5**	**0.30**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.20	0.3	40	60	**1.4**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.20	0.2	30	50	**1.1**	**0.15**	**40**

CNMA 120412 – **LT 1005**

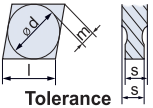
	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.60	1.7	270	450	**3.5**	**0.40**	**350**
			15		200 HB	0.7	6.0	0.20	0.58	1.5	200	320	**3.5**	**0.40**	**250**
			16		250 HB	0.7	6.0	0.20	0.56	1.5	170	240	**3.5**	**0.40**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.52	1.3	130	260	**3.0**	**0.30**	**240**
			17,19		200 HB	0.7	6.0	0.20	0.50	1.1	130	230	**3.0**	**0.30**	**210**
			18,20		250 HB	0.7	6.0	0.20	0.48	1.0	130	190	**3.0**	**0.30**	**180**
H	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.25	0.3	40	60	**1.5**	**0.19**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.20	0.3	30	50	**1.2**	**0.17**	**40**

NN chipbreaker

C N M G

Shape

Clearance Angle



Tolerance
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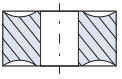
m ± 0.13
s ± 0.13

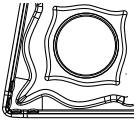


Fixing, Chipbreaker

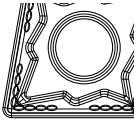
LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMG 120404 NN LT 10	12	4.76	0.4	T0000491	●	●	●
CNMG 120408 NN LT 10	12	4.76	0.8	T0000059	●	●	●
CNMG 120408 NM LT 10	12	4.76	0.8	T0001966	●	●	●
CNMG 120412 NN LT 10	12	4.76	1.2	T0000061	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMG 120404 NN LT 1000	12	4.76	0.4	T0001895	●	●	●
CNMG 120408 NN LT 1000	12	4.76	0.8	T0001896	●	●	●
CNMG 120408 NM LT 1000	12	4.76	0.8	T0001968	●	●	●
CNMG 120408 NX LT 1000	12	4.76	0.8	T0002741	●	●	●
CNMG 120412 NN LT 1000	12	4.76	1.2	T0001897	●	●	●

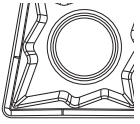
The most popular general purpose turning inserts. Use for turning, facing and boring operations.



NX chipbreaker



NM chipbreaker



NN chipbreaker

Machining Recommendations

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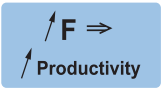
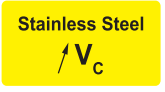
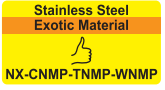


LT 10 and LT 1000



LT 10 and LT 1000



NX LT 10 and LT 1000

NX LT 10 and LT 1000

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

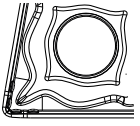
● = Good ● = Acceptable ● = Not recommended

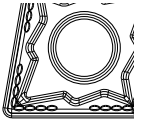
C N M G

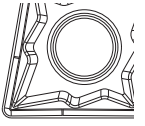
LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMG 120408 NN LT 1005	12	4.76	0.8	T0004054	●	●	●
CNMG 120408 NM LT 1005	12	4.76	0.8	T0004053	●	●	●
CNMG 120408 NX LT 1005	12	4.76	0.8	T0004055	●	●	●
CNMG 120412 NN LT 1005	12	4.76	1.2	T0004056	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMG 120408 NN LT 1025	12	4.76	0.8	T0004112	●	●	●
CNMG 120408 NM LT 1025	12	4.76	0.8	T0004111	●	●	●
CNMG 120408 NX LT 1025	12	4.76	0.8	T0004113	●	●	●
CNMG 120412 NN LT 1025	12	4.76	1.2	T0004114	●	●	●

The most popular general purpose turning inserts. Use for turning, facing and boring operations.


NX chipbreaker

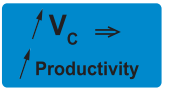

NM chipbreaker


NN chipbreaker

Machining Recommendations

Details on page 14

NX for LT 1025



LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

CNMG 120404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.0	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

CNMG 120408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	2.00	180	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.60	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.40	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.00	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	0.90	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.70	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.70	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	50	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	50	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	45	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	60	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.50	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.6	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.50	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.6	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	2.00	200	400	**3.0**	**0.40**	**280**

CNMG 120408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	430	**3.0**	**0.38**	**265**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	365	**3.0**	**0.35**	**240**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	325	**3.0**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	365	**3.0**	**0.32**	**220**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	325	**3.0**	**0.32**	**200**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	275	**3.0**	**0.30**	**165**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	235	**2.7**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	245	**2.5**	**0.30**	**155**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	195	**2.5**	**0.30**	**130**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	170	**2.2**	**0.28**	**110**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	145	**2.2**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	325	**3.0**	**0.35**	**220**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	300	**3.0**	**0.35**	**200**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	275	**3.0**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	325	**3.0**	**0.30**	**200**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	300	**3.0**	**0.30**	**175**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	245	**3.0**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	130	**2.0**	**0.25**	**90**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	115	**1.5**	**0.20**	**75**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	105	**1.0**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	80	**1.5**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	65	**1.0**	**0.15**	**45**

CNMG 120408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.8	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.8	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.5	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.2	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.2	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.2	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.0	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.2	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.2	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.8	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.8	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

CNMG 120408 NM – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.65	2.70	180	330	**4.0**	**0.50**	**210**
			2		190 HB	0.5	5.0	0.21	0.65	2.70	180	280	**4.0**	**0.50**	**200**
			3		250 HB	0.5	5.0	0.21	0.59	2.25	180	250	**4.0**	**0.50**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.59	1.80	120	280	**4.0**	**0.44**	**160**
			4,6		230 HB	0.5	4.0	0.21	0.59	1.80	120	250	**4.0**	**0.44**	**150**
			5,7		280 HB	0.5	4.0	0.18	0.52	1.80	120	210	**4.0**	**0.38**	**140**
			8		350 HB	0.5	3.5	0.18	0.52	1.60	120	180	4.0	0.38	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.52	1.80	70	190	**3.3**	0.38	120
			10		280 HB	0.5	4.0	0.18	0.52	1.80	70	150	**3.3**	0.38	110
			11		320 HB	0.5	3.0	0.18	0.46	1.20	70	130	**3.3**	0.35	100
			11		350 HB	0.5	3.0	0.18	0.46	1.20	70	110	**3.3**	0.35	90
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.52	1.80	170	270	4.0	0.38	190
			14		240 HB	0.5	5.0	0.20	0.52	1.60	160	220	4.0	0.38	170
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.46	1.20	80	150	**3.3**	0.32	100
			14		310 HB	0.5	4.0	0.18	0.46	1.20	70	140	**3.3**	0.32	90
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.52	1.60	170	250	4.0	0.38	190
			13		42 HRc	0.5	4.0	0.22	0.52	1.60	120	190	**3.5**	0.38	130
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.78	3.00	170	250	4.0	0.44	180
			15		200 HB	0.5	5.0	0.15	0.78	2.70	160	230	4.0	0.44	170
			16		250 HB	0.5	5.0	0.15	0.72	2.70	150	210	4.0	0.44	160
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.65	2.25	120	250	4.0	0.38	150
			17,19		200 HB	0.5	5.0	0.15	0.65	1.95	120	230	4.0	0.38	140
			18,20		250 HB	0.5	5.0	0.15	0.65	1.80	120	190	4.0	0.38	130
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.46	1.05	25	45	2.7	0.35	30
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.46	1.05	25	45	**2.7**	**0.35**	**32**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.46	1.05	23	40	**2.7**	**0.35**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.52	1.20	45	65	**2.7**	**0.38**	**55**
			37	T40	-	0.5	3.0	0.20	0.46	1.05	35	55	**2.7**	**0.36**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.39	0.90	50	100	**2.7**	**0.31**	**80**
			38		50 HRc	0.5	2.0	0.11	0.33	0.60	40	90	**2.0**	**0.25**	**70**
			38		55 HRc	0.5	1.5	0.11	0.26	0.45	40	80	**1.5**	**0.23**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.33	0.60	40	60	**2.0**	**0.23**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.26	0.45	30	50	**1.5**	**0.19**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.78	2.70	200	400	**4.0**	**0.50**	**280**

CNMG 120408 NM – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.65	2.70	180	430	**3.6**	**0.46**	**265**
			2		190 HB	0.5	5.0	0.21	0.65	2.70	180	365	**3.6**	**0.42**	**240**
			3		250 HB	0.5	5.0	0.21	0.59	2.25	180	325	**3.6**	**0.40**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.59	1.80	120	365	**3.6**	**0.38**	**220**
			4,6		230 HB	0.5	4.0	0.21	0.59	1.80	120	325	**3.6**	**0.38**	**200**
			5,7		280 HB	0.5	4.0	0.18	0.52	1.80	120	275	**3.6**	**0.36**	**165**
			8		350 HB	0.5	3.5	0.18	0.52	1.50	120	235	**3.2**	**0.36**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.52	1.80	70	245	**3.0**	**0.36**	**155**
			10		280 HB	0.5	4.0	0.18	0.52	1.80	70	195	**3.0**	**0.36**	**130**
			11		320 HB	0.5	3.0	0.18	0.46	1.20	70	170	**2.6**	**0.34**	**110**
			11		350 HB	0.5	3.0	0.18	0.46	1.20	70	145	**2.6**	**0.34**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.78	3.00	170	325	**3.6**	**0.42**	**220**
			15		200 HB	0.5	5.0	0.15	0.78	2.70	160	300	**3.6**	**0.42**	**200**
			16		250 HB	0.5	5.0	0.15	0.72	2.70	150	275	**3.6**	**0.42**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.65	2.25	120	325	**3.6**	**0.36**	**200**
			17,19		200 HB	0.5	5.0	0.15	0.65	1.95	120	300	**3.6**	**0.36**	**175**
			18,20		250 HB	0.5	5.0	0.15	0.65	1.80	120	245	**3.6**	**0.36**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.39	0.90	50	130	**2.4**	**0.30**	**90**
			38		50 HRc	0.5	2.0	0.11	0.33	0.60	40	115	**1.8**	**0.24**	**75**
			38		55 HRc	0.5	1.5	0.11	0.26	0.45	40	105	**1.2**	**0.22**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.33	0.60	40	80	**1.8**	**0.22**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.26	0.45	30	65	**1.2**	**0.18**	**45**

CNMG 120408 NM – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.65	2.7	90	330	**4.0**	**0.50**	**210**
			2		190 HB	0.5	5.0	0.21	0.65	2.7	90	280	**4.0**	**0.50**	**200**
			3		250 HB	0.5	5.0	0.21	0.59	2.3	90	250	**4.0**	**0.50**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.59	1.8	60	280	**4.0**	**0.44**	**160**
			4,6		230 HB	0.5	4.0	0.21	0.59	1.8	60	250	**4.0**	**0.44**	**150**
			5,7		280 HB	0.5	4.0	0.18	0.52	1.8	60	210	**4.0**	**0.38**	**140**
			8		350 HB	0.5	3.5	0.18	0.52	1.6	60	180	**4.0**	**0.38**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.52	1.8	35	190	**3.3**	**0.38**	**120**
			10		280 HB	0.5	4.0	0.18	0.52	1.8	35	150	**3.3**	**0.38**	**110**
			11		320 HB	0.5	3.0	0.18	0.46	1.2	35	130	**3.3**	**0.35**	**100**
			11		350 HB	0.5	3.0	0.18	0.46	1.2	35	110	**3.3**	**0.35**	**90**
Stainless	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.52	1.6	85	250	**4.0**	**0.38**	**190**
			13		42 HRc	0.5	4.0	0.22	0.52	1.6	60	190	**3.5**	**0.38**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.65	2.3	60	250	**4.0**	**0.38**	**150**
			17,19		200 HB	0.5	5.0	0.15	0.65	2.0	60	230	**4.0**	**0.38**	**140**
			18,20		250 HB	0.5	5.0	0.15	0.65	1.8	60	190	**4.0**	**0.38**	**130**

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CNMG 120408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.70	180	330	**3.0**	**0.33**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.70	180	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.45	180	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.15	120	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.15	120	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.15	120	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	120	180	3.0	0.29	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.15	70	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.15	70	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.75	70	130	**2.5**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.75	70	110	**2.5**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.15	170	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	160	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.75	80	150	**2.5**	**0.27**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.75	70	140	**2.5**	**0.27**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.19	0.40	0.95	170	250	**2.5**	**0.29**	**190**
			13		42 HRc	0.5	4.0	0.19	0.40	0.95	120	190	**2.2**	**0.24**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	250	**3.0**	**0.33**	**200**
			15		200 HB	0.5	5.0	0.13	0.60	1.70	160	230	**3.0**	**0.33**	**180**
			16		250 HB	0.5	5.0	0.13	0.55	1.70	150	210	**3.0**	**0.33**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.45	120	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.25	120	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.15	120	190	**3.0**	**0.29**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			33	Inconel 700	250 HB	0.5	3.0	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.18	0.35	0.65	25	40	**2.0**	**0.27**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.18	0.40	0.75	45	65	**2.0**	**0.31**	**55**
			37	T40	-	0.5	3.0	0.18	0.35	0.65	35	55	**2.0**	**0.29**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.10	0.30	0.55	50	100	**2.0**	**0.24**	**80**
			38		50 HRc	0.5	2.0	0.10	0.25	0.40	40	90	**1.5**	**0.19**	**70**
			38		55 HRc	0.5	1.5	0.10	0.20	0.30	40	80	**1.0**	**0.17**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.10	0.25	0.40	40	60	**1.5**	**0.17**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.10	0.20	0.30	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.18	0.60	1.70	200	400	**3.0**	**0.38**	**280**

CNMG 120408 NX – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	180	430	**3.0**	**0.36**	**265**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	180	365	**3.0**	**0.33**	**240**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	180	325	**3.0**	**0.31**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	120	365	**3.0**	**0.30**	**220**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	120	325	**3.0**	**0.30**	**200**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.14	120	275	**3.0**	**0.29**	**165**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	120	235	**2.7**	**0.29**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.14	70	245	**2.5**	**0.29**	**155**
			10		280 HB	0.5	4.0	0.16	0.40	1.14	70	195	**2.5**	**0.29**	**130**
			11		320 HB	0.5	3.0	0.16	0.35	0.76	70	170	**2.2**	**0.27**	**110**
			11		350 HB	0.5	3.0	0.16	0.35	0.76	70	145	**2.2**	**0.27**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	325	**3.0**	**0.33**	**220**
			15		200 HB	0.5	5.0	0.13	0.60	1.71	160	300	**3.0**	**0.33**	**200**
			16		250 HB	0.5	5.0	0.13	0.55	1.71	150	275	**3.0**	**0.33**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	120	325	**3.0**	**0.29**	**200**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	120	300	**3.0**	**0.29**	**175**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	120	245	**3.0**	**0.29**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.10	0.30	0.57	50	130	**2.0**	**0.24**	**90**
			38		50 HRc	0.5	2.0	0.10	0.25	0.38	40	115	**1.5**	**0.19**	**75**
			38		55 HRc	0.5	1.5	0.10	0.20	0.29	40	105	**1.0**	**0.17**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.10	0.25	0.38	40	80	**1.5**	**0.17**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.10	0.20	0.29	30	65	**1.0**	**0.14**	**45**

CNMG 120408 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.7	90	330	**3.0**	**0.36**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.7	90	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.4	90	250	**3.0**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.1	60	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.1	60	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.1	60	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	1.0	60	180	**2.7**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.1	35	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.1	35	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.8	35	130	**2.2**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.8	35	110	**2.2**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.14	85	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	80	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.76	40	150	**2.5**	**0.23**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.76	35	140	**2.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.16	0.40	0.67	85	250	**2.5**	**0.19**	**190**
			13		42 HRc	0.5	4.0	0.16	0.40	0.67	60	190	**2.2**	**0.19**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	60	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	60	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	60	190	**3.0**	**0.29**	**140**

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CNMG 120412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	180	330	**4.0**	**0.46**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	180	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	180	250	**4.0**	**0.46**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	120	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	120	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	120	180	**4.0**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	70	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	70	130	**3.4**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	70	110	**3.4**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	170	270	**4.0**	**0.40**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	160	220	**4.0**	**0.38**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	80	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	70	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.28	0.54	1.70	170	250	**4.0**	**0.40**	**190**
			13		42 HRc	0.7	4.8	0.28	0.54	1.70	120	190	**3.0**	**0.35**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.81	3.40	170	250	**4.0**	**0.46**	**200**
			15		200 HB	0.7	6.0	0.20	0.81	3.06	160	230	**4.0**	**0.46**	**180**
			16		250 HB	0.7	6.0	0.20	0.74	3.06	150	210	**4.0**	**0.46**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.68	2.55	120	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.20	0.68	2.21	120	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.20	0.68	2.04	120	190	**4.0**	**0.40**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**32**
			33	Inconel 700	250 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**30**
			34	Stellite 21	350 HB	0.7	3.6	0.25	0.47	1.19	23	40	**2.7**	**0.37**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	4.8	0.25	0.54	1.36	45	65	**2.7**	**0.44**	**55**
			37	T40	-	0.7	3.6	0.25	0.47	1.19	35	55	**2.7**	**0.40**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.14	0.41	1.02	50	100	**2.7**	**0.33**	**80**
			38		50 HRc	0.7	2.4	0.14	0.34	0.68	40	90	**2.0**	**0.26**	**70**
			38		55 HRc	0.7	1.8	0.14	0.27	0.51	40	80	**1.3**	**0.24**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	60	**2.0**	**0.24**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.27	0.51	30	50	**1.3**	**0.20**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	7.0	0.25	0.81	3.10	200	400	**4.0**	**0.50**	**280**

CNMG 120412 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	180	430	**4.0**	**0.50**	**265**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	180	365	**4.0**	**0.46**	**240**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	180	325	**4.0**	**0.44**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	365	**4.0**	**0.42**	**220**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	120	325	**4.0**	**0.42**	**200**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	120	275	**4.0**	**0.40**	**165**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	120	235	**3.6**	**0.40**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	245	**3.4**	**0.40**	**155**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	70	195	**3.4**	**0.40**	**130**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	70	170	**2.9**	**0.37**	**110**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	70	145	**2.9**	**0.37**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.19	0.81	3.40	170	325	**4.0**	**0.46**	**220**
			15		200 HB	0.7	6.0	0.19	0.81	3.06	160	300	**4.0**	**0.46**	**200**
			16		250 HB	0.7	6.0	0.19	0.74	3.06	150	275	**4.0**	**0.46**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.19	0.68	2.55	120	325	**4.0**	**0.40**	**200**
			17,19		200 HB	0.7	6.0	0.19	0.68	2.21	120	300	**4.0**	**0.40**	**175**
			18,20		250 HB	0.7	6.0	0.19	0.68	2.04	120	245	**4.0**	**0.40**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.14	0.41	1.02	50	130	**2.7**	**0.33**	**90**
			38		50 HRc	0.7	2.4	0.14	0.34	0.68	40	115	**2.0**	**0.26**	**75**
			38		55 HRc	0.7	1.8	0.14	0.27	0.51	40	105	**1.3**	**0.24**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	80	**2.0**	**0.24**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.27	0.51	30	65	**1.3**	**0.20**	**45**

CNMG 120412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	90	330	**4.0**	**0.50**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	90	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	90	250	**4.0**	**0.44**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	60	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	60	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	60	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	60	180	**3.6**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	35	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	35	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	35	130	**2.9**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	35	110	**2.9**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	85	270	**4.0**	**0.33**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	80	220	**4.0**	**0.29**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	40	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	35	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.23	0.54	1.19	85	250	**3.4**	**0.26**	**190**
			13		42 HRc	0.7	4.8	0.23	0.54	1.19	60	190	**2.9**	**0.26**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.19	0.68	2.55	60	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.19	0.68	2.21	60	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.19	0.68	2.04	60	190	**4.0**	**0.40**	**140**

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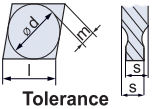
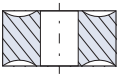
C N M M

Shape

Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13



Fixing,, Chipbreaker

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMM 120408 NR LT 1025	12	4.76	0.8	T0004115	●	●	●
CNMM 120412 NR LT 1025	12	4.76	1.2	T0004116	●	●	●

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

Machining Recommendations

Details on page 14

F ⇒ Productivity

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

CNMM 120408 NR – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.21	0.60	2.88	90	330	**4.2**	**0.46**	**240**
			2		190 HB	0.5	7.0	0.21	0.60	2.88	90	280	**4.2**	**0.42**	**220**
			3		250 HB	0.5	7.0	0.21	0.54	2.40	90	250	**4.2**	**0.40**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.21	0.54	1.92	60	280	**4.2**	**0.38**	**200**
			4,6		230 HB	0.5	5.6	0.21	0.54	1.92	60	250	**4.2**	**0.38**	**180**
			5,7		280 HB	0.5	5.6	0.18	0.48	1.92	60	210	**4.2**	**0.36**	**150**
			8		350 HB	0.5	4.9	0.18	0.48	1.60	60	180	**3.8**	**0.36**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.18	0.48	1.92	35	190	**3.5**	**0.36**	**140**
			10		280 HB	0.5	5.6	0.18	0.48	1.92	35	150	**3.5**	**0.36**	**120**
			11		320 HB	0.5	4.2	0.18	0.42	1.28	35	130	**3.1**	**0.34**	**100**
			11		350 HB	0.5	4.2	0.18	0.42	1.28	35	110	**3.1**	**0.34**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	7.0	0.20	0.48	1.92	85	270	**4.2**	**0.30**	**190**
			14		240 HB	0.5	7.0	0.20	0.48	1.60	80	220	**4.2**	**0.26**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	5.6	0.18	0.42	1.28	40	150	**3.5**	**0.29**	**100**
			14		310 HB	0.5	5.6	0.18	0.42	1.28	35	140	**3.5**	**0.29**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	7.0	0.18	0.48	1.12	85	250	**3.5**	**0.24**	**190**
			13		42 HRc	0.5	5.6	0.18	0.48	1.12	60	190	**3.1**	**0.24**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.15	0.60	2.40	60	250	**4.2**	**0.36**	**180**
			17,19		200 HB	0.5	7.0	0.15	0.60	2.08	60	230	**4.2**	**0.36**	**160**
			18,20		250 HB	0.5	7.0	0.15	0.60	1.92	60	190	**4.2**	**0.36**	**140**

CNMM 120412 NR – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	7.0	0.21	0.60	3.24	90	330	**5.0**	**0.46**	**240**
			2		190 HB	0.7	7.0	0.21	0.60	3.24	90	280	**5.0**	**0.42**	**220**
			3		250 HB	0.7	7.0	0.21	0.54	2.70	90	250	**5.0**	**0.40**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	7.0	0.21	0.54	2.16	60	280	**5.0**	**0.38**	**200**
			4,6		230 HB	0.7	5.6	0.21	0.54	2.16	60	250	**5.0**	**0.38**	**180**
			5,7		280 HB	0.7	5.6	0.18	0.48	2.16	60	210	**5.0**	**0.36**	**150**
			8		350 HB	0.7	4.9	0.18	0.48	1.80	60	180	**4.5**	**0.36**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	5.6	0.18	0.48	2.16	35	190	**4.1**	**0.36**	**140**
			10		280 HB	0.7	5.6	0.18	0.48	2.16	35	150	**4.1**	**0.36**	**120**
			11		320 HB	0.7	4.2	0.18	0.42	1.44	35	130	**3.6**	**0.34**	**100**
			11		350 HB	0.7	4.2	0.18	0.42	1.44	35	110	**3.6**	**0.34**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	7.0	0.20	0.48	2.16	85	270	**5.0**	**0.30**	**190**
			14		240 HB	0.7	7.0	0.20	0.48	1.80	80	220	**5.0**	**0.26**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	5.6	0.18	0.42	1.44	40	150	**4.1**	**0.29**	**100**
			14		310 HB	0.7	5.6	0.18	0.42	1.44	35	140	**4.1**	**0.29**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	7.0	0.18	0.48	1.26	85	250	**4.1**	**0.24**	**190**
			13		42 HRc	0.7	5.6	0.18	0.48	1.26	60	190	**3.6**	**0.24**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	7.0	0.15	0.60	2.70	60	250	**5.0**	**0.36**	**180**
			17,19		200 HB	0.7	7.0	0.15	0.60	2.34	60	230	**5.0**	**0.36**	**160**
			18,20		250 HB	0.7	7.0	0.15	0.60	2.16	60	190	**5.0**	**0.36**	**140**

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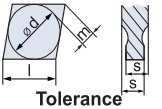
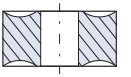
C N M P

Shape

Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13



Fixing, Chipbreaker

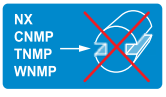
LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMP 120408 NN LT 1000	12	4.76	0.8	T0001900	●	●	●
CNMP 120412 NN LT 1000	12	4.76	1.2	T0001901	●	●	●

LT 1025 Recommended for moderate to low speed					Application guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CNMP 120408 NN LT 1025	12	4.76	0.8	T0004117	●	●	●
CNMP 120412 NN LT 1025	12	4.76	1.2	T0004118	●	●	●

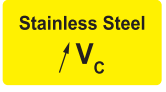
80° diamond shape, double sided inserts with positive chipbreaker geometry. Generates low cutting force. Suitable for high temperature alloys.

Machining Recommendations

Details on page 14



LT 1000



LT 1000

LT 1000 and 1025

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

CNMP 120408 NN – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

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CNMP 120412 NN – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	180	330	**4.0**	**0.46**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	180	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	180	250	**4.0**	**0.46**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	120	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	120	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	120	180	4.0	0.40	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	70	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	70	130	**3.4**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	70	110	**3.4**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	170	270	**4.0**	**0.40**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	160	220	**4.0**	**0.38**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	80	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	70	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.28	0.54	1.70	170	250	**4.0**	**0.40**	**190**
			13		42 HRc	0.7	4.8	0.28	0.54	1.70	120	190	**3.0**	**0.36**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.81	3.40	170	250	**4.0**	**0.46**	**200**
			15		200 HB	0.7	6.0	0.20	0.81	3.06	160	230	**4.0**	**0.46**	**180**
			16		250 HB	0.7	6.0	0.20	0.74	3.06	150	210	**4.0**	**0.46**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.68	2.55	120	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.20	0.68	2.21	120	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.20	0.68	2.04	120	190	**4.0**	**0.40**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**32**
			33	Inconel 700	250 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**30**
			34	Stellite 21	350 HB	0.7	3.6	0.25	0.47	1.19	23	40	**2.7**	**0.37**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	4.8	0.25	0.54	1.36	45	65	**2.7**	**0.40**	**55**
			37	T40	-	0.7	3.6	0.25	0.47	1.19	35	55	**2.7**	**0.37**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.14	0.41	1.02	50	100	**2.7**	**0.33**	**80**
			38		50 HRc	0.7	2.4	0.14	0.34	0.68	40	90	**2.0**	**0.26**	**70**
			38		55 HRc	0.7	1.8	0.14	0.27	0.51	40	80	**1.3**	**0.24**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	60	**2.0**	**0.24**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.27	0.51	30	50	**1.3**	**0.20**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	7.0	0.25	0.81	3.10	200	400	**4.0**	**0.50**	**280**

CNMP 120408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

CNMP 120412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	90	330	**4.0**	**0.50**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	90	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	90	250	**4.0**	**0.44**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	60	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	60	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	60	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	60	180	**3.6**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	35	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	35	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	35	130	**2.9**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	35	110	**2.9**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	85	270	**4.0**	**0.33**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	80	220	**4.0**	**0.29**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	40	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	35	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.23	0.54	1.19	85	250	**3.4**	**0.26**	**190**
			13		42 HRc	0.7	4.8	0.23	0.54	1.19	60	190	**2.9**	**0.26**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.19	0.68	2.55	60	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.19	0.68	2.21	60	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.19	0.68	2.04	60	190	**4.0**	**0.40**	**140**

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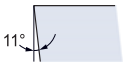
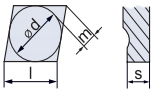
C P M T

Shape

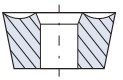


Clearance Angle



Tolerance

s ± 0.13
For l = 06/09, **d** ± 0.05 **m** ± 0.08
For l = 12, **d** ± 0.08 **m** ± 0.13



Fixing, Chipbreaker

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
CPMT 060204 NN LT 1000	6	2.38	0.4	T0003088	●	●	●
CPMT 060208 NN LT 1000	6	2.38	0.8	T0003144	●	●	●
CPMT 09T304 NN LT 1000	9	3.97	0.4	T0003145	●	●	●
CPMT 09T308 NN LT 1000	9	3.97	0.8	T0003146	●	●	●

80° diamond shape inserts with positive chipbreaker geometry. Very popular and useful for boring (even of small diameters), facing and external turning operations.

Machining Recommendations

Details on page 14

Stainless Steel
V_c

F ⇒
Productivity

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

CPMT 060204 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.4	2.1	0.08	0.20	0.37	180	330	**1.0**	**0.16**	**240**
			2		190 HB	0.4	1.8	0.08	0.19	0.32	180	280	**1.0**	**0.16**	**220**
			3		250 HB	0.4	1.8	0.08	0.17	0.30	180	250	**1.0**	**0.16**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.4	1.8	0.08	0.17	0.31	120	280	**1.0**	**0.14**	**200**
			4,6		230 HB	0.4	1.8	0.08	0.17	0.30	120	250	**1.0**	**0.14**	**180**
			5,7		280 HB	0.4	1.4	0.08	0.15	0.25	120	210	**1.0**	**0.14**	**150**
			8		350 HB	0.4	1.4	0.08	0.15	0.22	120	180	**1.0**	**0.14**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.4	1.8	0.07	0.15	0.25	70	190	**1.0**	**0.11**	**140**
			10		280 HB	0.4	1.8	0.07	0.14	0.25	70	150	**1.0**	**0.11**	**120**
			11		320 HB	0.4	1.4	0.07	0.12	0.20	70	130	**1.0**	**0.11**	**100**
			11		350 HB	0.4	1.4	0.07	0.12	0.16	70	110	**1.0**	**0.11**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.4	1.8	0.08	0.15	0.20	170	270	**1.0**	**0.11**	**220**
			14		240 HB	0.4	1.8	0.08	0.15	0.16	160	220	**1.0**	**0.11**	**190**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.4	1.4	0.07	0.12	0.12	80	150	**1.0**	**0.11**	**100**
			14		310 HB	0.4	1.4	0.07	0.12	0.12	70	140	**1.0**	**0.11**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.4	1.8	0.08	0.15	0.20	170	250	**0.9**	**0.14**	**210**
			13		42 HRc	0.4	1.4	0.08	0.14	0.16	120	190	**0.9**	**0.11**	**140**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.4	2.1	0.06	0.17	0.40	170	250	**1.0**	**0.16**	**200**
			15		200 HB	0.4	2.1	0.06	0.17	0.37	160	230	**1.0**	**0.16**	**180**
			16		250 HB	0.4	2.1	0.06	0.17	0.37	150	210	**1.0**	**0.16**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.4	1.8	0.06	0.15	0.30	120	250	**1.0**	**0.14**	**180**
			17,19		200 HB	0.4	1.8	0.06	0.15	0.25	120	230	**1.0**	**0.14**	**160**
			18,20		250 HB	0.4	1.8	0.06	0.15	0.25	120	190	**1.0**	**0.14**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.4	1.4	0.08	0.13	0.16	25	45	**1.0**	**0.11**	**33**
			33	Inconel 700	250 HB	0.4	1.4	0.08	0.13	0.16	25	45	**1.0**	**0.11**	**30**
			34	Stellite 21	350 HB	0.4	1.4	0.08	0.13	0.16	23	40	**1.0**	**0.11**	**28**
	Ti Based	10	36	TiAl6V4	-	0.4	1.4	0.08	0.14	0.20	45	65	**1.0**	**0.13**	**55**
			37	T40	-	0.4	1.4	0.08	0.12	0.16	35	55	**1.0**	**0.11**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.4	1.3	0.04	0.10	0.12	50	100	**0.8**	**0.10**	**80**
			38		50 HRc	0.4	1.1	0.04	0.09	0.11	40	90	**0.6**	**0.08**	**70**
			38		55 HRc	0.4	1.0	0.04	0.08	0.08	40	80	**0.5**	**0.06**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.4	1.1	0.04	0.10	0.11	40	60	**0.6**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.4	1.0	0.04	0.08	0.08	30	50	**0.5**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.4	2.8	0.08	0.26	0.43	200	400	**1.0**	**0.18**	**280**

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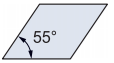
CPMT 09T304 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.2	3.0	0.11	0.23	0.60	180	330	**1.6**	**0.18**	**240**
			2		190 HB	0.2	2.5	0.11	0.22	0.52	180	280	**1.6**	**0.18**	**220**
			3		250 HB	0.2	2.5	0.11	0.20	0.48	180	250	**1.6**	**0.18**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.2	2.5	0.11	0.20	0.50	120	280	**1.6**	**0.15**	**200**
			4,6		230 HB	0.2	2.5	0.11	0.20	0.48	120	250	**1.6**	**0.15**	**180**
			5,7		280 HB	0.2	2.0	0.11	0.18	0.40	120	210	**1.6**	**0.15**	**150**
			8		350 HB	0.2	2.0	0.11	0.18	0.35	120	180	**1.6**	**0.15**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.2	2.5	0.10	0.18	0.40	70	190	**1.6**	**0.12**	**140**
			10		280 HB	0.2	2.5	0.10	0.16	0.40	70	150	**1.6**	**0.12**	**120**
			11		320 HB	0.2	2.0	0.10	0.14	0.32	70	130	**1.6**	**0.12**	**100**
			11		350 HB	0.2	2.0	0.10	0.14	0.26	70	110	**1.6**	**0.12**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.2	2.5	0.11	0.18	0.32	170	270	**1.6**	**0.12**	**220**
			14		240 HB	0.2	2.5	0.11	0.18	0.26	160	220	**1.6**	**0.12**	**190**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.2	2.0	0.10	0.14	0.19	80	150	**1.6**	**0.12**	**100**
			14		310 HB	0.2	2.0	0.10	0.14	0.19	70	140	**1.6**	**0.12**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.2	2.5	0.11	0.18	0.32	170	250	**1.4**	**0.15**	**210**
			13		42 HRc	0.2	2.0	0.11	0.16	0.26	120	190	**1.4**	**0.12**	**140**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.2	3.0	0.08	0.20	0.64	170	250	**1.6**	**0.18**	**200**
			15		200 HB	0.2	3.0	0.08	0.20	0.60	160	230	**1.6**	**0.18**	**180**
			16		250 HB	0.2	3.0	0.08	0.20	0.60	150	210	**1.6**	**0.18**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.2	2.5	0.08	0.18	0.48	120	250	**1.6**	**0.15**	**180**
			17,19		200 HB	0.2	2.5	0.08	0.18	0.40	120	230	**1.6**	**0.15**	**160**
			18,20		250 HB	0.2	2.5	0.08	0.18	0.40	120	190	**1.6**	**0.15**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.2	2.0	0.11	0.15	0.26	25	45	**1.6**	**0.12**	**33**
			33	Inconel 700	250 HB	0.2	2.0	0.11	0.15	0.26	25	45	**1.6**	**0.12**	**30**
			34	Stellite 21	350 HB	0.2	2.0	0.11	0.15	0.26	23	40	**1.6**	**0.12**	**28**
	Ti Based	10	36	TiAl6V4	-	0.2	2.0	0.11	0.16	0.32	45	65	**1.6**	**0.14**	**55**
			37	T40	-	0.2	2.0	0.11	0.14	0.26	35	55	**1.6**	**0.12**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.2	1.8	0.06	0.12	0.19	50	100	**1.3**	**0.11**	**80**
			38		50 HRc	0.2	1.6	0.06	0.11	0.18	40	90	**1.0**	**0.09**	**70**
			38		55 HRc	0.2	1.4	0.06	0.09	0.13	40	80	**0.8**	**0.07**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.2	1.6	0.06	0.12	0.18	40	60	**1.0**	**0.11**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.2	1.4	0.06	0.09	0.13	30	50	**0.8**	**0.07**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.2	3.9	0.11	0.30	0.69	200	400	**1.6**	**0.20**	**280**

CPMT 09T308 NN – **LT 10 | LT 1000**

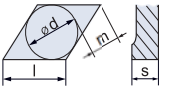
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.21	0.50	1.62	180	330	**3.0**	**0.34**	**240**
			2		190 HB	0.5	4.0	0.21	0.50	1.62	180	280	**3.0**	**0.32**	**220**
			3		250 HB	0.5	4.0	0.21	0.45	1.35	180	250	**3.0**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.21	0.45	1.08	120	280	**3.0**	**0.29**	**200**
			4,6		230 HB	0.5	3.2	0.21	0.45	1.08	120	250	**3.0**	**0.29**	**180**
			5,7		280 HB	0.5	3.2	0.18	0.40	1.08	120	210	**3.0**	**0.27**	**150**
			8		350 HB	0.5	2.8	0.18	0.40	0.90	120	180	**2.7**	**0.27**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.18	0.40	1.08	70	190	**2.5**	**0.27**	**140**
			10		280 HB	0.5	3.2	0.18	0.40	1.08	70	150	**2.5**	**0.27**	**120**
			11		320 HB	0.5	2.4	0.18	0.35	0.72	70	130	**2.2**	**0.25**	**100**
			11		350 HB	0.5	2.4	0.18	0.35	0.72	70	110	**2.2**	**0.25**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.20	0.40	1.08	170	270	**3.0**	**0.23**	**190**
			14		240 HB	0.5	4.0	0.20	0.40	0.90	160	220	**3.0**	**0.20**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.18	0.35	0.72	80	150	**2.5**	**0.22**	**100**
			14		310 HB	0.5	3.2	0.18	0.35	0.72	70	140	**2.5**	**0.22**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.18	0.40	0.63	170	250	**2.5**	**0.18**	**190**
			13		42 HRc	0.5	3.2	0.18	0.40	0.63	120	190	**2.2**	**0.18**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.15	0.60	1.80	170	250	**3.0**	**0.32**	**200**
			15		200 HB	0.5	4.0	0.15	0.60	1.62	160	230	**3.0**	**0.32**	**180**
			16		250 HB	0.5	4.0	0.15	0.55	1.62	150	210	**3.0**	**0.32**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.15	0.50	1.35	120	250	**3.0**	**0.27**	**180**
			17,19		200 HB	0.5	4.0	0.15	0.50	1.17	120	230	**3.0**	**0.27**	**160**
			18,20		250 HB	0.5	4.0	0.15	0.50	1.08	120	190	**3.0**	**0.27**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**32**
			33	Inconel 700	250 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**30**
			34	Stellite 21	350 HB	0.5	2.4	0.20	0.35	0.63	23	40	**2.0**	**0.25**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.8	0.20	0.40	0.72	45	65	**2.0**	**0.30**	**55**
			37	T40	-	0.5	2.4	0.20	0.35	0.63	35	55	**2.0**	**0.27**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.11	0.30	0.54	50	100	**2.0**	**0.23**	**80**
			38		50 HRc	0.5	1.6	0.11	0.25	0.36	40	90	**1.5**	**0.18**	**70**
			38		55 HRc	0.5	1.2	0.11	0.20	0.27	40	80	**1.0**	**0.16**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.6	0.11	0.25	0.36	40	60	**1.5**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.2	0.11	0.20	0.27	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.8	0.20	0.60	1.62	200	400	**3.0**	**0.36**	**280**

D C M T

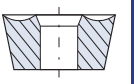


Shape

Clearance Angle



Tolerance
d ± 0.05
m ± 0.08
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DCMT 070204 NN LT 10	7	2.38	0.4	T0000064	●	●	●
DCMT 11T304 NN LT 10	11	3.97	0.4	T0000065	●	●	●
DCMT 11T308 NN LT 10	11	3.97	0.8	T0000721	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DCMT 070204 NN LT 1000	7	2.38	0.4	T0001902	●	●	●
DCMT 11T304 NN LT 1000	11	3.97	0.4	T0001903	●	●	●
DCMT 11T308 NN LT 1000	11	3.97	0.8	T0001904	●	●	●

55° diamond shape inserts. Suitable for internal turning due to a unique chip removal geometry. Generates low cutting force. Most suitable for small work-pieces.

Machining Recommendations

Details on page 14

Stainless Steel
V_c

LT 10 and LT 1000

F ⇒
Productivity

LT 10 and LT 1000

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

DCMT 070204 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	2.1	0.08	0.20	0.37	180	330	**1.0**	**0.14**	**300**
			2		190 HB	0.3	1.8	0.08	0.19	0.32	180	280	**1.0**	**0.14**	**260**
			3		250 HB	0.3	1.8	0.08	0.17	0.30	180	250	**1.0**	**0.14**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	1.8	0.08	0.17	0.31	120	280	**1.0**	**0.11**	**260**
			4,6		230 HB	0.3	1.8	0.08	0.17	0.30	120	250	**1.0**	**0.11**	**240**
			5,7		280 HB	0.3	1.4	0.08	0.15	0.25	120	210	**1.0**	**0.10**	**200**
			8		350 HB	0.3	1.4	0.08	0.15	0.22	120	180	**1.0**	**0.10**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	1.8	0.07	0.15	0.25	70	190	**0.9**	**0.08**	**180**
			10		280 HB	0.3	1.8	0.07	0.14	0.25	70	150	**0.9**	**0.08**	**140**
			11		320 HB	0.3	1.4	0.07	0.12	0.20	70	130	**0.9**	**0.08**	**120**
			11		350 HB	0.3	1.4	0.07	0.12	0.16	70	110	**0.9**	**0.08**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	1.8	0.06	0.15	0.20	170	270	**1.0**	**0.07**	**260**
			14		240 HB	0.3	1.8	0.06	0.15	0.16	160	220	**1.0**	**0.06**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	1.4	0.06	0.12	0.12	80	150	**0.9**	**0.06**	**140**
			14		310 HB	0.3	1.4	0.06	0.12	0.12	70	140	**0.9**	**0.06**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	1.8	0.06	0.15	0.20	170	250	**0.9**	**0.07**	**240**
			13		42 HRc	0.3	1.4	0.06	0.14	0.16	120	190	**0.8**	**0.06**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	2.1	0.06	0.17	0.40	170	250	**1.0**	**0.14**	**240**
			15		200 HB	0.3	2.1	0.06	0.17	0.37	160	230	**1.0**	**0.14**	**220**
			16		250 HB	0.3	2.1	0.06	0.17	0.37	150	210	**1.0**	**0.14**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	1.8	0.06	0.15	0.30	120	250	**1.0**	**0.10**	**240**
			17,19		200 HB	0.3	1.8	0.06	0.15	0.25	120	230	**1.0**	**0.10**	**220**
			18,20		250 HB	0.3	1.8	0.06	0.15	0.25	120	190	**1.0**	**0.10**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	**0.08**	**40**
			33	Inconel 700	250 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	**0.08**	**40**
			34	Stellite 21	350 HB	0.3	1.4	0.07	0.13	0.16	23	45	**0.7**	**0.08**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	1.4	0.07	0.14	0.20	45	65	**0.7**	**0.11**	**60**
			37	T40	-	0.3	1.4	0.07	0.12	0.16	35	60	**0.7**	**0.08**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.3	0.04	0.10	0.12	50	100	**0.7**	**0.08**	**90**
			38		50 HRc	0.3	1.1	0.04	0.09	0.11	40	90	**0.6**	**0.06**	**80**
			38		55 HRc	0.0	1.0	0.04	0.08	0.08	40	80	**0.5**	**0.05**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.1	0.04	0.10	0.11	40	60	**0.6**	**0.08**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.0	0.04	0.08	0.08	30	50	**0.5**	**0.05**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	2.8	0.08	0.26	0.43	200	400	**1.0**	**0.18**	**350**

DCMT 11T304 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.0	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

DCMT 11T308 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.21	0.50	1.62	180	330	**3.0**	**0.32**	**240**
			2		190 HB	0.5	4.0	0.21	0.50	1.62	180	280	**3.0**	**0.32**	**220**
			3		250 HB	0.5	4.0	0.21	0.45	1.35	180	250	**3.0**	**0.32**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.21	0.45	1.08	120	280	**3.0**	**0.29**	**200**
			4,6		230 HB	0.5	3.2	0.21	0.45	1.08	120	250	**3.0**	**0.29**	**180**
			5,7		280 HB	0.5	3.2	0.18	0.40	1.08	120	210	**3.0**	**0.27**	**150**
			8		350 HB	0.5	2.8	0.18	0.40	0.90	120	180	**3.0**	**0.27**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.18	0.40	1.08	70	190	**2.5**	**0.27**	**140**
			10		280 HB	0.5	3.2	0.18	0.40	1.08	70	150	**2.5**	**0.27**	**120**
			11		320 HB	0.5	2.4	0.18	0.35	0.72	70	130	**2.5**	**0.25**	**100**
			11		350 HB	0.5	2.4	0.18	0.35	0.72	70	110	**2.5**	**0.25**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.20	0.40	1.08	170	270	**3.0**	**0.32**	**190**
			14		240 HB	0.5	4.0	0.20	0.40	0.90	160	220	**3.0**	**0.29**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.18	0.35	0.72	80	150	**2.5**	**0.25**	**100**
			14		310 HB	0.5	3.2	0.18	0.35	0.72	70	140	**2.5**	**0.25**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.22	0.40	0.90	170	250	**3.0**	**0.29**	**190**
			13		42 HRc	0.5	3.2	0.22	0.40	0.90	120	190	**2.5**	**0.29**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.15	0.60	1.80	170	250	**3.0**	**0.32**	**200**
			15		200 HB	0.5	4.0	0.15	0.60	1.62	160	230	**3.0**	**0.32**	**180**
			16		250 HB	0.5	4.0	0.15	0.55	1.62	150	210	**3.0**	**0.32**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.15	0.50	1.35	120	250	**3.0**	**0.27**	**180**
			17,19		200 HB	0.5	4.0	0.15	0.50	1.17	120	230	**3.0**	**0.27**	**160**
			18,20		250 HB	0.5	4.0	0.15	0.50	1.08	120	190	**3.0**	**0.27**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**32**
			33	Inconel 700	250 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**30**
			34	Stellite 21	350 HB	0.5	2.4	0.20	0.35	0.63	23	40	**2.0**	**0.25**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.2	0.20	0.40	0.72	45	65	**2.0**	**0.30**	**55**
			37	T40	-	0.5	2.4	0.20	0.35	0.63	35	55	**2.0**	**0.27**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.11	0.30	0.54	50	100	**2.0**	**0.23**	**80**
			38		50 HRc	0.5	1.6	0.11	0.25	0.36	40	90	**1.5**	**0.18**	**70**
			38		55 HRc	0.5	1.2	0.11	0.20	0.27	40	80	**1.0**	**0.16**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.6	0.11	0.25	0.36	40	60	**1.5**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.2	0.11	0.20	0.27	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.8	0.20	0.60	1.60	200	400	**3.0**	**0.36**	**280**

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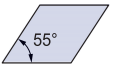
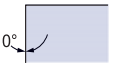
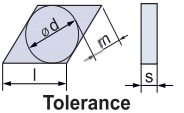
D N M A



Shape

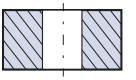


Clearance Angle



Tolerance

s ± 0.13
For l = 11, **d** ± 0.05 **m** ± 0.08
For l = 15, **d** ± 0.08 **m** ± 0.13



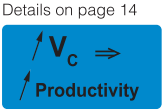
Fixing, Chipbreaker

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNMA 150608 LT 1005	15	6.35	0.8	T0003241	●	●	●
DNMA 150612 LT 1005	15	6.35	1.2	T0003242	●	●	●

55° diamond shape flat inserts. Strong edge preparation, mainly for gray cast iron machining. Suitable for profiling of complex shapes, from roughing to finishing.

Machining Recommendations

Details on page 14



Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

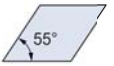
DNMA 150608 – **LT 1005**

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.15	0.42	1.3	270	450	**3.2**	**0.30**	**350**
			15		200 HB	0.7	5.0	0.15	0.40	1.2	200	320	**3.2**	**0.30**	**250**
			16		250 HB	0.7	5.0	0.15	0.36	1.2	170	240	**3.2**	**0.30**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.15	0.42	1.0	130	260	**2.5**	**0.28**	**240**
			17,19		200 HB	0.7	5.0	0.15	0.40	0.8	130	230	**2.5**	**0.28**	**210**
			18,20		250 HB	0.7	5.0	0.15	0.36	0.8	130	190	**2.5**	**0.28**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.0	0.11	0.22	0.2	40	60	**1.4**	**0.15**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.11	0.22	0.2	30	50	**1.0**	**0.15**	**40**

DNMA 150612 – **LT 1005**

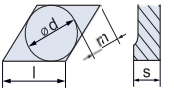
	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.15	0.46	1.3	270	450	**3.5**	**0.33**	**350**
			15		200 HB	0.7	5.0	0.15	0.42	1.2	200	320	**3.5**	**0.33**	**250**
			16		250 HB	0.7	5.0	0.15	0.38	1.2	170	240	**3.5**	**0.33**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.15	0.46	1.0	130	260	**2.5**	**0.30**	**240**
			17,19		200 HB	0.7	5.0	0.15	0.42	0.9	130	230	**2.5**	**0.30**	**210**
			18,20		250 HB	0.7	5.0	0.15	0.38	0.8	130	190	**2.5**	**0.30**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.0	0.11	0.24	0.3	40	60	**1.4**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.11	0.24	0.2	30	50	**1.0**	**0.15**	**40**

D N M G



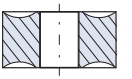
Shape

Clearance Angle



Tolerance

s ± 0.13
For l = 11, **d** ± 0.05 **m** ± 0.08
For l = 15, **d** ± 0.08 **m** ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNMG 110404 NN LT 10	11	4.76	0.4	T0000066	●	●	●
DNMG 110408 NN LT 10	11	4.76	0.8	T0000675	●	●	●
DNMG 150404 NN LT 10	15	4.76	0.4	T0000476	●	●	●
DNMG 150408 NN LT 10	15	4.76	0.8	T0000475	●	●	●
DNMG 150412 NN LT 10	15	4.76	1.2	T0001021	●	●	●
DNMG 150604 NN LT 10	15	6.35	0.4	T0000583	●	●	●
DNMG 150608 NN LT 10	15	6.35	0.8	T0000067	●	●	●
DNMG 150612 NN LT 10	15	6.35	1.2	T0000672	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNMG 110404 NN LT 1000	11	4.76	0.4	T0001905	●	●	●
DNMG 110408 NN LT 1000	11	4.76	0.8	T0001906	●	●	●
DNMG 150404 NN LT 1000	15	4.76	0.4	T0001907	●	●	●
DNMG 150408 NN LT 1000	15	4.76	0.8	T0001908	●	●	●
DNMG 150408 NX LT 1000	15	4.76	0.8	T0003097	●	●	●
DNMG 150412 NN LT 1000	15	4.76	1.2	T0001909	●	●	●
DNMG 150604 NN LT 1000	15	6.35	0.4	T0001910	●	●	●
DNMG 150608 NN LT 1000	15	6.35	0.8	T0001911	●	●	●
DNMG 150608 NX LT 1000	15	6.35	0.8	T0003220	●	●	●
DNMG 150612 NN LT 1000	15	6.35	1.2	T0001912	●	●	●

Machining Recommendations

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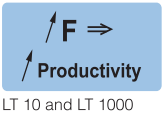
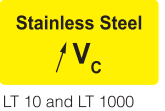


LT 10 and LT 1000



LT 10 and LT 1000

NX LT 10 and LT 1000

NX LT 10 and LT 1000

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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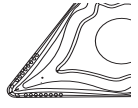
www.akytec.ru

D N M G

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNMG 110408 NN LT 1005	11	4.76	0.8	T0004059	●	●	●
DNMG 150408 NN LT 1005	15	4.76	0.8	T0004060	●	●	●
DNMG 150408 NX LT 1005	15	4.76	1.2	T0004062	●	●	●
DNMG 150412 NN LT 1005	15	4.76	1.2	T0004064	●	●	●
DNMG 150608 NN LT 1005	15	6.35	0.8	T0004067	●	●	●
DNMG 150608 NX LT 1005	15	6.35	0.8	T0004063	●	●	●
DNMG 150612 NN LT 1005	15	6.35	1.2	T0004068	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNMG 110408 NN LT 1025	11	4.76	0.8	T0004119	●	●	●
DNMG 150408 NN LT 1025	15	4.76	0.8	T0004121	●	●	●
DNMG 150408 NX LT 1025	15	4.76	1.2	T0004122	●	●	●
DNMG 150412 NN LT 1025	15	4.76	1.2	T0004124	●	●	●
DNMG 150608 NN LT 1025	15	6.35	0.8	T0004126	●	●	●
DNMG 150608 NX LT 1025	15	6.35	0.8	T0004123	●	●	●
DNMG 150612 NN LT 1025	15	6.35	1.2	T0004127	●	●	●

55° diamond shape inserts. Suitable for profiling of complex shapes, from roughing to finishing.



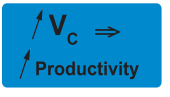
NX chipbreaker

NN chipbreaker

Machining Recommendations

Details on page 14

NX for LT 1025



LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

DNMG 110404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.0	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

DNMG 110408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

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DNMG 110408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	430	**3.0**	**0.38**	**265**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	365	**3.0**	**0.35**	**240**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	325	**3.0**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	365	**3.0**	**0.32**	**220**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	325	**3.0**	**0.32**	**200**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	275	**3.0**	**0.30**	**165**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	235	**2.7**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	245	**2.5**	**0.30**	**155**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	195	**2.5**	**0.30**	**130**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	170	**2.2**	**0.28**	**110**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	145	**2.2**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	325	**3.0**	**0.35**	**220**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	300	**3.0**	**0.35**	**200**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	275	**3.0**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	325	**3.0**	**0.30**	**200**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	300	**3.0**	**0.30**	**175**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	245	**3.0**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	130	**2.0**	**0.25**	**90**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	115	**1.5**	**0.20**	**75**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	105	**1.0**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	80	**1.5**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	65	**1.0**	**0.15**	**45**

DNMG 110408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

DNMG 150404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.0	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

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DNMG 150408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

DNMG 150408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	430	**3.0**	**0.38**	**265**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	365	**3.0**	**0.35**	**240**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	325	**3.0**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	365	**3.0**	**0.32**	**220**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	325	**3.0**	**0.32**	**200**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	275	**3.0**	**0.30**	**165**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	235	**2.7**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	245	**2.5**	**0.30**	**155**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	195	**2.5**	**0.30**	**130**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	170	**2.2**	**0.28**	**110**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	145	**2.2**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	325	**3.0**	**0.35**	**220**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	300	**3.0**	**0.35**	**200**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	275	**3.0**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	325	**3.0**	**0.30**	**200**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	300	**3.0**	**0.30**	**175**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	245	**3.0**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	130	**2.0**	**0.25**	**90**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	115	**1.5**	**0.20**	**75**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	105	**1.0**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	80	**1.5**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	65	**1.0**	**0.15**	**45**

DNMG 150408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

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DNMG 150408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

DNMG 150408 NX – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	180	430	**3.0**	**0.36**	**265**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	180	365	**3.0**	**0.33**	**240**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	180	325	**3.0**	**0.31**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	120	365	**3.0**	**0.30**	**220**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	120	325	**3.0**	**0.30**	**200**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.14	120	275	**3.0**	**0.29**	**165**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	120	235	**2.7**	**0.29**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.14	70	245	**2.5**	**0.29**	**155**
			10		280 HB	0.5	4.0	0.16	0.40	1.14	70	195	**2.5**	**0.29**	**130**
			11		320 HB	0.5	3.0	0.16	0.35	0.76	70	170	**2.2**	**0.27**	**110**
			11		350 HB	0.5	3.0	0.16	0.35	0.76	70	145	**2.2**	**0.27**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	325	**3.0**	**0.33**	**220**
			15		200 HB	0.5	5.0	0.13	0.60	1.71	160	300	**3.0**	**0.33**	**200**
			16		250 HB	0.5	5.0	0.13	0.55	1.71	150	275	**3.0**	**0.33**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	120	325	**3.0**	**0.29**	**200**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	120	300	**3.0**	**0.29**	**175**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	120	245	**3.0**	**0.29**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.10	0.30	0.57	50	130	**2.0**	**0.24**	**90**
			38		50 HRc	0.5	2.0	0.10	0.25	0.38	40	115	**1.5**	**0.19**	**75**
			38		55 HRc	0.5	1.5	0.10	0.20	0.29	40	105	**1.0**	**0.17**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.10	0.25	0.38	40	80	**1.5**	**0.17**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.10	0.20	0.29	30	65	**1.0**	**0.14**	**45**

DNMG 150408 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	90	330	**3.0**	**0.36**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	90	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	90	250	**3.0**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	60	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	60	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.14	60	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	60	180	**2.7**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.14	35	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.14	35	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.76	35	130	**2.2**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.76	35	110	**2.2**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.14	85	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	80	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.76	40	150	**2.5**	**0.23**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.76	35	140	**2.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.16	0.40	0.67	85	250	**2.5**	**0.19**	**190**
			13		42 HRc	0.5	4.0	0.16	0.40	0.67	60	190	**2.2**	**0.19**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	60	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	60	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	60	190	**3.0**	**0.29**	**140**

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DNMG 150412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	180	330	**4.0**	**0.46**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	180	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	180	250	**4.0**	**0.46**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	120	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	120	210	**4.0**	**0.40**	**150**
			8		*350 HB*	0.7	4.2	0.23	0.54	1.70	120	180	**4.0**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	70	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	70	130	**3.4**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	70	110	**3.4**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	170	270	**4.0**	**0.40**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	160	220	**4.0**	**0.38**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	80	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	70	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.28	0.54	1.70	170	250	**4.0**	**0.40**	**190**
			13		42 HRc	0.7	4.8	0.28	0.54	1.70	120	190	**3.0**	**0.35**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.81	3.40	170	250	**4.0**	**0.46**	**200**
			15		200 HB	0.7	6.0	0.20	0.81	3.06	160	230	**4.0**	**0.46**	**180**
			16		250 HB	0.7	6.0	0.20	0.74	3.06	150	210	**4.0**	**0.46**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.68	2.55	120	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.20	0.68	2.21	120	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.20	0.68	2.04	120	190	**4.0**	**0.40**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**32**
			33	Inconel 700	250 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**30**
			34	Stellite 21	350 HB	0.7	3.6	0.25	0.47	1.19	23	40	**2.7**	**0.37**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	4.8	0.25	0.54	1.36	45	65	**2.7**	**0.44**	**55**
			37	T40	-	0.7	3.6	0.25	0.47	1.19	35	55	**2.7**	**0.40**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.14	0.41	1.02	50	100	**2.7**	**0.33**	**80**
			38		50 HRc	0.7	2.4	0.14	0.34	0.68	40	90	**2.0**	**0.26**	**70**
			38		55 HRc	0.7	1.8	0.14	0.27	0.51	40	80	**1.3**	**0.24**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	60	**2.0**	**0.24**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.27	0.51	30	50	**1.3**	**0.20**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	7.0	0.25	0.81	3.10	200	400	**4.0**	**0.50**	**280**

DNMG 150412 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	180	430	**4.0**	**0.50**	**265**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	180	365	**4.0**	**0.46**	**240**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	180	325	**4.0**	**0.44**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	365	**4.0**	**0.42**	**220**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	120	325	**4.0**	**0.42**	**200**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	120	275	**4.0**	**0.40**	**165**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	120	235	**3.6**	**0.40**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	245	**3.4**	**0.40**	**155**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	70	195	**3.4**	**0.40**	**130**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	70	170	**2.9**	**0.37**	**110**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	70	145	**2.9**	**0.37**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.19	0.81	3.40	170	325	**4.0**	**0.46**	**220**
			15		200 HB	0.7	6.0	0.19	0.81	3.06	160	300	**4.0**	**0.46**	**200**
			16		250 HB	0.7	6.0	0.19	0.74	3.06	150	275	**4.0**	**0.46**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.19	0.68	2.55	120	325	**4.0**	**0.40**	**200**
			17,19		200 HB	0.7	6.0	0.19	0.68	2.21	120	300	**4.0**	**0.40**	**175**
			18,20		250 HB	0.7	6.0	0.19	0.68	2.04	120	245	**4.0**	**0.40**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.14	0.41	1.02	50	130	**2.7**	**0.33**	**90**
			38		50 HRc	0.7	2.4	0.14	0.34	0.68	40	115	**2.0**	**0.26**	**75**
			38		55 HRc	0.7	1.8	0.14	0.27	0.51	40	105	**1.3**	**0.24**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	80	**2.0**	**0.24**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.27	0.51	30	65	**1.3**	**0.20**	**45**

DNMG 150412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	90	330	**4.0**	**0.50**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	90	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	90	250	**4.0**	**0.44**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	60	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	60	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	60	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	60	180	**3.6**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	35	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	35	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	35	130	**2.9**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	35	110	**2.9**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	85	270	**4.0**	**0.33**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	80	220	**4.0**	**0.29**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	40	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	35	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.23	0.54	1.19	85	250	**3.4**	**0.26**	**190**
			13		42 HRc	0.7	4.8	0.23	0.54	1.19	60	190	**2.9**	**0.26**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.19	0.68	2.55	60	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.19	0.68	2.21	60	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.19	0.68	2.04	60	190	**4.0**	**0.40**	**140**

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DNMG 150604 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

DNMG 150608 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

DNMG 150608 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	430	**3.0**	**0.38**	**265**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	365	**3.0**	**0.35**	**240**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	325	**3.0**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	365	**3.0**	**0.32**	**220**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	325	**3.0**	**0.32**	**200**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	275	**3.0**	**0.30**	**165**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	235	**2.7**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	245	**2.5**	**0.30**	**155**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	195	**2.5**	**0.30**	**130**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	170	**2.2**	**0.28**	**110**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	145	**2.2**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	325	**3.0**	**0.35**	**220**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	300	**3.0**	**0.35**	**200**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	275	**3.0**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	325	**3.0**	**0.30**	**200**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	300	**3.0**	**0.30**	**175**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	245	**3.0**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	130	**2.0**	**0.25**	**90**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	115	**1.5**	**0.20**	**75**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	105	**1.0**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	80	**1.5**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	65	**1.0**	**0.15**	**45**

DNMG 150608 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

DNMG 150608 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

DNMG 150608 NX – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	180	430	**3.0**	**0.36**	**265**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	180	365	**3.0**	**0.33**	**240**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	180	325	**3.0**	**0.31**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	120	365	**3.0**	**0.30**	**220**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	120	325	**3.0**	**0.30**	**200**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.14	120	275	**3.0**	**0.29**	**165**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	120	235	**2.7**	**0.29**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.14	70	245	**2.5**	**0.29**	**155**
			10		280 HB	0.5	4.0	0.16	0.40	1.14	70	195	**2.5**	**0.29**	**130**
			11		320 HB	0.5	3.0	0.16	0.35	0.76	70	170	**2.2**	**0.27**	**110**
			11		350 HB	0.5	3.0	0.16	0.35	0.76	70	145	**2.2**	**0.27**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	325	**3.0**	**0.33**	**220**
			15		200 HB	0.5	5.0	0.13	0.60	1.71	160	300	**3.0**	**0.33**	**200**
			16		250 HB	0.5	5.0	0.13	0.55	1.71	150	275	**3.0**	**0.33**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	120	325	**3.0**	**0.29**	**200**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	120	300	**3.0**	**0.29**	**175**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	120	245	**3.0**	**0.29**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.10	0.30	0.57	50	130	**2.0**	**0.24**	**90**
			38		50 HRc	0.5	2.0	0.10	0.25	0.38	40	115	**1.5**	**0.19**	**75**
			38		55 HRc	0.5	1.5	0.10	0.20	0.29	40	105	**1.0**	**0.17**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.10	0.25	0.38	40	80	**1.5**	**0.17**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.10	0.20	0.29	30	65	**1.0**	**0.14**	**45**

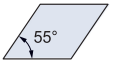
DNMG 150608 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	90	330	**3.0**	**0.36**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	90	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	90	250	**3.0**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	60	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	60	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.14	60	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	60	180	**2.7**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.14	35	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.14	35	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.76	35	130	**2.2**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.76	35	110	**2.2**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.14	85	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	80	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.76	40	150	**2.5**	**0.23**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.76	35	140	**2.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.16	0.40	0.67	85	250	**2.5**	**0.19**	**190**
			13		42 HRc	0.5	4.0	0.16	0.40	0.67	60	190	**2.2**	**0.19**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	60	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	60	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	60	190	**3.0**	**0.29**	**140**

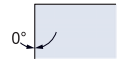
DNMG 150612 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.26	0.68	3.06	180	330	**4.0**	**0.46**	**240**
			2		190 HB	0.7	6.0	0.26	0.68	3.06	180	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	6.0	0.26	0.61	2.55	180	250	**4.0**	**0.46**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.26	0.61	2.04	120	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.8	0.26	0.61	2.04	120	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.8	0.23	0.54	2.04	120	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	4.2	0.23	0.54	1.70	120	180	**4.0**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.23	0.54	2.04	70	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.8	0.23	0.54	2.04	70	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.6	0.23	0.47	1.36	70	130	**3.4**	**0.37**	**100**
			11		350 HB	0.7	3.6	0.23	0.47	1.36	70	110	**3.4**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.25	0.54	2.04	170	270	**4.0**	**0.40**	**190**
			14		240 HB	0.7	6.0	0.25	0.54	1.70	160	220	**4.0**	**0.38**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.23	0.47	1.36	80	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.8	0.23	0.47	1.36	70	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.28	0.54	1.70	170	250	**4.0**	**0.40**	**190**
			13		42 HRc	0.7	4.8	0.28	0.54	1.70	120	190	**3.0**	**0.35**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.81	3.40	170	250	**4.0**	**0.46**	**200**
			15		200 HB	0.7	6.0	0.20	0.81	3.06	160	230	**4.0**	**0.46**	**180**
			16		250 HB	0.7	6.0	0.20	0.74	3.06	150	210	**4.0**	**0.46**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.68	2.55	120	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	6.0	0.20	0.68	2.21	120	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	6.0	0.20	0.68	2.04	120	190	**4.0**	**0.40**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**32**
			33	Inconel 700	250 HB	0.7	3.6	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**30**
			34	Stellite 21	350 HB	0.7	3.6	0.25	0.47	1.19	23	40	**2.7**	**0.37**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	4.8	0.25	0.54	1.36	45	65	**2.7**	**0.44**	**55**
			37	T40	-	0.7	3.6	0.25	0.47	1.19	35	55	**2.7**	**0.40**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.14	0.41	1.02	50	100	**2.7**	**0.33**	**80**
			38		50 HRc	0.7	2.4	0.14	0.34	0.68	40	90	**2.0**	**0.26**	**70**
			38		55 HRc	0.7	1.8	0.14	0.27	0.51	40	80	**1.3**	**0.24**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.34	0.68	40	60	**2.0**	**0.24**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.27	0.51	30	50	**1.3**	**0.20**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	7.0	0.25	0.81	3.10	200	400	**4.0**	**0.50**	**280**

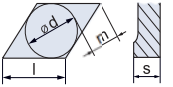
D N U X



Shape

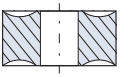


Clearance Angle



Tolerance

d ± 0.08
m ± 0.13
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNUX 150608 R11 LT10	15	6.35	0.8	T0002157	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
DNUX 150608 R11 LT 1000	15	6.35	0.8	T0002793	●	●	●

55° nose angle inserts with four cutting edges. Excellent chip control and low cutting force. Suitable for conventional turning operations and long shafts.

Machining Recommendations

Details on page 14

V_c ⇒ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

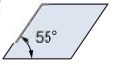
Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

DNUX 150608 R11 – **LT 10 | LT 1000**

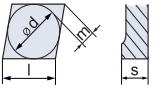
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.70	180	330	**3.0**	**0.33**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.70	180	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.45	180	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.15	120	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.15	120	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.15	120	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	120	180	**3.0**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.15	70	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.15	70	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.75	70	130	**2.5**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.75	70	110	**2.5**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.15	170	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	160	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.75	80	150	**2.5**	**0.27**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.75	70	140	**2.5**	**0.27**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.19	0.40	0.95	170	250	**2.5**	**0.29**	**190**
			13		42 HRc	0.5	4.0	0.19	0.40	0.95	120	190	**2.2**	**0.24**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	250	**3.0**	**0.33**	**200**
			15		200 HB	0.5	5.0	0.13	0.60	1.70	160	230	**3.0**	**0.33**	**180**
			16		250 HB	0.5	5.0	0.13	0.55	1.70	150	210	**3.0**	**0.33**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.45	120	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.25	120	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.15	120	190	**3.0**	**0.29**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			33	Inconel 700	250 HB	0.5	3.0	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.18	0.35	0.65	25	40	**2.0**	**0.27**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	3.5	0.18	0.40	0.75	45	65	**2.0**	**0.31**	**55**
			37	T40	-	0.5	3.0	0.18	0.35	0.65	35	55	**2.0**	**0.29**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.10	0.30	0.55	50	100	**2.0**	**0.24**	**80**
			38		50 HRc	0.5	2.0	0.10	0.25	0.40	40	90	**1.5**	**0.19**	**70**
			38		55 HRc	0.5	1.5	0.10	0.20	0.30	40	80	**1.0**	**0.17**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.10	0.25	0.40	40	60	**1.5**	**0.17**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.10	0.20	0.30	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.18	0.60	1.70	200	400	**3.0**	**0.38**	**280**

K N U X

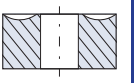


Shape

Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
KNUX 160405 R LT 10	16	4.76	0.5	T0000951	●	●	●
KNUX 160405 L LT 10	16	4.76	0.5	T0003884	●	●	●

A 55° nose angle inserts with two cutting edges. Popular insert with excellent chip control and low cutting force. Suitable for conventional turning operations.

Machining Recommendations

Details on page 14

$V_c \Rightarrow$ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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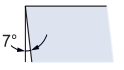
тел. 8 (499) 550 5039, mail@akytec.ru
www.akytec.ru

KNUX 160405 L/R – **LT 10 | LT 1000**

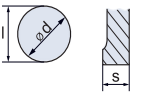
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.2	5.0	0.11	0.23	0.85	180	330	**3.0**	**0.18**	**300**
			2		190 HB	0.2	4.2	0.11	0.22	0.73	180	280	**3.0**	**0.18**	**260**
			3		250 HB	0.2	4.2	0.11	0.20	0.68	180	250	**3.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.2	4.2	0.10	0.20	0.71	120	280	**3.0**	**0.15**	**260**
			4,6		230 HB	0.2	4.2	0.10	0.20	0.68	120	250	**3.0**	**0.15**	**240**
			5,7		280 HB	0.2	3.3	0.10	0.18	0.56	120	210	**3.0**	**0.15**	**200**
			8		350 HB	0.2	3.3	0.10	0.18	0.51	120	180	**3.0**	**0.15**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.2	4.2	0.09	0.18	0.56	70	190	**2.0**	**0.12**	**180**
			10		280 HB	0.2	4.2	0.09	0.16	0.56	70	150	**2.0**	**0.12**	**140**
			11		320 HB	0.2	3.3	0.09	0.14	0.45	70	130	**2.0**	**0.12**	**120**
			11		350 HB	0.2	3.3	0.09	0.14	0.37	70	110	**2.0**	**0.12**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.2	4.2	0.10	0.18	0.60	170	270	**3.0**	**0.15**	**260**
			14		240 HB	0.2	4.2	0.10	0.18	0.50	160	220	**3.0**	**0.15**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.2	3.3	0.09	0.14	0.40	80	150	**2.0**	**0.15**	**140**
			14		310 HB	0.2	3.3	0.09	0.14	0.40	70	140	**2.0**	**0.15**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.2	4.2	0.10	0.18	0.50	170	250	**3.0**	**0.15**	**240**
			13		42 HRc	0.2	3.3	0.10	0.16	0.45	120	190	**2.0**	**0.15**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.2	5.0	0.08	0.20	0.85	170	250	**3.0**	**0.18**	**240**
			15		200 HB	0.2	5.0	0.08	0.20	0.75	160	230	**3.0**	**0.18**	**220**
			16		250 HB	0.2	5.0	0.08	0.20	0.65	150	210	**3.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.2	4.2	0.08	0.18	0.68	120	250	**2.5**	**0.15**	**240**
			17,19		200 HB	0.2	4.2	0.08	0.18	0.60	120	230	**2.5**	**0.15**	**220**
			18,20		250 HB	0.2	4.2	0.08	0.18	0.56	120	190	**2.5**	**0.15**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.2	3.3	0.09	0.15	0.40	25	50	**2.0**	**0.12**	**40**
			33	Inconel 700	250 HB	0.2	3.3	0.09	0.15	0.40	25	50	**2.0**	**0.12**	**40**
			34	Stellite 21	350 HB	0.2	3.3	0.09	0.15	0.40	23	45	**2.0**	**0.12**	**35**
	Ti Based	10	36	TiAl6V4	-	0.2	3.3	0.09	0.16	0.45	45	65	**2.0**	**0.15**	**60**
			37	T40	-	0.2	3.3	0.09	0.14	0.40	35	60	**2.0**	**0.12**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.2	3.0	0.05	0.12	0.28	50	100	**1.8**	**0.11**	**90**
			38		50 HRc	0.2	2.5	0.05	0.10	0.24	40	90	**1.4**	**0.09**	**80**
			38		55 HRc	0.2	2.3	0.05	0.09	0.18	40	80	**1.2**	**0.07**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.2	2.7	0.05	0.12	0.24	40	60	**1.8**	**0.11**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.2	2.3	0.05	0.09	0.18	30	50	**1.2**	**0.07**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.2	6.6	0.10	0.30	0.99	200	400	**3.0**	**0.20**	**350**

R C M T

Shape

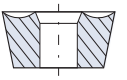


Clearance Angle



Tolerance

s ± 0.13
For l = 06/08/10, **d** ± 0.05 **m** ± 0.08
For l = 12, **d** ± 0.08 **m** ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
RCMT 0602 M0 LT 10	6	2.38	3	T0000090	●	●	●
RCMT 0803 M0 LT 10	8	3.18	4	T0000091	●	●	●
RCMT 10T3 M0 LT 10	10	3.97	5	T0000092	●	●	●
RCMT 1204 M0 LT 10	12	4.76	6	T0000093	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
RCMT 0602 M0 LT 1000	6	2.38	3	T0001914	●	●	●
RCMT 0803 M0 LT 1000	8	3.18	4	T0001915	●	●	●
RCMT 10T3 M0 LT 1000	10	3.97	5	T0001916	●	●	●
RCMT 1204 M0 LT 1000	12	4.76	6	T0001917	●	●	●

Round inserts with positive rake angle and excellent edge resistance. Suitable for profiling operations of mill rolls and aerospace parts

Machining Recommendations

Details on page 14

F ⇒ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

RCMT 0602 M0 – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.0	0.15	0.40	0.64	180	330	**1.0**	**0.35**	**240**
			2		190 HB	0.5	2.0	0.15	0.40	0.64	180	280	**1.0**	**0.35**	**220**
			3		250 HB	0.5	1.5	0.15	0.35	0.56	180	250	**1.0**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.0	0.15	0.35	0.56	120	280	**1.0**	**0.30**	**200**
			4,6		230 HB	0.5	2.0	0.15	0.35	0.48	120	250	**1.0**	**0.30**	**180**
			5,7		280 HB	0.5	2.0	0.15	0.35	0.40	120	210	**1.0**	**0.30**	**150**
			8		350 HB	0.5	1.5	0.15	0.35	0.36	120	180	**1.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.13	0.35	0.48	70	190	**1.0**	**0.30**	**140**
			10		280 HB	0.5	2.0	0.13	0.30	0.40	70	150	**1.0**	**0.28**	**120**
			11		320 HB	0.5	1.5	0.13	0.30	0.32	70	130	**1.0**	**0.28**	**100**
			11		350 HB	0.5	1.5	0.13	0.30	0.26	70	110	**1.0**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.0	0.14	0.35	0.32	170	270	**1.0**	**0.32**	**220**
			14		240 HB	0.5	2.0	0.14	0.32	0.32	160	220	**1.0**	**0.32**	**190**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	1.5	0.13	0.30	0.30	80	150	**1.0**	**0.28**	**100**
			14		310 HB	0.5	1.5	0.13	0.30	0.30	70	140	**1.0**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.0	0.15	0.35	0.32	170	250	**1.0**	**0.32**	**210**
			13		42 HRc	0.5	2.0	0.15	0.30	0.30	120	190	**1.0**	**0.28**	**140**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.0	0.11	0.45	0.70	170	250	**1.0**	**0.35**	**200**
			15		200 HB	0.5	2.0	0.11	0.45	0.65	160	230	**1.0**	**0.35**	**180**
			16		250 HB	0.5	2.0	0.11	0.45	0.60	150	210	**1.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.0	0.11	0.35	0.60	120	250	**1.0**	**0.30**	**180**
			17,19		200 HB	0.5	2.0	0.11	0.35	0.50	120	230	**1.0**	**0.30**	**160**
			18,20		250 HB	0.5	2.0	0.11	0.35	0.45	120	190	**1.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	1.5	0.13	0.30	0.30	25	50	**1.0**	**0.28**	**33**
			33	Inconel 700	250 HB	0.5	1.5	0.13	0.30	0.30	25	50	**1.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	1.5	0.13	0.30	0.30	23	45	**1.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	1.5	0.13	0.32	0.32	45	65	**1.0**	**0.30**	**55**
			37	T40	-	0.5	1.5	0.13	0.30	0.30	35	60	**1.0**	**0.28**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.2	0.05	0.22	0.20	50	100	**0.9**	**0.18**	**80**
			38		50 HRc	0.5	1.0	0.05	0.18	0.17	40	90	**0.7**	**0.16**	**70**
			38		55 HRc	0.3	0.8	0.05	0.14	0.12	40	80	**0.6**	**0.12**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.2	0.05	0.22	0.17	40	60	**0.9**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	0.8	0.05	0.14	0.10	30	50	**0.6**	**0.12**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	2.0	0.15	0.40	0.70	200	400	**1.0**	**0.35**	**280**

RCMT 0803 M0 – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.4	0.15	0.40	0.77	180	330	**1.2**	**0.35**	**240**
			2		190 HB	0.5	2.4	0.15	0.40	0.77	180	280	**1.2**	**0.35**	**220**
			3		250 HB	0.5	1.8	0.15	0.35	0.67	180	250	**1.2**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.4	0.15	0.35	0.67	120	280	**1.2**	**0.30**	**200**
			4,6		230 HB	0.5	2.4	0.15	0.35	0.58	120	250	**1.2**	**0.30**	**180**
			5,7		280 HB	0.5	2.4	0.15	0.35	0.48	120	210	**1.2**	**0.30**	**150**
			8		350 HB	0.5	1.8	0.15	0.35	0.43	120	180	**1.2**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.4	0.13	0.35	0.58	70	190	**1.2**	**0.30**	**140**
			10		280 HB	0.5	2.4	0.13	0.30	0.48	70	150	**1.2**	**0.28**	**120**
			11		320 HB	0.5	1.8	0.13	0.30	0.38	70	130	**1.2**	**0.28**	**100**
			11		350 HB	0.5	1.8	0.13	0.30	0.31	70	110	**1.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.4	0.14	0.35	0.38	170	270	**1.2**	**0.32**	**220**
			14		240 HB	0.5	2.4	0.14	0.32	0.38	160	220	**1.2**	**0.32**	**190**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	1.8	0.13	0.30	0.36	80	150	**1.2**	**0.28**	**100**
			14		310 HB	0.5	1.8	0.13	0.30	0.36	70	140	**1.2**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.4	0.15	0.35	0.38	170	250	**1.2**	**0.32**	**210**
			13		42 HRc	0.5	2.4	0.15	0.30	0.36	120	190	**1.2**	**0.28**	**140**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.4	0.11	0.45	0.84	170	250	**1.2**	**0.35**	**200**
			15		200 HB	0.5	2.4	0.11	0.45	0.78	160	230	**1.2**	**0.35**	**180**
			16		250 HB	0.5	2.4	0.11	0.45	0.72	150	210	**1.2**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.4	0.11	0.35	0.72	120	250	**1.2**	**0.30**	**180**
			17,19		200 HB	0.5	2.4	0.11	0.35	0.60	120	230	**1.2**	**0.30**	**160**
			18,20		250 HB	0.5	2.4	0.11	0.35	0.54	120	190	**1.2**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	1.8	0.13	0.30	0.36	25	50	**1.2**	**0.28**	**33**
			33	Inconel 700	250 HB	0.5	1.8	0.13	0.30	0.36	25	50	**1.2**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	1.8	0.13	0.30	0.36	23	45	**1.2**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	1.8	0.13	0.32	0.38	45	65	**1.2**	**0.30**	**55**
			37	T40	-	0.5	1.8	0.13	0.30	0.36	35	60	**1.2**	**0.28**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.4	0.05	0.22	0.24	50	100	**1.1**	**0.18**	**80**
			38		50 HRc	0.5	1.2	0.05	0.18	0.20	40	90	**0.8**	**0.16**	**70**
			38		55 HRc	0.3	1.0	0.05	0.14	0.14	40	80	**0.7**	**0.12**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.05	0.22	0.20	40	60	**1.1**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.0	0.05	0.14	0.12	30	50	**0.7**	**0.12**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	2.4	0.15	0.40	0.84	200	400	**1.2**	**0.35**	**280**

RCMT 10T3 M0 – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.8	0.15	0.40	0.90	180	330	**1.4**	**0.35**	**240**
			2		190 HB	0.5	2.8	0.15	0.40	0.90	180	280	**1.4**	**0.35**	**220**
			3		250 HB	0.5	2.1	0.15	0.35	0.78	180	250	**1.4**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.8	0.15	0.35	0.78	120	280	**1.4**	**0.30**	**200**
			4,6		230 HB	0.5	2.8	0.15	0.35	0.67	120	250	**1.4**	**0.30**	**180**
			5,7		280 HB	0.5	2.8	0.15	0.35	0.56	120	210	**1.4**	**0.30**	**150**
			8		350 HB	0.5	2.1	0.15	0.35	0.50	120	180	**1.4**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.13	0.35	0.67	70	190	**1.4**	**0.30**	**140**
			10		280 HB	0.5	2.8	0.13	0.30	0.56	70	150	**1.4**	**0.28**	**120**
			11		320 HB	0.5	2.1	0.13	0.30	0.45	70	130	**1.4**	**0.28**	**100**
			11		350 HB	0.5	2.1	0.13	0.30	0.36	70	110	**1.4**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.8	0.14	0.35	0.45	170	270	**1.4**	**0.32**	**220**
			14		240 HB	0.5	2.8	0.14	0.32	0.45	160	220	**1.4**	**0.32**	**190**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.1	0.13	0.30	0.42	80	150	**1.4**	**0.28**	**100**
			14		310 HB	0.5	2.1	0.13	0.30	0.42	70	140	**1.4**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.8	0.15	0.35	0.45	170	250	**1.4**	**0.32**	**210**
			13		42 HRc	0.5	2.8	0.15	0.30	0.42	120	190	**1.4**	**0.28**	**140**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.8	0.11	0.45	0.98	170	250	**1.4**	**0.35**	**200**
			15		200 HB	0.5	2.8	0.11	0.45	0.91	160	230	**1.4**	**0.35**	**180**
			16		250 HB	0.5	2.8	0.11	0.45	0.84	150	210	**1.4**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.8	0.11	0.35	0.84	120	250	**1.4**	**0.30**	**180**
			17,19		200 HB	0.5	2.8	0.11	0.35	0.70	120	230	**1.4**	**0.30**	**160**
			18,20		250 HB	0.5	2.8	0.11	0.35	0.63	120	190	**1.4**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.13	0.30	0.42	25	50	**1.4**	**0.28**	**33**
			33	Inconel 700	250 HB	0.5	2.1	0.13	0.30	0.42	25	50	**1.4**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	2.1	0.13	0.30	0.42	23	45	**1.4**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.1	0.13	0.32	0.45	45	65	**1.4**	**0.30**	**55**
			37	T40	-	0.5	2.1	0.13	0.30	0.42	35	60	**1.4**	**0.28**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.7	0.05	0.22	0.28	50	100	**1.3**	**0.18**	**80**
			38		50 HRc	0.5	1.4	0.05	0.18	0.24	40	90	**1.0**	**0.16**	**70**
			38		55 HRc	0.3	1.1	0.05	0.14	0.17	40	80	**0.8**	**0.12**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.7	0.05	0.22	0.24	40	60	**1.3**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.1	0.05	0.14	0.14	30	50	**0.8**	**0.12**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	2.8	0.15	0.40	0.98	200	400	**1.4**	**0.35**	**280**

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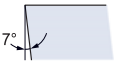
RCMT 1204 M0 – **LT 10 | LT 1000**

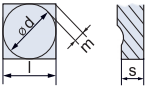
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.2	0.15	0.40	1.54	180	330	**2.0**	**0.42**	**240**
			2		190 HB	0.5	3.2	0.15	0.40	1.54	180	280	**2.0**	**0.42**	**220**
			3		250 HB	0.5	2.4	0.15	0.35	1.34	180	250	**2.0**	**0.36**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.2	0.15	0.35	1.34	120	280	**2.0**	**0.36**	**200**
			4,6		230 HB	0.5	3.2	0.15	0.35	1.15	120	250	**2.0**	**0.36**	**180**
			5,7		280 HB	0.5	3.2	0.15	0.35	0.96	120	210	**2.0**	**0.36**	**150**
			8		350 HB	0.5	2.4	0.15	0.35	0.86	120	180	**2.0**	**0.36**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.13	0.35	1.15	70	190	**2.0**	**0.36**	**140**
			10		280 HB	0.5	3.2	0.13	0.30	0.96	70	150	**2.0**	**0.34**	**120**
			11		320 HB	0.5	2.4	0.13	0.30	0.77	70	130	**2.0**	**0.34**	**100**
			11		350 HB	0.5	2.4	0.13	0.30	0.62	70	110	**2.0**	**0.34**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.2	0.14	0.35	0.77	170	270	**2.0**	**0.38**	**220**
			14		240 HB	0.5	3.2	0.14	0.32	0.77	160	220	**2.0**	**0.38**	**190**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.4	0.13	0.30	0.60	80	150	**1.5**	**0.34**	**100**
			14		310 HB	0.5	2.4	0.13	0.30	0.60	70	140	**1.5**	**0.34**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.2	0.15	0.35	0.77	170	250	**2.0**	**0.38**	**210**
			13		42 HRc	0.5	3.2	0.15	0.30	0.65	120	190	**2.0**	**0.32**	**140**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.2	0.11	0.45	1.68	170	250	**2.0**	**0.42**	**200**
			15		200 HB	0.5	3.2	0.11	0.45	1.56	160	230	**2.0**	**0.42**	**180**
			16		250 HB	0.5	3.2	0.11	0.45	1.44	150	210	**2.0**	**0.42**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.2	0.11	0.35	1.44	120	250	**2.0**	**0.36**	**180**
			17,19		200 HB	0.5	3.2	0.11	0.35	1.20	120	230	**2.0**	**0.36**	**160**
			18,20		250 HB	0.5	3.2	0.11	0.35	1.08	120	190	**2.0**	**0.36**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.4	0.13	0.30	0.60	25	50	**1.5**	**0.34**	**33**
			33	Inconel 700	250 HB	0.5	2.4	0.13	0.30	0.60	25	50	**1.5**	**0.34**	**30**
			34	Stellite 21	350 HB	0.5	2.4	0.13	0.30	0.60	23	45	**1.5**	**0.34**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.4	0.13	0.32	0.60	45	65	**1.5**	**0.36**	**55**
			37	T40	-	0.5	2.4	0.13	0.30	0.60	35	60	**1.5**	**0.34**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.9	0.05	0.22	0.48	50	100	**1.8**	**0.22**	**80**
			38		50 HRc	0.5	1.6	0.05	0.18	0.41	40	90	**1.4**	**0.19**	**70**
			38		55 HRc	0.5	1.3	0.05	0.14	0.29	40	80	**1.2**	**0.14**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.9	0.05	0.22	0.41	40	60	**1.8**	**0.22**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.3	0.05	0.14	0.24	30	50	**1.2**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	3.2	0.15	0.40	1.68	200	400	**2.0**	**0.42**	**280**

S C M T

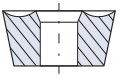
Shape



Clearance Angle



Tolerance
d ± 0.05
m ± 0.08
s ± 0.13



Fixing, Chipbreaker

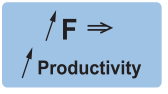
LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
SCMT 09T304 NN LT 10	9	3.97	0.4	T0001459	●	●	●
SCMT 09T308 NN LT 10	9	3.97	0.8	T0001458	●	●	●

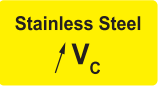
LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
SCMT 09T304 NN LT 1000	9	3.97	0.4	T0001918	●	●	●
SCMT 09T308 NN LT 1000	9	3.97	0.8	T0001919	●	●	●

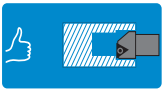
Square inserts with a positive rake angle and excellent cutting edge resistance. Suitable for boring operations.

Machining Recommendations

Details on page 14







Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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тел. 8 (499) 550 5039, mail@akytec.ru
www.akytec.ru

SCMT 09T304 – **LT 10 | LT 1000**

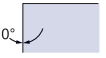
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	4.0	0.11	0.26	0.72	180	330	**2.5**	**0.18**	**300**
			2		190 HB	0.3	3.3	0.11	0.25	0.62	180	280	**2.5**	**0.18**	**260**
			3		250 HB	0.3	3.3	0.11	0.23	0.58	180	250	**2.5**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	3.3	0.10	0.23	0.60	120	280	**2.5**	**0.14**	**260**
			4,6		230 HB	0.3	3.3	0.10	0.23	0.58	120	250	**2.5**	**0.14**	**240**
			5,7		280 HB	0.3	2.7	0.10	0.21	0.48	120	210	**2.5**	**0.13**	**200**
			8		350 HB	0.3	2.7	0.10	0.21	0.43	120	180	**2.5**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	3.3	0.09	0.21	0.48	70	190	**2.1**	**0.10**	**180**
			10		280 HB	0.3	3.3	0.09	0.18	0.48	70	150	**2.1**	**0.10**	**140**
			11		320 HB	0.3	2.7	0.09	0.16	0.38	70	130	**2.1**	**0.10**	**120**
			11		350 HB	0.3	2.7	0.09	0.16	0.31	70	110	**2.1**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	3.3	0.08	0.21	0.38	170	270	**2.5**	**0.09**	**260**
			14		240 HB	0.3	3.3	0.08	0.21	0.31	160	220	**2.5**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.7	0.08	0.16	0.24	80	150	**2.1**	**0.08**	**140**
			14		310 HB	0.3	2.7	0.08	0.16	0.24	70	140	**2.1**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	3.3	0.08	0.21	0.38	170	250	**2.1**	**0.09**	**240**
			13		42 HRc	0.3	2.7	0.08	0.18	0.31	120	190	**1.9**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	4.0	0.08	0.23	0.77	170	250	**2.5**	**0.18**	**240**
			15		200 HB	0.3	4.0	0.08	0.23	0.72	160	230	**2.5**	**0.18**	**220**
			16		250 HB	0.3	4.0	0.08	0.23	0.72	150	210	**2.5**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	3.3	0.08	0.21	0.58	120	250	**2.5**	**0.13**	**240**
			17,19		200 HB	0.3	3.3	0.08	0.21	0.48	120	230	**2.5**	**0.13**	**220**
			18,20		250 HB	0.3	3.3	0.08	0.21	0.48	120	190	**2.5**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.7	0.09	0.17	0.31	25	50	**1.6**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.7	0.09	0.17	0.31	25	50	**1.6**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.7	0.09	0.17	0.31	23	45	**1.6**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.7	0.09	0.18	0.38	45	65	**1.6**	**0.14**	**60**
			37	T40	-	0.3	2.7	0.09	0.16	0.31	35	60	**1.6**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	2.4	0.05	0.14	0.24	50	100	**1.8**	**0.10**	**90**
			38		50 HRc	0.3	2.0	0.05	0.12	0.20	40	90	**1.4**	**0.08**	**80**
			38		55 HRc	0.3	1.9	0.05	0.10	0.16	40	80	**1.1**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	2.1	0.05	0.14	0.20	40	60	**1.4**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.9	0.05	0.10	0.16	30	50	**1.1**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	5.3	0.10	0.35	0.84	200	400	**2.5**	**0.23**	**350**

SCMT 09T308 – **LT 10 | LT 1000**

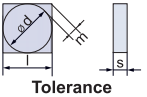
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.21	0.50	1.62	180	330	**3.0**	**0.32**	**240**
			2		190 HB	0.5	4.0	0.21	0.50	1.62	180	280	**3.0**	**0.32**	**220**
			3		250 HB	0.5	4.0	0.21	0.45	1.35	180	250	**3.0**	**0.32**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.21	0.45	1.08	120	280	**3.0**	**0.29**	**200**
			4,6		230 HB	0.5	3.2	0.21	0.45	1.08	120	250	**3.0**	**0.29**	**180**
			5,7		280 HB	0.5	3.2	0.18	0.40	1.08	120	210	**3.0**	**0.27**	**150**
			8		350 HB	0.5	2.8	0.18	0.40	0.90	120	180	**3.0**	**0.27**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.18	0.40	1.08	70	190	**2.5**	**0.27**	**140**
			10		280 HB	0.5	3.2	0.18	0.40	1.08	70	150	**2.5**	**0.27**	**120**
			11		320 HB	0.5	2.4	0.18	0.35	0.72	70	130	**2.5**	**0.25**	**100**
			11		350 HB	0.5	2.4	0.18	0.35	0.72	70	110	**2.5**	**0.25**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.20	0.40	1.08	170	270	**3.0**	**0.32**	**200**
			14		240 HB	0.5	4.0	0.20	0.40	0.90	160	220	**3.0**	**0.29**	**180**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.18	0.35	0.72	80	150	**2.5**	**0.25**	**100**
			14		310 HB	0.5	3.2	0.18	0.35	0.72	70	140	**2.5**	**0.25**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.22	0.40	0.90	170	250	**3.0**	**0.29**	**190**
			13		42 HRc	0.5	3.2	0.22	0.40	0.90	120	190	**2.5**	**0.29**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.15	0.60	1.80	170	250	**3.0**	**0.32**	**200**
			15		200 HB	0.5	4.0	0.15	0.60	1.62	160	230	**3.0**	**0.32**	**180**
			16		250 HB	0.5	4.0	0.15	0.55	1.62	150	210	**3.0**	**0.32**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.15	0.50	1.35	120	250	**3.0**	**0.27**	**180**
			17,19		200 HB	0.5	4.0	0.15	0.50	1.17	120	230	**3.0**	**0.27**	**160**
			18,20		250 HB	0.5	4.0	0.15	0.50	1.08	120	190	**3.0**	**0.27**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**32**
			33	Inconel 700	250 HB	0.5	2.4	0.20	0.35	0.63	25	45	**2.0**	**0.25**	**30**
			34	Stellite 21	350 HB	0.5	2.4	0.20	0.35	0.63	23	40	**2.0**	**0.25**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.2	0.20	0.40	0.72	45	65	**2.0**	**0.30**	**55**
			37	T40	-	0.5	2.4	0.20	0.35	0.63	35	55	**2.0**	**0.27**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.11	0.30	0.54	50	100	**2.0**	**0.23**	**80**
			38		50 HRc	0.5	1.6	0.11	0.25	0.36	40	90	**1.5**	**0.18**	**70**
			38		55 HRc	0.5	1.2	0.11	0.20	0.27	40	80	**1.0**	**0.16**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.6	0.11	0.25	0.36	40	60	**1.5**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.2	0.11	0.20	0.27	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.8	0.20	0.60	1.60	200	400	**3.0**	**0.36**	**280**

S N M A

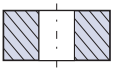
Shape



Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13



Fixing

LT 1005 Recommended for moderate to high speed

Insert Designation	l	s	r	Catalog Nr.	Application Guide F	M	R
SNMA 120408 LT 1005	12	4.76	0.8	T0003239	●	●	●
SNMA 120412 LT 1005	12	4.76	1.2	T0003240	●	●	●

Strong edge preparation mainly for gray cast iron. For general purpose turning, facing and boring operations.

Machining Recommendations

Details on page 14

F ⇒ Productivity

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

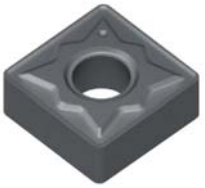
● = Good ● = Acceptable ● = Not recommended

SNMA 120408 – **LT 1005**

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.40	1.4	270	450	**3.5**	**0.32**	**350**
			15		200 HB	0.7	6.0	0.20	0.38	1.2	200	320	**3.5**	**0.32**	**250**
			16		250 HB	0.7	6.0	0.20	0.36	1.2	170	240	**3.5**	**0.32**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.40	1.0	130	260	**2.5**	**0.30**	**240**
			17,19		200 HB	0.7	6.0	0.20	0.38	0.9	130	230	**2.5**	**0.30**	**210**
			18,20		250 HB	0.7	6.0	0.20	0.36	0.8	130	190	**2.5**	**0.30**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.20	0.3	40	60	**1.4**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.20	0.2	30	50	**1.1**	**0.15**	**40**

SNMA 120412 – **LT 1005**

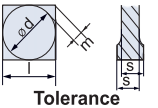
	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.20	0.60	1.7	270	450	**3.5**	**0.40**	**350**
			15		200 HB	0.7	6.0	0.20	0.58	1.5	200	320	**3.5**	**0.40**	**250**
			16		250 HB	0.7	6.0	0.20	0.56	1.5	170	240	**3.5**	**0.40**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.20	0.52	1.3	130	260	**3.0**	**0.30**	**240**
			17,19		200 HB	0.7	6.0	0.20	0.50	1.1	130	230	**3.0**	**0.30**	**210**
			18,20		250 HB	0.7	6.0	0.20	0.48	1.0	130	190	**3.0**	**0.30**	**180**
H	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.25	0.3	40	60	**1.5**	**0.19**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.20	0.3	30	50	**1.2**	**0.17**	**40**



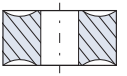
S N M G

Shape

Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13

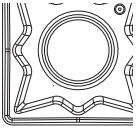


Fixing, Chipbreaker

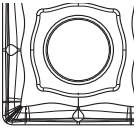
LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
SNMG 120408 NN LT 10	12	4.76	0.8	T0000322	●	●	●
SNMG 120412 NN LT 10	12	4.76	1.2	T0000323	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
SNMG 120408 NN LT 1000	12	4.76	0.8	T0001921	●	●	●
SNMG 120408 NX LT 1000	12	4.76	0.8	T0003011	●	●	●
SNMG 120412 NN LT 1000	12	4.76	1.2	T0001922	●	●	●

Square inserts with strong cutting edge. Suitable for roughing operations.



NN chipbreaker



NX chipbreaker

Machining Recommendations

Details on page 14

Stainless Steel V_c

F ⇒ Productivity

Stainless Steel
Exotic Material
NX-CNMP-TNMP-WNMP

Exotic Material
Verify ⚠
Cutting Conditions

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

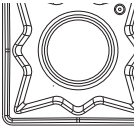
Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

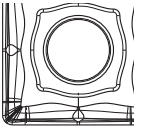
S N M G

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
SNMG 120408 NN LT 1005	12	4.76	0.8	T0004076	●	●	●
SNMG 120408 NX LT 1005	12	4.76	0.8	T0004077	●	●	●
SNMG 120412 NN LT 1005	12	4.76	1.2	T0004078	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
SNMG 120408 NN LT 1025	12	4.76	0.8	T0004133	●	●	●
SNMG 120408 NX LT 1025	12	4.76	0.8	T0004134	●	●	●
SNMG 120412 NN LT 1025	12	4.76	1.2	T0004136	●	●	●



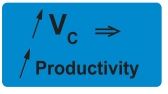
NN chipbreaker



NX chipbreaker

Machining Recommendations

Details on page 14



LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

SNMG 120408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.30	0.70	2.54	180	330	**3.0**	**0.50**	**240**
			2		190 HB	0.5	5.0	0.30	0.70	2.54	180	280	**3.0**	**0.50**	**220**
			3		250 HB	0.5	5.0	0.30	0.63	2.12	180	250	**3.0**	**0.50**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.30	0.63	1.69	120	280	**3.0**	**0.45**	**200**
			4,6		230 HB	0.5	4.0	0.30	0.63	1.69	120	250	**3.0**	**0.45**	**180**
			5,7		280 HB	0.5	4.0	0.25	0.56	1.69	120	210	**3.0**	**0.43**	**150**
			8		350 HB	0.5	3.5	0.25	0.56	1.41	120	180	**3.0**	**0.43**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.25	0.56	1.69	70	190	**2.5**	**0.43**	**140**
			10		280 HB	0.5	4.0	0.25	0.56	1.69	70	150	**2.5**	**0.43**	**120**
			11		320 HB	0.5	3.0	0.25	0.49	1.13	70	130	**2.5**	**0.40**	**100**
			11		350 HB	0.5	3.0	0.25	0.49	1.13	70	110	**2.5**	**0.40**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.28	0.56	1.69	170	270	**3.0**	**0.50**	**190**
			14		240 HB	0.5	5.0	0.28	0.56	1.41	160	220	**3.0**	**0.45**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.25	0.49	1.13	80	150	**2.5**	**0.40**	**100**
			14		310 HB	0.5	4.0	0.25	0.49	1.13	70	140	**2.5**	**0.40**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.31	0.56	1.41	170	250	**3.0**	**0.45**	**190**
			13		42 HRc	0.5	4.0	0.31	0.56	1.41	120	190	**2.5**	**0.45**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.21	0.84	2.82	170	250	**3.0**	**0.50**	**200**
			15		200 HB	0.5	5.0	0.21	0.84	2.54	160	230	**3.0**	**0.50**	**180**
			16		250 HB	0.5	5.0	0.21	0.77	2.54	150	210	**3.0**	**0.50**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.21	0.70	2.12	120	250	**3.0**	**0.43**	**180**
			17,19		200 HB	0.5	5.0	0.21	0.70	1.83	120	230	**3.0**	**0.43**	**160**
			18,20		250 HB	0.5	5.0	0.21	0.70	1.69	120	190	**3.0**	**0.43**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.28	0.49	0.99	25	45	**2.0**	**0.40**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.28	0.49	0.99	25	45	**2.0**	**0.40**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.28	0.49	0.99	23	40	**2.0**	**0.40**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.28	0.56	1.13	45	65	**2.0**	**0.47**	**55**
			37	T40	-	0.5	3.0	0.28	0.49	0.99	35	55	**2.0**	**0.43**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.16	0.42	0.85	50	100	**2.0**	**0.36**	**80**
			38		50 HRc	0.5	2.0	0.16	0.35	0.56	40	90	**1.5**	**0.28**	**70**
			38		55 HRc	0.5	1.5	0.16	0.28	0.42	40	80	**1.0**	**0.26**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.16	0.35	0.56	40	60	**1.5**	**0.26**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.16	0.28	0.42	30	50	**1.0**	**0.21**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.28	0.80	2.50	200	400	**3.0**	**0.57**	**280**

SNMG 120408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.30	0.70	2.54	180	430	**3.0**	**0.54**	**265**
			2		190 HB	0.5	5.0	0.30	0.70	2.54	180	365	**3.0**	**0.50**	**240**
			3		250 HB	0.5	5.0	0.30	0.63	2.12	180	325	**3.0**	**0.47**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.30	0.63	1.69	120	365	**3.0**	**0.45**	**220**
			4,6		230 HB	0.5	4.0	0.30	0.63	1.69	120	325	**3.0**	**0.45**	**200**
			5,7		280 HB	0.5	4.0	0.25	0.56	1.69	120	275	**3.0**	**0.43**	**165**
			8		350 HB	0.5	3.5	0.25	0.56	1.41	120	235	**2.7**	**0.43**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.25	0.56	1.69	70	245	**2.5**	**0.43**	**155**
			10		280 HB	0.5	4.0	0.25	0.56	1.69	70	195	**2.5**	**0.43**	**130**
			11		320 HB	0.5	3.0	0.25	0.49	1.13	70	170	**2.2**	**0.40**	**110**
			11		350 HB	0.5	3.0	0.25	0.49	1.13	70	145	**2.2**	**0.40**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.21	0.84	2.82	170	325	**3.0**	**0.50**	**220**
			15		200 HB	0.5	5.0	0.21	0.84	2.54	160	300	**3.0**	**0.50**	**200**
			16		250 HB	0.5	5.0	0.21	0.77	2.54	150	275	**3.0**	**0.50**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.21	0.70	2.12	120	325	**3.0**	**0.43**	**200**
			17,19		200 HB	0.5	5.0	0.21	0.70	1.83	120	300	**3.0**	**0.43**	**175**
			18,20		250 HB	0.5	5.0	0.21	0.70	1.69	120	245	**3.0**	**0.43**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.16	0.42	0.85	50	130	**2.0**	**0.36**	**90**
			38		50 HRc	0.5	2.0	0.16	0.35	0.56	40	115	**1.5**	**0.28**	**75**
			38		55 HRc	0.5	1.5	0.16	0.28	0.42	40	105	**1.0**	**0.26**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.16	0.35	0.56	40	80	**1.5**	**0.26**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.16	0.28	0.42	30	65	**1.0**	**0.21**	**45**

SNMG 120408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.30	0.70	2.54	90	330	**3.0**	**0.54**	**240**
			2		190 HB	0.5	5.0	0.30	0.70	2.54	90	280	**3.0**	**0.50**	**220**
			3		250 HB	0.5	5.0	0.30	0.63	2.12	90	250	**3.0**	**0.47**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.30	0.63	1.69	60	280	**3.0**	**0.45**	**200**
			4,6		230 HB	0.5	4.0	0.30	0.63	1.69	60	250	**3.0**	**0.45**	**180**
			5,7		280 HB	0.5	4.0	0.25	0.56	1.69	60	210	**3.0**	**0.43**	**150**
			8		350 HB	0.5	3.5	0.25	0.56	1.41	60	180	**2.7**	**0.43**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.25	0.56	1.69	35	190	**2.5**	**0.43**	**140**
			10		280 HB	0.5	4.0	0.25	0.56	1.69	35	150	**2.5**	**0.43**	**120**
			11		320 HB	0.5	3.0	0.25	0.49	1.13	35	130	**2.2**	**0.40**	**100**
			11		350 HB	0.5	3.0	0.25	0.49	1.13	35	110	**2.2**	**0.40**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.28	0.56	1.69	85	270	**3.0**	**0.36**	**190**
			14		240 HB	0.5	5.0	0.28	0.56	1.41	80	220	**3.0**	**0.31**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.25	0.49	1.13	40	150	**2.5**	**0.34**	**100**
			14		310 HB	0.5	4.0	0.25	0.49	1.13	35	140	**2.5**	**0.34**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.25	0.56	0.99	85	250	**2.5**	**0.28**	**190**
			13		42 HRc	0.5	4.0	0.25	0.56	0.99	60	190	**2.2**	**0.28**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.21	0.70	2.12	60	250	**3.0**	**0.43**	**180**
			17,19		200 HB	0.5	5.0	0.21	0.70	1.83	60	230	**3.0**	**0.43**	**160**
			18,20		250 HB	0.5	5.0	0.21	0.70	1.69	60	190	**3.0**	**0.43**	**140**

SNMG 120408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.26	0.70	2.40	180	330	**3.0**	**0.47**	**240**
			2		190 HB	0.5	5.0	0.26	0.70	2.40	180	280	**3.0**	**0.47**	**220**
			3		250 HB	0.5	5.0	0.26	0.63	2.00	180	250	**3.0**	**0.47**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.26	0.63	1.60	120	280	**3.0**	**0.43**	**200**
			4,6		230 HB	0.5	4.0	0.26	0.63	1.60	120	250	**3.0**	**0.43**	**180**
			5,7		280 HB	0.5	4.0	0.22	0.56	1.60	120	210	**3.0**	**0.41**	**150**
			8		350 HB	0.5	3.5	0.22	0.56	1.35	120	180	**3.0**	**0.41**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.22	0.56	1.60	70	190	**2.5**	**0.41**	**140**
			10		280 HB	0.5	4.0	0.22	0.56	1.60	70	150	**2.5**	**0.41**	**120**
			11		320 HB	0.5	3.0	0.22	0.49	1.05	70	130	**2.5**	**0.38**	**100**
			11		350 HB	0.5	3.0	0.22	0.49	1.05	70	110	**2.5**	**0.38**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.25	0.56	1.60	170	270	**3.0**	**0.34**	**190**
			14		240 HB	0.5	5.0	0.25	0.56	1.35	160	220	**3.0**	**0.30**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.22	0.49	1.05	80	150	**2.5**	**0.38**	**100**
			14		310 HB	0.5	4.0	0.22	0.49	1.05	70	140	**2.5**	**0.38**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.27	0.56	1.35	170	250	**2.5**	**0.41**	**190**
			13		42 HRc	0.5	4.0	0.27	0.56	1.35	120	190	**2.5**	**0.34**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.18	0.84	2.70	170	250	**3.0**	**0.47**	**200**
			15		200 HB	0.5	5.0	0.18	0.84	2.40	160	230	**3.0**	**0.47**	**180**
			16		250 HB	0.5	5.0	0.18	0.77	2.40	150	210	**3.0**	**0.47**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.18	0.70	2.00	120	250	**3.0**	**0.41**	**180**
			17,19		200 HB	0.5	5.0	0.18	0.70	1.75	120	230	**3.0**	**0.41**	**160**
			18,20		250 HB	0.5	5.0	0.18	0.70	1.60	120	190	**3.0**	**0.41**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.25	0.49	0.95	25	45	**2.0**	**0.38**	**30**
			33	Inconel 700	250 HB	0.5	3.0	0.25	0.49	0.95	25	45	**2.0**	**0.38**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.25	0.49	0.95	25	40	**2.0**	**0.38**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.25	0.56	1.05	45	65	**2.0**	**0.45**	**55**
			37	T40	-	0.5	3.0	0.25	0.49	0.95	35	55	**2.0**	**0.41**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.14	0.42	0.80	50	100	**2.0**	**0.34**	**80**
			38		50 HRc	0.5	2.0	0.14	0.35	0.55	40	90	**1.5**	**0.27**	**70**
			38		55 HRc	0.5	1.5	0.14	0.28	0.40	40	80	**1.0**	**0.24**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.14	0.35	0.55	40	60	**1.5**	**0.24**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.14	0.28	0.40	30	50	**1.0**	**0.20**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.25	0.84	2.40	200	400	**3.0**	**0.54**	**280**

SNMG 120408 – NX **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.26	0.70	2.41	180	430	**3.0**	**0.51**	**265**
			2		190 HB	0.5	5.0	0.26	0.70	2.41	180	365	**3.0**	**0.47**	**240**
			3		250 HB	0.5	5.0	0.26	0.63	2.01	180	325	**3.0**	**0.45**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.26	0.63	1.61	120	365	**3.0**	**0.43**	**220**
			4,6		230 HB	0.5	4.0	0.26	0.63	1.61	120	325	**3.0**	**0.43**	**200**
			5,7		280 HB	0.5	4.0	0.22	0.56	1.61	120	275	**3.0**	**0.41**	**165**
			8		350 HB	0.5	3.5	0.22	0.56	1.34	120	235	**2.7**	**0.41**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.22	0.56	1.61	70	245	**2.5**	**0.41**	**155**
			10		280 HB	0.5	4.0	0.22	0.56	1.61	70	195	**2.5**	**0.41**	**130**
			11		320 HB	0.5	3.0	0.22	0.49	1.07	70	170	**2.2**	**0.38**	**110**
			11		350 HB	0.5	3.0	0.22	0.49	1.07	70	145	**2.2**	**0.38**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.18	0.84	2.68	170	325	**3.0**	**0.47**	**220**
			15		200 HB	0.5	5.0	0.18	0.84	2.41	160	300	**3.0**	**0.47**	**200**
			16		250 HB	0.5	5.0	0.18	0.77	2.41	150	275	**3.0**	**0.47**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.18	0.70	2.01	120	325	**3.0**	**0.41**	**200**
			17,19		200 HB	0.5	5.0	0.18	0.70	1.74	120	300	**3.0**	**0.41**	**175**
			18,20		250 HB	0.5	5.0	0.18	0.70	1.61	120	245	**3.0**	**0.41**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.14	0.42	0.80	50	130	**2.0**	**0.34**	**90**
			38		50 HRc	0.5	2.0	0.14	0.35	0.54	40	115	**1.5**	**0.27**	**75**
			38		55 HRc	0.5	1.5	0.14	0.28	0.40	40	105	**1.0**	**0.24**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.14	0.35	0.54	40	80	**1.5**	**0.24**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.14	0.28	0.40	30	65	**1.0**	**0.20**	**45**

SNMG 120408 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.26	0.70	2.41	90	330	**3.0**	**0.51**	**240**
			2		190 HB	0.5	5.0	0.26	0.70	2.41	90	280	**3.0**	**0.47**	**220**
			3		250 HB	0.5	5.0	0.26	0.63	2.01	90	250	**3.0**	**0.45**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.26	0.63	1.61	60	280	**3.0**	**0.43**	**200**
			4,6		230 HB	0.5	4.0	0.26	0.63	1.61	60	250	**3.0**	**0.43**	**180**
			5,7		280 HB	0.5	4.0	0.22	0.56	1.61	60	210	**3.0**	**0.41**	**150**
			8		350 HB	0.5	3.5	0.22	0.56	1.34	60	180	**2.7**	**0.41**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.22	0.56	1.61	35	190	**2.5**	**0.41**	**140**
			10		280 HB	0.5	4.0	0.22	0.56	1.61	35	150	**2.5**	**0.41**	**120**
			11		320 HB	0.5	3.0	0.22	0.49	1.07	35	130	**2.2**	**0.38**	**100**
			11		350 HB	0.5	3.0	0.22	0.49	1.07	35	110	**2.2**	**0.38**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.25	0.56	1.61	85	270	**3.0**	**0.34**	**190**
			14		240 HB	0.5	5.0	0.25	0.56	1.34	80	220	**3.0**	**0.30**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.22	0.49	1.07	40	150	**2.5**	**0.32**	**100**
			14		310 HB	0.5	4.0	0.22	0.49	1.07	35	140	**2.5**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.56	0.94	85	250	**2.5**	**0.27**	**190**
			13		42 HRc	0.5	4.0	0.22	0.56	0.94	60	190	**2.2**	**0.27**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.18	0.70	2.01	60	250	**3.0**	**0.41**	**180**
			17,19		200 HB	0.5	5.0	0.18	0.70	1.74	60	230	**3.0**	**0.41**	**160**
			18,20		250 HB	0.5	5.0	0.18	0.70	1.61	60	190	**3.0**	**0.41**	**140**

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SNMG 120412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.37	0.95	3.96	180	330	**4.0**	**0.65**	**240**
			2		190 HB	0.7	6.0	0.37	0.95	3.96	180	280	**4.0**	**0.65**	**220**
			3		250 HB	0.7	6.0	0.37	0.86	3.30	180	250	**4.0**	**0.65**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.37	0.86	2.64	120	280	**4.0**	**0.60**	**200**
			4,6		230 HB	0.7	4.8	0.37	0.86	2.64	120	250	**4.0**	**0.60**	**180**
			5,7		280 HB	0.7	4.8	0.32	0.76	2.64	120	210	**4.0**	**0.56**	**150**
			8		350 HB	0.7	4.2	0.32	0.76	2.40	120	180	**4.0**	**0.56**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.32	0.76	2.64	70	190	**3.4**	**0.56**	**140**
			10		280 HB	0.7	4.8	0.32	0.76	2.64	70	150	**3.4**	**0.56**	**120**
			11		320 HB	0.7	3.6	0.32	0.67	1.76	70	130	**3.4**	**0.52**	**100**
			11		350 HB	0.7	3.6	0.32	0.67	1.76	70	110	**3.4**	**0.52**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.35	0.76	2.64	170	270	**4.0**	**0.58**	**190**
			14		240 HB	0.7	6.0	0.35	0.76	2.20	160	220	**4.0**	**0.52**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.32	0.67	1.76	80	150	**3.4**	**0.46**	**100**
			14		310 HB	0.7	4.8	0.32	0.67	1.76	70	140	**3.4**	**0.46**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.39	0.76	2.20	170	250	**4.0**	**0.55**	**190**
			13		42 HRc	0.7	4.8	0.39	0.76	2.20	120	190	**3.0**	**0.50**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.30	1.14	4.40	170	250	**4.0**	**0.65**	**200**
			15		200 HB	0.7	6.0	0.30	1.14	3.96	160	230	**4.0**	**0.65**	**180**
			16		250 HB	0.7	6.0	0.30	1.05	3.96	150	210	**4.0**	**0.65**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.30	0.95	3.30	120	250	**4.0**	**0.56**	**180**
			17,19		200 HB	0.7	6.0	0.30	0.95	2.86	120	230	**4.0**	**0.56**	**160**
			18,20		250 HB	0.7	6.0	0.30	0.95	2.64	120	190	**4.0**	**0.56**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	3.6	0.35	0.67	1.54	25	45	**2.7**	**0.52**	**32**
			33	Inconel 700	250 HB	0.7	3.6	0.35	0.67	1.54	25	45	**2.7**	**0.52**	**30**
			34	Stellite 21	350 HB	0.7	3.6	0.35	0.67	1.54	23	40	**2.7**	**0.52**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	4.8	0.35	0.76	1.76	45	65	**2.7**	**0.58**	**55**
			37	T40	-	0.7	3.6	0.35	0.67	1.54	35	55	**2.7**	**0.52**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.19	0.57	1.32	50	100	**2.7**	**0.47**	**80**
			38		50 HRc	0.7	2.4	0.19	0.48	0.88	40	90	**2.0**	**0.37**	**70**
			38		55 HRc	0.7	1.8	0.19	0.38	0.66	40	80	**1.3**	**0.33**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.19	0.48	0.88	40	60	**2.0**	**0.33**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.19	0.38	0.66	30	50	**1.3**	**0.28**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	7.0	0.35	1.14	4.30	200	400	**4.0**	**0.80**	**280**

SNMG 120412 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.37	0.95	3.96	180	430	**4.0**	**0.71**	**265**
			2		190 HB	0.7	6.0	0.37	0.95	3.96	180	365	**4.0**	**0.65**	**240**
			3		250 HB	0.7	6.0	0.37	0.86	3.30	180	325	**4.0**	**0.61**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.37	0.86	2.64	120	365	**4.0**	**0.60**	**220**
			4,6		230 HB	0.7	4.8	0.37	0.86	2.64	120	325	**4.0**	**0.60**	**200**
			5,7		280 HB	0.7	4.8	0.32	0.76	2.64	120	275	**4.0**	**0.56**	**165**
			8		350 HB	0.7	4.2	0.32	0.76	2.20	120	235	**3.6**	**0.56**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.32	0.76	2.64	70	245	**3.4**	**0.56**	**155**
			10		280 HB	0.7	4.8	0.32	0.76	2.64	70	195	**3.4**	**0.56**	**130**
			11		320 HB	0.7	3.6	0.32	0.67	1.76	70	170	**2.9**	**0.52**	**110**
			11		350 HB	0.7	3.6	0.32	0.67	1.76	70	145	**2.9**	**0.52**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	6.0	0.26	1.14	4.40	170	325	**4.0**	**0.65**	**220**
			15		200 HB	0.7	6.0	0.26	1.14	3.96	160	300	**4.0**	**0.65**	**200**
			16		250 HB	0.7	6.0	0.26	1.05	3.96	150	275	**4.0**	**0.65**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.26	0.95	3.30	120	325	**4.0**	**0.56**	**200**
			17,19		200 HB	0.7	6.0	0.26	0.95	2.86	120	300	**4.0**	**0.56**	**175**
			18,20		250 HB	0.7	6.0	0.26	0.95	2.64	120	245	**4.0**	**0.56**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.0	0.19	0.57	1.32	50	130	**2.7**	**0.47**	**90**
			38		50 HRc	0.7	2.4	0.19	0.48	0.88	40	115	**2.0**	**0.37**	**75**
			38		55 HRc	0.7	1.8	0.19	0.38	0.66	40	105	**1.3**	**0.33**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.4	0.19	0.48	0.88	40	80	**2.0**	**0.33**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.19	0.38	0.66	30	65	**1.3**	**0.28**	**45**

SNMG 120412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	6.0	0.37	0.95	3.96	90	330	**4.0**	**0.71**	**240**
			2		190 HB	0.7	6.0	0.37	0.95	3.96	90	280	**4.0**	**0.65**	**220**
			3		250 HB	0.7	6.0	0.37	0.86	3.30	90	250	**4.0**	**0.61**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	6.0	0.37	0.86	2.64	60	280	**4.0**	**0.60**	**200**
			4,6		230 HB	0.7	4.8	0.37	0.86	2.64	60	250	**4.0**	**0.60**	**180**
			5,7		280 HB	0.7	4.8	0.32	0.76	2.64	60	210	**4.0**	**0.56**	**150**
			8		350 HB	0.7	4.2	0.32	0.76	2.20	60	180	**3.6**	**0.56**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.8	0.32	0.76	2.64	35	190	**3.4**	**0.56**	**140**
			10		280 HB	0.7	4.8	0.32	0.76	2.64	35	150	**3.4**	**0.56**	**120**
			11		320 HB	0.7	3.6	0.32	0.67	1.76	35	130	**2.9**	**0.52**	**100**
			11		350 HB	0.7	3.6	0.32	0.67	1.76	35	110	**2.9**	**0.52**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	6.0	0.35	0.76	2.64	85	270	**4.0**	**0.47**	**190**
			14		240 HB	0.7	6.0	0.35	0.76	2.20	80	220	**4.0**	**0.41**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.8	0.32	0.67	1.76	40	150	**3.4**	**0.45**	**100**
			14		310 HB	0.7	4.8	0.32	0.67	1.76	35	140	**3.4**	**0.45**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	6.0	0.32	0.76	1.54	85	250	**3.4**	**0.37**	**190**
			13		42 HRc	0.7	4.8	0.32	0.76	1.54	60	190	**2.9**	**0.37**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	6.0	0.26	0.95	3.30	60	250	**4.0**	**0.56**	**180**
			17,19		200 HB	0.7	6.0	0.26	0.95	2.86	60	230	**4.0**	**0.56**	**160**
			18,20		250 HB	0.7	6.0	0.26	0.95	2.64	60	190	**4.0**	**0.56**	**140**

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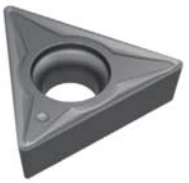

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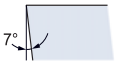
Shape



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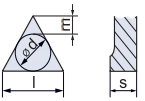

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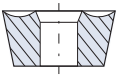

Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TCMT 110204 NN LT 10	11	2.38	0.4	T0000477	●	●	●
TCMT 110208 NN LT 10	11	2.38	0.8	T0000478	●	●	●
TCMT 16T304 NN LT 10	16	3.97	0.4	T0000479	●	●	●
TCMT 16T308 NN LT 10	16	3.97	0.8	T0000068	●	●	●
TCMT 16T312 NN LT 10	16	3.97	1.2	T0001774	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TCMT 110204 NN LT 1000	11	2.38	0.4	T0001924	●	●	●
TCMT 110208 NN LT 1000	11	2.38	0.8	T0001925	●	●	●
TCMT 16T304 NN LT 1000	16	3.97	0.4	T0001927	●	●	●
TCMT 16T308 NN LT 1000	16	3.97	0.8	T0001928	●	●	●
TCMT 16T312 NN LT 1000	16	3.97	1.2	T0001929	●	●	●

60° triangle shape inserts with positive rake angle. Suitable for boring and internal turning operations.

Machining Recommendations

Details on page 14

Stainless Steel
V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

TCMT 110204 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	2.1	0.08	0.20	0.37	180	330	**1.0**	**0.14**	**300**
			2		190 HB	0.3	1.8	0.08	0.19	0.32	180	280	**1.0**	**0.14**	**260**
			3		250 HB	0.3	1.8	0.08	0.17	0.30	180	250	**1.0**	**0.14**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	1.8	0.08	0.17	0.31	120	280	**1.0**	**0.11**	**260**
			4,6		230 HB	0.3	1.8	0.08	0.17	0.30	120	250	**1.0**	**0.11**	**240**
			5,7		280 HB	0.3	1.4	0.08	0.15	0.25	120	210	**1.0**	**0.10**	**200**
			8		350 HB	0.3	1.4	0.08	0.15	0.22	120	180	1.0	0.10	180
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	1.8	0.07	0.15	0.25	70	190	**0.9**	**0.08**	**180**
			10		280 HB	0.3	1.8	0.07	0.14	0.25	70	150	**0.9**	**0.08**	**140**
			11		320 HB	0.3	1.4	0.07	0.12	0.20	70	130	**0.9**	**0.08**	**120**
			11		350 HB	0.3	1.4	0.07	0.12	0.16	70	110	**0.9**	**0.08**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	1.8	0.06	0.15	0.20	170	270	1.0	**0.07**	**260**
			14		240 HB	0.3	1.8	0.06	0.15	0.16	160	220	1.0	**0.06**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	1.4	0.06	0.12	0.12	80	150	**0.9**	**0.06**	**140**
			14		310 HB	0.3	1.4	0.06	0.12	0.12	70	140	**0.9**	**0.06**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	1.8	0.06	0.15	0.20	170	250	**0.9**	**0.07**	**240**
			13		42 HRc	0.3	1.4	0.06	0.14	0.16	120	190	**0.8**	**0.06**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	2.1	0.06	0.17	0.40	170	250	1.0	**0.14**	**240**
			15		200 HB	0.3	2.1	0.06	0.17	0.37	160	230	1.0	**0.14**	**220**
			16		250 HB	0.3	2.1	0.06	0.17	0.37	150	210	1.0	**0.14**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	1.8	0.06	0.15	0.30	120	250	1.0	**0.10**	**240**
			17,19		200 HB	0.3	1.8	0.06	0.15	0.25	120	230	1.0	**0.10**	**220**
			18,20		250 HB	0.3	1.8	0.06	0.15	0.25	120	190	1.0	**0.10**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	**0.08**	**40**
			33	Inconel 700	250 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	**0.08**	**40**
			34	Stellite 21	350 HB	0.3	1.4	0.07	0.13	0.16	23	45	**0.7**	**0.08**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	1.4	0.07	0.14	0.20	45	65	**0.7**	**0.11**	**60**
			37	T40	-	0.3	1.4	0.07	0.12	0.16	35	60	**0.7**	**0.08**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.3	0.04	0.10	0.12	50	100	**0.7**	**0.08**	**90**
			38		50 HRc	0.3	1.1	0.04	0.09	0.11	40	90	**0.6**	**0.06**	**80**
			38		55 HRc	0.3	1.0	0.04	0.08	0.08	40	80	**0.5**	**0.05**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.1	0.04	0.10	0.11	40	60	**0.6**	**0.08**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.0	0.04	0.08	0.08	30	50	**0.5**	**0.05**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	2.8	0.08	0.26	0.43	200	400	**1.0**	**0.18**	**350**

TCMT 110208 NN – **LT 10 | LT 1000**

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.2	2.1	0.08	0.20	0.37	180	330	**1.0**	**0.25**	**300**
			2		190 HB	0.2	1.8	0.08	0.19	0.32	180	280	**1.0**	**0.25**	**260**
			3		250 HB	0.2	1.8	0.08	0.17	0.30	180	250	**1.0**	**0.25**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.2	1.8	0.08	0.17	0.31	120	280	**1.0**	**0.21**	**260**
			4,6		230 HB	0.2	1.8	0.08	0.17	0.30	120	250	**1.0**	**0.21**	**240**
			5,7		280 HB	0.2	1.4	0.08	0.15	0.25	120	210	**1.0**	**0.21**	**200**
			8		350 HB	0.2	1.4	0.08	0.15	0.22	120	180	**1.0**	**0.21**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.2	1.8	0.07	0.15	0.25	70	190	**1.0**	**0.17**	**180**
			10		280 HB	0.2	1.8	0.07	0.14	0.25	70	150	**1.0**	**0.17**	**140**
			11		320 HB	0.2	1.4	0.07	0.12	0.20	70	130	**1.0**	**0.17**	**120**
			11		350 HB	0.2	1.4	0.07	0.12	0.16	70	110	**1.0**	**0.17**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.2	1.8	0.08	0.15	0.20	170	270	**1.0**	**0.17**	**260**
			14		240 HB	0.2	1.8	0.08	0.15	0.16	160	220	**1.0**	**0.17**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.2	1.4	0.07	0.12	0.12	80	150	**1.0**	**0.17**	**140**
			14		310 HB	0.2	1.4	0.07	0.12	0.12	70	140	**1.0**	**0.17**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.2	1.8	0.08	0.15	0.20	170	250	**1.0**	**0.21**	**240**
			13		42 HRc	0.2	1.4	0.08	0.14	0.16	120	190	**1.0**	**0.17**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.2	2.1	0.06	0.17	0.40	170	250	**1.0**	**0.25**	**240**
			15		200 HB	0.2	2.1	0.06	0.17	0.37	160	230	**1.0**	**0.25**	**220**
			16		250 HB	0.2	2.1	0.06	0.17	0.37	150	210	**1.0**	**0.25**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.2	1.8	0.06	0.15	0.30	120	250	**1.0**	**0.21**	**240**
			17,19		200 HB	0.2	1.8	0.06	0.15	0.25	120	230	**1.0**	**0.21**	**220**
			18,20		250 HB	0.2	1.8	0.06	0.15	0.25	120	190	**1.0**	**0.21**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.2	1.4	0.08	0.13	0.16	25	50	**1.0**	**0.17**	**40**
			33	Inconel 700	250 HB	0.2	1.4	0.08	0.13	0.16	25	50	**1.0**	**0.17**	**40**
			34	Stellite 21	350 HB	0.2	1.4	0.08	0.13	0.16	23	45	**1.0**	**0.17**	**35**
	Ti Based	10	36	TiAl6V4	-	0.2	1.4	0.08	0.14	0.20	45	65	**1.0**	**0.20**	**60**
			37	T40	-	0.2	1.4	0.08	0.12	0.16	35	60	**1.0**	**0.17**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.2	1.3	0.04	0.10	0.12	50	100	**0.8**	**0.15**	**90**
			38		50 HRc	0.2	1.1	0.04	0.09	0.11	40	90	**0.6**	**0.13**	**80**
			38		55 HRc	0.2	1.0	0.04	0.08	0.08	40	80	**0.5**	**0.10**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.2	1.1	0.04	0.10	0.11	40	60	**0.6**	**0.15**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.2	1.0	0.04	0.08	0.08	30	50	**0.5**	**0.10**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.2	2.8	0.08	0.26	0.43	200	400	**1.0**	**0.28**	**350**

TCMT 16T304 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

TCMT 16T308 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.43	1.62	180	330	**3.0**	**0.30**	**240**
			2		190 HB	0.5	5.0	0.21	0.43	1.62	180	280	**3.0**	**0.30**	**220**
			3		250 HB	0.5	5.0	0.21	0.38	1.35	180	250	**3.0**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.38	1.08	120	280	**3.0**	**0.27**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.38	1.08	120	250	**3.0**	**0.27**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.34	1.08	120	210	**3.0**	**0.26**	**150**
			8		350 HB	0.5	3.5	0.18	0.34	0.90	120	180	**3.0**	**0.26**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.34	1.08	70	190	**2.5**	**0.26**	**140**
			10		280 HB	0.5	4.0	0.18	0.34	1.08	70	150	**2.5**	**0.26**	**120**
			11		320 HB	0.5	3.0	0.18	0.30	0.72	70	130	**2.5**	**0.24**	**100**
			11		350 HB	0.5	3.0	0.18	0.30	0.72	70	110	**2.5**	**0.24**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.34	1.08	170	270	**3.0**	**0.30**	**200**
			14		240 HB	0.5	5.0	0.20	0.34	0.90	160	220	**3.0**	**0.27**	**180**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.30	0.72	80	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.30	0.72	70	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.34	0.90	170	250	**3.0**	**0.27**	**190**
			13		42 HRc	0.5	4.0	0.22	0.34	0.90	120	190	**2.5**	**0.27**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.51	1.80	170	250	**3.0**	**0.30**	**200**
			15		200 HB	0.5	5.0	0.15	0.51	1.62	160	230	**3.0**	**0.30**	**180**
			16		250 HB	0.5	5.0	0.15	0.47	1.62	150	210	**3.0**	**0.30**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.43	1.35	120	250	**3.0**	**0.26**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.43	1.17	120	230	**3.0**	**0.26**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.43	1.08	120	190	**3.0**	**0.26**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.30	0.63	25	45	**2.0**	**0.24**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.30	0.63	25	45	**2.0**	**0.24**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.30	0.63	23	40	**2.0**	**0.24**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.34	0.72	45	65	**2.0**	**0.28**	**55**
			37	T40	-	0.5	3.0	0.20	0.30	0.63	35	55	**2.0**	**0.26**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.26	0.54	50	100	**2.0**	**0.21**	**80**
			38		50 HRc	0.5	2.0	0.11	0.21	0.36	40	90	**1.5**	**0.17**	**70**
			38		55 HRc	0.5	1.5	0.11	0.17	0.27	40	80	**1.0**	**0.15**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.21	0.36	40	60	**1.5**	**0.15**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.17	0.27	30	50	**1.0**	**0.13**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.51	1.60	200	400	**3.0**	**0.34**	**280**

TCMT 16T312 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.48	1.94	180	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.48	1.94	180	280	**3.0**	**0.38**	**220**
			3		250 HB	0.5	5.0	0.21	0.43	1.62	180	250	**3.0**	**0.38**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.43	1.30	120	280	**3.0**	**0.35**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.43	1.30	120	250	**3.0**	**0.35**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.38	1.30	120	210	**3.0**	**0.32**	**150**
			8		350 HB	0.5	3.5	0.18	0.38	1.08	120	180	**3.0**	**0.32**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.38	1.30	70	190	**2.5**	**0.32**	**140**
			10		280 HB	0.5	4.0	0.18	0.38	1.30	70	150	**2.5**	**0.32**	**120**
			11		320 HB	0.5	3.0	0.18	0.33	0.86	70	130	**2.5**	**0.30**	**100**
			11		350 HB	0.5	3.0	0.18	0.33	0.86	70	110	**2.5**	**0.30**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.38	1.30	170	270	**3.0**	**0.38**	**200**
			14		240 HB	0.5	5.0	0.20	0.38	1.08	160	220	**3.0**	**0.35**	**180**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.33	0.86	80	150	**2.5**	**0.30**	**100**
			14		310 HB	0.5	4.0	0.18	0.33	0.86	70	140	**2.5**	**0.30**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.38	1.08	170	250	**3.0**	**0.35**	**190**
			13		42 HRc	0.5	4.0	0.22	0.38	1.08	120	190	**2.5**	**0.35**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.57	2.16	170	250	**3.0**	**0.38**	**200**
			15		200 HB	0.5	5.0	0.15	0.57	1.94	160	230	**3.0**	**0.38**	**180**
			16		250 HB	0.5	5.0	0.15	0.52	1.94	150	210	**3.0**	**0.38**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.48	1.62	120	250	**3.0**	**0.32**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.48	1.40	120	230	**3.0**	**0.32**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.48	1.30	120	190	**3.0**	**0.32**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.33	0.76	25	45	**2.0**	**0.30**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.33	0.76	25	45	**2.0**	**0.30**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.33	0.76	23	40	**2.0**	**0.30**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.38	0.86	45	65	**2.0**	**0.36**	**55**
			37	T40	-	0.5	3.0	0.20	0.33	0.76	35	55	**2.0**	**0.32**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.29	0.65	50	100	**2.0**	**0.27**	**80**
			38		50 HRc	0.5	2.0	0.11	0.24	0.43	40	90	**1.5**	**0.22**	**70**
			38		55 HRc	0.5	1.5	0.11	0.19	0.32	40	80	**1.0**	**0.19**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.24	0.43	40	60	**1.5**	**0.19**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.19	0.32	30	50	**1.0**	**0.16**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.57	1.90	200	400	**3.0**	**0.43**	**280**

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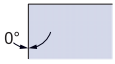
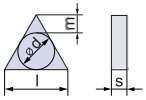
www.akytec.ru

T N M A

Shape

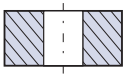


Clearance Angle



Tolerance

s ± 0.13
For l = 16, **d** ± 0.05 **m** ± 0.08
For l = 22, **d** ± 0.08 **m** ± 0.13



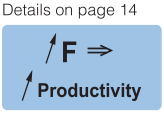
Fixing, Chipbreaker

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNMA 160408 LT 1005	16	4.76	0.8	T0002837	●	●	●
TNMA 160412 LT 1005	16	4.76	1.2	T0003238	●	●	●

Strong edge preparation mainly for gray cast iron. For general purpose turning, facing and boring operations.

Machining Recommendations

Details on page 14



Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

TNMA 160408 – **LT 1005**

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.15	0.35	1.3	270	450	**3.2**	**0.30**	**350**
			15		200 HB	0.7	5.0	0.15	0.33	1.2	200	320	**3.2**	**0.30**	**250**
			16		250 HB	0.7	5.0	0.15	0.30	1.2	170	240	**3.2**	**0.30**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.15	0.35	1.0	130	260	**2.5**	**0.28**	**240**
			17,19		200 HB	0.7	5.0	0.15	0.33	0.9	130	230	**2.5**	**0.28**	**210**
			18,20		250 HB	0.7	5.0	0.15	0.30	0.8	130	190	**2.5**	**0.28**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.0	0.11	0.18	0.3	40	60	**1.4**	**0.15**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.11	0.18	0.2	30	50	**1.0**	**0.15**	**40**

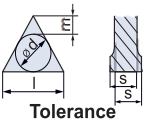
TNMA 160412 – **LT 1005**

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.15	0.38	1.3	270	450	**3.5**	**0.33**	**350**
			15		200 HB	0.7	5.0	0.15	0.35	1.2	200	320	**3.5**	**0.33**	**250**
			16		250 HB	0.7	5.0	0.15	0.32	1.2	170	240	**3.5**	**0.33**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.15	0.38	1.3	130	260	**2.5**	**0.30**	**240**
			17,19		200 HB	0.7	5.0	0.15	0.35	1.2	130	230	**2.5**	**0.30**	**210**
			18,20		250 HB	0.7	5.0	0.15	0.32	1.2	130	190	**2.5**	**0.30**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.0	0.11	0.20	0.3	40	60	**1.4**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.11	0.20	0.2	30	50	**1.0**	**0.15**	**40**

T N M G

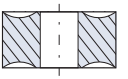
Shape

Clearance Angle



Tolerance

s ± 0.13
For l = 16, **d** ± 0.05 **m** ± 0.08
For l = 22, **d** ± 0.08 **m** ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNMG 160404 NN LT 10	16	4.76	0.4	T0000457	●	●	●
TNMG 160408 NN LT 10	16	4.76	0.8	T0000069	●	●	●
TNMG 160412 NN LT 10	16	4.76	1.2	T0001734	●	●	●
TNMG 220404 NN LT 10	22	4.76	0.4	T0001873	●	●	●
TNMG 220408 NN LT 10	22	4.76	0.8	T0000113	●	●	●
TNMG 220412 NN LT 10	22	4.76	1.2	T0001735	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNMG 160404 NN LT 1000	16	4.76	0.4	T0001931	●	●	●
TNMG 160408 NN LT 1000	16	4.76	0.8	T0001932	●	●	●
TNMG 160408 NX LT 1000	16	4.76	0.8	T0003012	●	●	●
TNMG 160412 NN LT 1000	16	4.76	1.2	T0001933	●	●	●
TNMG 220404 NN LT 1000	22	4.76	0.4	T0001934	●	●	●
TNMG 220408 NN LT 1000	22	4.76	0.8	T0001935	●	●	●
TNMG 220408 NX LT 1000	22	4.76	0.8	T0003013	●	●	●
TNMG 220412 NN LT 1000	22	4.76	1.2	T0001936	●	●	●

60° triangle shape inserts. Suitable for general purpose turning and copying operations.

Machining Recommendations

Details on page 14

F ⇒ Productivity

LT 10 and LT 1000

Stainless Steel V_c

LT 10 and LT 1000

Stainless Steel
Exotic Material
NX-CNMP-TNMP-WNMP

NX LT 10 and LT 1000

Exotic Material
Verify
Cutting Conditions

NX LT 10 and LT 1000

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

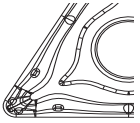
Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

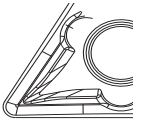
T N M G

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNMG 160408 NN LT 1005	16	4.76	0.8	T0004081	●	●	●
TNMG 160408 NX LT 1005	16	4.76	0.8	T0004082	●	●	●
TNMG 160412 NN LT 1005	16	4.76	1.2	T0004083	●	●	●
TNMG 220408 NN LT 1005	22	4.76	0.8	T0004084	●	●	●
TNMG 220408 NX LT 1005	22	4.76	0.8	T0004086	●	●	●
TNMG 220412 NN LT 1005	22	4.76	1.2	T0004087	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNMG 160408 NN LT 1025	16	4.76	0.8	T0004138	●	●	●
TNMG 160408 NX LT 1025	16	4.76	0.8	T0004139	●	●	●
TNMG 160412 NN LT 1025	16	4.76	1.2	T0004140	●	●	●
TNMG 220408 NN LT 1025	22	4.76	0.8	T0004142	●	●	●
TNMG 220408 NX LT 1025	22	4.76	0.8	T0004143	●	●	●
TNMG 220412 NN LT 1025	22	4.76	1.2	T0004144	●	●	●



NX chipbreaker



NM chipbreaker

Machining Recommendations

Details on page 14

Stainless Steel
Exotic Material
NX-CNMP-TNMP-WNMP

NX for LT 1025

$V_c \Rightarrow$ Productivity

LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

TNMG 160404 NN – **T 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

TNMG 160408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

TNMG 160408 NN – LT 1005

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	430	**3.0**	**0.38**	**265**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	365	**3.0**	**0.35**	**240**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	325	**3.0**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	365	**3.0**	**0.32**	**220**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	325	**3.0**	**0.32**	**200**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	275	**3.0**	**0.30**	**165**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	235	**2.7**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	245	**2.5**	**0.30**	**155**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	195	**2.5**	**0.30**	**130**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	170	**2.2**	**0.28**	**110**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	145	**2.2**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	325	**3.0**	**0.35**	**220**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	300	**3.0**	**0.35**	**200**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	275	**3.0**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	325	**3.0**	**0.30**	**200**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	300	**3.0**	**0.30**	**175**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	245	**3.0**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	130	**2.0**	**0.25**	**90**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	115	**1.5**	**0.20**	**75**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	105	**1.0**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	80	**1.5**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	65	**1.0**	**0.15**	**45**

TNMG 160408 NN – LT 1025

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

TNMG 160408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.70	180	330	**3.0**	**0.33**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.70	180	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.45	180	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.15	120	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.15	120	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.15	120	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	120	180	**3.0**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.15	70	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.15	70	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.75	70	130	**2.5**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.75	70	110	**2.5**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.15	170	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	160	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.75	80	150	**2.5**	**0.27**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.75	70	140	**2.5**	**0.27**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.19	0.40	0.95	170	250	**2.5**	**0.29**	**190**
			13		42 HRc	0.5	4.0	0.19	0.40	0.95	120	190	**2.2**	**0.24**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	250	**3.0**	**0.33**	**200**
			15		200 HB	0.5	5.0	0.13	0.60	1.70	160	230	**3.0**	**0.33**	**180**
			16		250 HB	0.5	5.0	0.13	0.55	1.70	150	210	**3.0**	**0.33**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.45	120	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.25	120	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.15	120	190	**3.0**	**0.29**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			33	Inconel 700	250 HB	0.5	3.0	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.18	0.35	0.65	25	40	**2.0**	**0.27**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.18	0.40	0.75	45	65	**2.0**	**0.31**	**55**
			37	T40	-	0.5	3.0	0.18	0.35	0.65	35	55	**2.0**	**0.29**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.10	0.30	0.55	50	100	**2.0**	**0.24**	**80**
			38		50 HRc	0.5	2.0	0.10	0.25	0.40	40	90	**1.5**	**0.19**	**70**
			38		55 HRc	0.5	1.5	0.10	0.20	0.30	40	80	**1.0**	**0.17**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.10	0.25	0.40	40	60	**1.5**	**0.17**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.10	0.20	0.30	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.18	0.60	1.70	200	400	**3.0**	**0.38**	**280**

TNMG 160408 NX – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	180	430	**3.0**	**0.36**	**265**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	180	365	**3.0**	**0.33**	**240**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	180	325	**3.0**	**0.31**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	120	365	**3.0**	**0.30**	**220**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	120	325	**3.0**	**0.30**	**200**
			5,7		280 HB	0.5	4.0	0.15	0.40	1.14	120	275	**3.0**	**0.29**	**165**
			8		350 HB	0.5	3.5	0.15	0.40	0.95	120	235	**2.7**	**0.29**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.15	0.40	1.14	70	245	**2.5**	**0.29**	**155**
			10		280 HB	0.5	4.0	0.15	0.40	1.14	70	195	**2.5**	**0.29**	**130**
			11		320 HB	0.5	3.0	0.15	0.35	0.76	70	170	**2.2**	**0.27**	**110**
			11		350 HB	0.5	3.0	0.15	0.35	0.76	70	145	**2.2**	**0.27**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.13	0.60	1.90	170	325	**3.0**	**0.33**	**220**
			15		200 HB	0.5	5.0	0.13	0.60	1.71	160	300	**3.0**	**0.33**	**200**
			16		250 HB	0.5	5.0	0.13	0.55	1.71	150	275	**3.0**	**0.33**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	120	325	3.0	0.29	200
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	120	300	3.0	0.29	175
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	120	245	3.0	0.29	155
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.09	0.30	0.57	50	130	**2.0**	**0.24**	**90**
			38		50 HRc	0.5	2.0	0.09	0.25	0.38	40	115	**1.5**	**0.19**	**75**
			38		55 HRc	0.5	1.5	0.09	0.20	0.29	40	105	**1.0**	**0.17**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.09	0.25	0.38	40	80	**1.5**	**0.17**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.09	0.20	0.29	30	65	**1.0**	**0.14**	**45**

TNMG 160408 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.18	0.50	1.71	90	330	**3.0**	**0.36**	**240**
			2		190 HB	0.5	5.0	0.18	0.50	1.71	90	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	5.0	0.18	0.45	1.43	90	250	**3.0**	**0.31**	**200**
Steel	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.18	0.45	1.14	60	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	4.0	0.18	0.45	1.14	60	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	4.0	0.16	0.40	1.14	60	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	3.5	0.16	0.40	0.95	60	180	**2.7**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.16	0.40	1.14	35	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	4.0	0.16	0.40	1.14	35	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	3.0	0.16	0.35	0.76	35	130	**2.2**	**0.27**	**100**
			11		350 HB	0.5	3.0	0.16	0.35	0.76	35	110	**2.2**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.18	0.40	1.14	85	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	5.0	0.18	0.40	0.95	80	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.16	0.35	0.76	40	150	**2.5**	**0.23**	**100**
			14		310 HB	0.5	4.0	0.16	0.35	0.76	35	140	**2.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.16	0.40	0.67	85	250	**2.5**	**0.19**	**190**
			13		42 HRc	0.5	4.0	0.16	0.40	0.67	60	190	**2.2**	**0.19**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.13	0.50	1.43	60	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	5.0	0.13	0.50	1.24	60	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	5.0	0.13	0.50	1.14	60	190	**3.0**	**0.29**	**140**

TNMG 160412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	5.0	0.26	0.68	3.06	180	330	**4.0**	**0.46**	**240**
			2		190 HB	0.7	5.0	0.26	0.68	3.06	180	280	**4.0**	**0.46**	**220**
			3		250 HB	0.7	5.0	0.26	0.61	2.55	180	250	**4.0**	**0.46**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	5.0	0.26	0.61	2.04	120	280	**4.0**	**0.42**	**200**
			4,6		230 HB	0.7	4.0	0.26	0.61	2.04	120	250	**4.0**	**0.42**	**180**
			5,7		280 HB	0.7	4.0	0.23	0.54	2.04	120	210	**4.0**	**0.40**	**150**
			8		350 HB	0.7	3.5	0.23	0.54	1.70	120	180	**4.0**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.0	0.23	0.54	2.04	70	190	**3.4**	**0.40**	**140**
			10		280 HB	0.7	4.0	0.23	0.54	2.04	70	150	**3.4**	**0.40**	**120**
			11		320 HB	0.7	3.0	0.23	0.47	1.36	70	130	**3.4**	**0.37**	**100**
			11		350 HB	0.7	3.0	0.23	0.47	1.36	70	110	**3.4**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	5.0	0.25	0.54	2.04	170	270	**4.0**	**0.40**	**190**
			14		240 HB	0.7	5.0	0.25	0.54	1.70	160	220	**4.0**	**0.36**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.0	0.23	0.47	1.36	80	150	**3.4**	**0.32**	**100**
			14		310 HB	0.7	4.0	0.23	0.47	1.36	70	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	5.0	0.28	0.54	1.70	170	250	**4.0**	**0.40**	**190**
			13		42 HRc	0.7	4.0	0.28	0.54	1.70	120	190	**3.0**	**0.35**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.20	0.81	3.40	170	250	**4.0**	**0.46**	**200**
			15		200 HB	0.7	5.0	0.20	0.81	3.06	160	230	**4.0**	**0.46**	**180**
			16		250 HB	0.7	5.0	0.20	0.74	3.06	150	210	**4.0**	**0.46**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.20	0.68	2.55	120	250	**4.0**	**0.40**	**180**
			17,19		200 HB	0.7	5.0	0.20	0.68	2.21	120	230	**4.0**	**0.40**	**160**
			18,20		250 HB	0.7	5.0	0.20	0.68	2.04	120	190	**4.0**	**0.40**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	3.0	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**32**
			33	Inconel 700	250 HB	0.7	3.0	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**30**
			34	Stellite 21	350 HB	0.7	3.0	0.25	0.47	1.19	23	40	**2.7**	**0.37**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	4.0	0.25	0.54	1.36	45	65	**2.7**	**0.40**	**55**
			37	T40	-	0.7	3.0	0.25	0.47	1.19	35	55	**2.7**	**0.37**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	2.5	0.14	0.41	1.02	50	100	**2.2**	**0.33**	**80**
			38		50 HRc	0.7	2.0	0.14	0.34	0.68	40	90	**2.0**	**0.26**	**70**
			38		55 HRc	0.7	1.5	0.14	0.27	0.51	40	80	**1.3**	**0.24**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.0	0.14	0.34	0.68	40	60	**2.0**	**0.24**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.14	0.27	0.51	30	50	**1.3**	**0.20**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	6.0	0.25	0.81	3.10	200	400	**4.0**	**0.50**	**280**

TNMG 160412 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	5.0	0.26	0.68	3.06	180	430	**3.6**	**0.50**	**265**
			2		190 HB	0.7	5.0	0.26	0.68	3.06	180	365	**3.6**	**0.46**	**240**
			3		250 HB	0.7	5.0	0.26	0.61	2.55	180	325	**3.6**	**0.44**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	5.0	0.26	0.61	2.04	120	365	**3.6**	**0.42**	**220**
			4,6		230 HB	0.7	4.0	0.26	0.61	2.04	120	325	**3.6**	**0.42**	**200**
			5,7		280 HB	0.7	4.0	0.23	0.54	2.04	120	275	**3.6**	**0.40**	**165**
			8		350 HB	0.7	3.5	0.23	0.54	1.70	120	235	**3.2**	**0.40**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.0	0.23	0.54	2.04	70	245	**3.0**	**0.40**	**155**
			10		280 HB	0.7	4.0	0.23	0.54	2.04	70	195	**3.0**	**0.40**	**130**
			11		320 HB	0.7	3.0	0.23	0.47	1.36	70	170	**2.6**	**0.37**	**110**
			11		350 HB	0.7	3.0	0.23	0.47	1.36	70	145	**2.6**	**0.37**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	5.0	0.19	0.81	3.40	170	325	**3.6**	**0.46**	**220**
			15		200 HB	0.7	5.0	0.19	0.81	3.06	160	300	**3.6**	**0.46**	**200**
			16		250 HB	0.7	5.0	0.19	0.74	3.06	150	275	**3.6**	**0.46**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.19	0.68	2.55	120	325	**3.6**	0.40	200
			17,19		200 HB	0.7	5.0	0.19	0.68	2.21	120	300	**3.6**	0.40	175
			18,20		250 HB	0.7	5.0	0.19	0.68	2.04	120	245	**3.6**	0.40	155
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	2.5	0.14	0.41	1.02	50	130	**2.4**	**0.33**	**90**
			38		50 HRc	0.7	2.0	0.14	0.34	0.68	40	115	**1.8**	**0.26**	**75**
			38		55 HRc	0.7	1.5	0.14	0.27	0.51	40	105	**1.2**	**0.24**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.0	0.14	0.34	0.68	40	80	**1.8**	**0.24**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.14	0.27	0.51	30	65	**1.2**	**0.20**	**45**

TNMG 160412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	5.0	0.26	0.68	3.06	90	330	**3.6**	**0.50**	**240**
			2		190 HB	0.7	5.0	0.26	0.68	3.06	90	280	**3.6**	**0.46**	**220**
			3		250 HB	0.7	5.0	0.26	0.61	2.55	90	250	**3.6**	**0.44**	**200**
Steel	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	5.0	0.26	0.61	2.04	60	280	**3.6**	**0.42**	**200**
			4,6		230 HB	0.7	4.0	0.26	0.61	2.04	60	250	**3.6**	**0.42**	**180**
			5,7		280 HB	0.7	4.0	0.23	0.54	2.04	60	210	**3.6**	**0.40**	**150**
			8		350 HB	0.7	3.5	0.23	0.54	1.70	60	180	**3.2**	**0.40**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	4.0	0.23	0.54	2.04	35	190	**3.0**	**0.40**	**140**
			10		280 HB	0.7	4.0	0.23	0.54	2.04	35	150	**3.0**	**0.40**	**120**
			11		320 HB	0.7	3.0	0.23	0.47	1.36	35	130	**2.6**	**0.37**	**100**
			11		350 HB	0.7	3.0	0.23	0.47	1.36	35	110	**2.6**	**0.37**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	5.0	0.25	0.54	2.04	85	270	**3.6**	**0.33**	**190**
			14		240 HB	0.7	5.0	0.25	0.54	1.70	80	220	**3.6**	**0.29**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	4.0	0.23	0.47	1.36	40	150	**3.0**	**0.32**	**100**
			14		310 HB	0.7	4.0	0.23	0.47	1.36	35	140	**3.0**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	5.0	0.23	0.54	1.19	85	250	**3.0**	**0.26**	**190**
			13		42 HRc	0.7	4.0	0.23	0.54	1.19	60	190	**2.6**	**0.26**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	5.0	0.19	0.68	2.55	60	250	**3.6**	**0.40**	**180**
			17,19		200 HB	0.7	5.0	0.19	0.68	2.21	60	230	**3.6**	**0.40**	**160**
			18,20		250 HB	0.7	5.0	0.19	0.68	2.04	60	190	**3.6**	**0.40**	**140**

TNMG 220404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

TNMG 220408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	7.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	7.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	5.6	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	5.6	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	4.9	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	5.6	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	4.2	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	4.2	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	7.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	7.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	5.6	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	5.6	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	7.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	5.6	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	7.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	7.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	7.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	7.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	7.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	4.2	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	4.2	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	4.2	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	5.6	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	4.2	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	3.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.8	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	2.1	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.8	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	2.1	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	8.4	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

TNMG 220408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.21	0.50	1.80	180	430	**3.0**	**0.38**	**265**
			2		190 HB	0.5	7.0	0.21	0.50	1.80	180	365	**3.0**	**0.35**	**240**
			3		250 HB	0.5	7.0	0.21	0.45	1.50	180	325	**3.0**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.21	0.45	1.20	120	365	**3.0**	**0.32**	**220**
			4,6		230 HB	0.5	5.6	0.21	0.45	1.20	120	325	**3.0**	**0.32**	**200**
			5,7		280 HB	0.5	5.6	0.18	0.40	1.20	120	275	**3.0**	**0.30**	**165**
			8		350 HB	0.5	4.9	0.18	0.40	1.00	120	235	**2.7**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.18	0.40	1.20	70	245	**2.5**	**0.30**	**155**
			10		280 HB	0.5	5.6	0.18	0.40	1.20	70	195	**2.5**	**0.30**	**130**
			11		320 HB	0.5	4.2	0.18	0.35	0.80	70	170	**2.2**	**0.28**	**110**
			11		350 HB	0.5	4.2	0.18	0.35	0.80	70	145	**2.2**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	7.0	0.15	0.60	2.00	170	325	**3.0**	**0.35**	**220**
			15		200 HB	0.5	7.0	0.15	0.60	1.80	160	300	**3.0**	**0.35**	**200**
			16		250 HB	0.5	7.0	0.15	0.55	1.80	150	275	**3.0**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.15	0.50	1.50	120	325	**3.0**	**0.30**	**200**
			17,19		200 HB	0.5	7.0	0.15	0.50	1.30	120	300	**3.0**	**0.30**	**175**
			18,20		250 HB	0.5	7.0	0.15	0.50	1.20	120	245	**3.0**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	3.5	0.11	0.30	0.60	50	130	**2.0**	**0.25**	**90**
			38		50 HRc	0.5	2.8	0.11	0.25	0.40	40	115	**1.5**	**0.20**	**75**
			38		55 HRc	0.5	2.1	0.11	0.20	0.30	40	105	**1.0**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.8	0.11	0.25	0.40	40	80	**1.5**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	2.1	0.11	0.20	0.30	30	65	**1.0**	**0.15**	**45**

TNMG 220408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	7.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	7.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	5.6	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	5.6	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	4.9	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	5.6	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	4.2	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	4.2	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	7.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	7.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	5.6	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	5.6	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	7.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	5.6	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	7.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	7.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

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TNMG 220408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.18	0.50	1.70	180	330	**3.0**	**0.33**	**240**
			2		190 HB	0.5	7.0	0.18	0.50	1.70	180	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	7.0	0.18	0.45	1.45	180	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.18	0.45	1.15	120	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	5.6	0.18	0.45	1.15	120	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	5.6	0.16	0.40	1.15	120	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	4.9	0.16	0.40	0.95	120	180	**3.0**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.16	0.40	1.15	70	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	5.6	0.16	0.40	1.15	70	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	4.2	0.16	0.35	0.75	70	130	**2.5**	**0.27**	**100**
			11		350 HB	0.5	4.2	0.16	0.35	0.75	70	110	**2.5**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	7.0	0.18	0.40	1.15	170	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	7.0	0.18	0.40	0.95	160	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	5.6	0.16	0.35	0.75	80	150	**2.5**	**0.27**	**100**
			14		310 HB	0.5	5.6	0.16	0.35	0.75	70	140	**2.5**	**0.27**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	7.0	0.19	0.40	0.95	170	250	**2.5**	**0.29**	**190**
			13		42 HRc	0.5	5.6	0.19	0.40	0.95	120	190	**2.5**	**0.24**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	7.0	0.13	0.60	1.90	170	250	**3.0**	**0.33**	**200**
			15		200 HB	0.5	7.0	0.13	0.60	1.70	160	230	**3.0**	**0.33**	**180**
			16		250 HB	0.5	7.0	0.13	0.55	1.70	150	210	**3.0**	**0.33**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.13	0.50	1.45	120	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	7.0	0.13	0.50	1.25	120	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	7.0	0.13	0.50	1.15	120	190	**3.0**	**0.29**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	4.2	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			33	Inconel 700	250 HB	0.5	4.2	0.18	0.35	0.65	25	45	**2.0**	**0.27**	**30**
			34	Stellite 21	350 HB	0.5	4.2	0.18	0.35	0.65	25	40	**2.0**	**0.27**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	5.6	0.18	0.40	0.75	45	65	**2.0**	**0.31**	**55**
			37	T40	-	0.5	4.2	0.18	0.35	0.65	35	55	**2.0**	**0.29**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	3.5	0.10	0.30	0.55	50	100	**2.0**	**0.24**	**80**
			38		50 HRc	0.5	2.8	0.10	0.25	0.40	40	90	**1.5**	**0.19**	**70**
			38		55 HRc	0.5	2.1	0.10	0.20	0.30	40	80	**1.0**	**0.17**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.8	0.10	0.25	0.40	40	60	**1.5**	**0.17**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	2.1	0.10	0.20	0.30	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	8.4	0.18	0.60	1.70	200	400	**3.0**	**0.38**	**280**

TNMG 220408 NX – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.18	0.50	1.71	180	430	**3.0**	**0.36**	**265**
			2		190 HB	0.5	7.0	0.18	0.50	1.71	180	365	**3.0**	**0.33**	**240**
			3		250 HB	0.5	7.0	0.18	0.45	1.43	180	325	**3.0**	**0.31**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.18	0.45	1.14	120	365	**3.0**	**0.30**	**220**
			4,6		230 HB	0.5	5.6	0.18	0.45	1.14	120	325	**3.0**	**0.30**	**200**
			5,7		280 HB	0.5	5.6	0.16	0.40	1.14	120	275	**3.0**	**0.29**	**165**
			8		350 HB	0.5	4.9	0.16	0.40	0.95	120	235	**2.7**	**0.29**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.16	0.40	1.14	70	245	**2.5**	**0.29**	**155**
			10		280 HB	0.5	5.6	0.16	0.40	1.14	70	195	**2.5**	**0.29**	**130**
			11		320 HB	0.5	4.2	0.16	0.35	0.76	70	170	**2.2**	**0.27**	**110**
			11		350 HB	0.5	4.2	0.16	0.35	0.76	70	145	**2.2**	**0.27**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	7.0	0.13	0.60	1.90	170	325	**3.0**	**0.33**	**220**
			15		200 HB	0.5	7.0	0.13	0.60	1.71	160	300	**3.0**	**0.33**	**200**
			16		250 HB	0.5	7.0	0.13	0.55	1.71	150	275	**3.0**	**0.33**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.13	0.50	1.43	120	325	**3.0**	**0.29**	**200**
			17,19		200 HB	0.5	7.0	0.13	0.50	1.24	120	300	**3.0**	**0.29**	**175**
			18,20		250 HB	0.5	7.0	0.13	0.50	1.14	120	245	**3.0**	**0.29**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	3.5	0.10	0.30	0.57	50	130	**2.0**	**0.24**	**90**
			38		50 HRc	0.5	2.8	0.10	0.25	0.38	40	115	**1.5**	**0.19**	**75**
			38		55 HRc	0.5	2.1	0.10	0.20	0.29	40	105	**1.0**	**0.17**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.8	0.10	0.25	0.38	40	80	**1.5**	**0.17**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	2.1	0.10	0.20	0.29	30	65	**1.0**	**0.14**	**45**

TNMG 220408 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	7.0	0.18	0.50	1.71	90	330	**3.0**	**0.36**	**240**
			2		190 HB	0.5	7.0	0.18	0.50	1.71	90	280	**3.0**	**0.33**	**220**
			3		250 HB	0.5	7.0	0.18	0.45	1.43	90	250	**3.0**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	7.0	0.18	0.45	1.14	60	280	**3.0**	**0.30**	**200**
			4,6		230 HB	0.5	5.6	0.18	0.45	1.14	60	250	**3.0**	**0.30**	**180**
			5,7		280 HB	0.5	5.6	0.16	0.40	1.14	60	210	**3.0**	**0.29**	**150**
			8		350 HB	0.5	4.9	0.16	0.40	0.95	60	180	**2.7**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	5.6	0.16	0.40	1.14	35	190	**2.5**	**0.29**	**140**
			10		280 HB	0.5	5.6	0.16	0.40	1.14	35	150	**2.5**	**0.29**	**120**
			11		320 HB	0.5	4.2	0.16	0.35	0.76	35	130	**2.2**	**0.27**	**100**
			11		350 HB	0.5	4.2	0.16	0.35	0.76	35	110	**2.2**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	7.0	0.18	0.40	1.14	85	270	**3.0**	**0.24**	**190**
			14		240 HB	0.5	7.0	0.18	0.40	0.95	80	220	**3.0**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	5.6	0.16	0.35	0.76	40	150	**2.5**	**0.23**	**100**
			14		310 HB	0.5	5.6	0.16	0.35	0.76	35	140	**2.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	7.0	0.16	0.40	0.67	85	250	**2.5**	**0.19**	**190**
			13		42 HRc	0.5	5.6	0.16	0.40	0.67	60	190	**2.2**	**0.19**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	7.0	0.13	0.50	1.43	60	250	**3.0**	**0.29**	**180**
			17,19		200 HB	0.5	7.0	0.13	0.50	1.24	60	230	**3.0**	**0.29**	**160**
			18,20		250 HB	0.5	7.0	0.13	0.50	1.14	60	190	**3.0**	**0.29**	**140**

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TNMG 220412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1		C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	7.0	0.26	0.68	3.06	180	330	**4.0**	**0.46**	**240**
		2			190 HB	0.7	7.0	0.26	0.68	3.06	180	280	**4.0**	**0.46**	**220**
		3			250 HB	0.7	7.0	0.26	0.61	2.55	180	250	**4.0**	**0.46**	**200**
	Low Alloyed	6		42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	7.0	0.26	0.61	2.04	120	280	**4.0**	**0.42**	**200**
		4,6			230 HB	0.7	5.6	0.26	0.61	2.04	120	250	**4.0**	**0.42**	**180**
		5,7			280 HB	0.7	5.6	0.23	0.54	2.04	120	210	**4.0**	**0.40**	**150**
		8			350 HB	0.7	4.9	0.23	0.54	1.70	120	180	**4.0**	**0.40**	**130**
	High Alloyed	10		X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	5.6	0.23	0.54	2.04	70	190	**3.4**	**0.40**	**140**
		10			280 HB	0.7	5.6	0.23	0.54	2.04	70	150	**3.4**	**0.40**	**120**
		11			320 HB	0.7	4.2	0.23	0.47	1.36	70	130	**3.4**	**0.37**	**100**
		11			350 HB	0.7	4.2	0.23	0.47	1.36	70	110	**3.4**	**0.37**	**90**
Stainless Steel	Austenitic	14		304, 316, X5CrNi18-9	180 HB	0.7	7.0	0.25	0.54	2.04	170	270	**4.0**	**0.40**	**190**
		14			240 HB	0.7	7.0	0.25	0.54	1.70	160	220	**4.0**	**0.36**	**170**
	Duplex	14		X2CrNiN23-4, S31500	290 HB	0.7	5.6	0.23	0.47	1.36	80	150	**3.4**	**0.32**	**100**
		14			310 HB	0.7	5.6	0.23	0.47	1.36	70	140	**3.4**	**0.32**	**90**
	Ferritic & Martensitic	12		410, X6Cr17, 17-4 PH, 430	200 HB	0.7	7.0	0.28	0.54	1.70	170	250	**4.0**	**0.40**	**190**
		13			42 HRc	0.7	5.6	0.28	0.54	1.70	120	190	**3.0**	**0.35**	**130**
Cast Iron	Grey	15		GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	7.0	0.20	0.81	3.40	170	250	**4.0**	**0.46**	**200**
		15			200 HB	0.7	7.0	0.20	0.81	3.06	160	230	**4.0**	**0.46**	**180**
		16			250 HB	0.7	7.0	0.20	0.74	3.06	150	210	**4.0**	**0.46**	**160**
	Malleable & Nodular	17,19		GGG40, GGG70, 50005	150 HB	0.7	7.0	0.20	0.68	2.55	120	250	**4.0**	**0.40**	**180**
		17,19			200 HB	0.7	7.0	0.20	0.68	2.21	120	230	**4.0**	**0.40**	**160**
		18,20			250 HB	0.7	7.0	0.20	0.68	2.04	120	190	**4.0**	**0.40**	**140**
High Temp. Alloys	Fe, Ni & Co Based	31,32		Incoloy 800	240 HB	0.7	4.2	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**32**
		33		Inconel 700	250 HB	0.7	4.2	0.25	0.47	1.19	25	45	**2.7**	**0.37**	**30**
		34		Stellite 21	350 HB	0.7	4.2	0.25	0.47	1.19	23	40	**2.7**	**0.37**	**28**
	Ti Based	36		TiAl6V4	-	0.7	5.6	0.25	0.54	1.36	45	65	**2.7**	**0.40**	**55**
		37		T40	-	0.7	4.2	0.25	0.47	1.19	35	55	**2.7**	**0.37**	**45**
Hardened Mat.	Steel	38		X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.5	0.14	0.41	1.02	50	100	**2.2**	**0.33**	**80**
		38			50 HRc	0.7	2.8	0.14	0.34	0.68	40	90	**2.0**	**0.26**	**70**
		38			55 HRc	0.7	2.1	0.14	0.27	0.51	40	80	**1.3**	**0.24**	**60**
	Chilled Cast Iron	40		Ni-Hard 2	400 HB	0.7	2.8	0.14	0.34	0.68	40	60	**2.0**	**0.24**	**50**
	White Cast Iron	41		G-X300CrMo15	55 HRc	0.7	2.1	0.14	0.27	0.51	30	50	**1.3**	**0.20**	**40**
NF	Al (>8%Si)	25		AlSi12	130 HB	0.7	7.0	0.25	0.81	3.10	200	400	**4.0**	**0.50**	**280**

TNMG 220412 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	7.0	0.26	0.68	3.06	180	430	4.0	0.50	265
			2		190 HB	0.7	7.0	0.26	0.68	3.06	180	365	4.0	0.46	240
			3		250 HB	0.7	7.0	0.26	0.61	2.55	180	325	4.0	0.44	220
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	7.0	0.26	0.61	2.04	120	365	4.0	0.42	220
			4,6		230 HB	0.7	5.6	0.26	0.61	2.04	120	325	4.0	0.42	200
			5,7		280 HB	0.7	5.6	0.23	0.54	2.04	120	275	4.0	0.40	165
			8		350 HB	0.7	4.9	0.23	0.54	1.70	120	235	3.6	0.40	145
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	5.6	0.23	0.54	2.04	70	245	3.4	0.40	155
			10		280 HB	0.7	5.6	0.23	0.54	2.04	70	195	3.4	0.40	130
			11		320 HB	0.7	4.2	0.23	0.47	1.36	70	170	2.9	0.37	110
			11		350 HB	0.7	4.2	0.23	0.47	1.36	70	145	2.9	0.37	100
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	7.0	0.19	0.81	3.40	170	325	4.0	0.46	220
			15		200 HB	0.7	7.0	0.19	0.81	3.06	160	300	4.0	0.46	200
			16		250 HB	0.7	7.0	0.19	0.74	3.06	150	275	4.0	0.46	175
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	7.0	0.19	0.68	2.55	120	325	4.0	0.40	200
			17,19		200 HB	0.7	7.0	0.19	0.68	2.21	120	300	4.0	0.40	175
			18,20		250 HB	0.7	7.0	0.19	0.68	2.04	120	245	4.0	0.40	155
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	3.5	0.14	0.41	1.02	50	130	2.7	0.33	90
			38		50 HRc	0.7	2.8	0.14	0.34	0.68	40	115	2.0	0.26	75
			38		55 HRc	0.7	2.1	0.14	0.27	0.51	40	105	1.3	0.24	65
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	2.8	0.14	0.34	0.68	40	80	2.0	0.24	55
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	2.1	0.14	0.27	0.51	30	65	1.3	0.20	45

TNMG 220412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	7.0	0.26	0.68	3.06	90	330	4.0	0.50	240
			2		190 HB	0.7	7.0	0.26	0.68	3.06	90	280	4.0	0.46	220
			3		250 HB	0.7	7.0	0.26	0.61	2.55	90	250	4.0	0.44	200
Steel	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	7.0	0.26	0.61	2.04	60	280	4.0	0.42	200
			4,6		230 HB	0.7	5.6	0.26	0.61	2.04	60	250	4.0	0.42	180
			5,7		280 HB	0.7	5.6	0.23	0.54	2.04	60	210	4.0	0.40	150
			8		350 HB	0.7	4.9	0.23	0.54	1.70	60	180	3.6	0.40	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	5.6	0.23	0.54	2.04	35	190	3.4	0.40	140
			10		280 HB	0.7	5.6	0.23	0.54	2.04	35	150	3.4	0.40	120
			11		320 HB	0.7	4.2	0.23	0.47	1.36	35	130	2.9	0.37	100
			11		350 HB	0.7	4.2	0.23	0.47	1.36	35	110	2.9	0.37	90
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	7.0	0.25	0.54	2.04	85	270	4.0	0.33	190
			14		240 HB	0.7	7.0	0.25	0.54	1.70	80	220	4.0	0.29	170
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	5.6	0.23	0.47	1.36	40	150	3.4	0.32	100
			14		310 HB	0.7	5.6	0.23	0.47	1.36	35	140	3.4	0.32	90
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	7.0	0.23	0.54	1.19	85	250	3.4	0.26	190
			13		42 HRc	0.7	5.6	0.23	0.54	1.19	60	190	2.9	0.26	130
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	7.0	0.19	0.68	2.55	60	250	4.0	0.40	180
			17,19		200 HB	0.7	7.0	0.19	0.68	2.21	60	230	4.0	0.40	160
			18,20		250 HB	0.7	7.0	0.19	0.68	2.04	60	190	4.0	0.40	140

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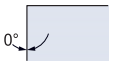
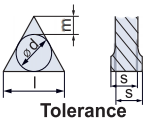
T N M P

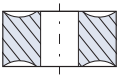
Shape



Clearance Angle



Tolerance
d ± 0.05
m ± 0.08
s ± 0.13



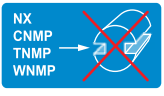
Fixing, Chipbreaker

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNMP 160408 NN LT 1025	16	4.76	0.8	T0004145	●	●	●

60° triangle shape inserts with positive chip breaker geometry. Generates low cutting forces. Suitable for general purpose, copying, high temperature alloys and stainless steel turning operations.

Machining Recommendations

Details on page 14



Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

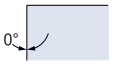
TNMP 160408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	90	330	**3.0**	**0.38**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	90	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	90	250	**3.0**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	60	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	60	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	60	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	60	180	**2.7**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	35	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	35	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	35	130	**2.2**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	35	110	**2.2**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	85	270	**3.0**	**0.25**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	80	220	**3.0**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	40	150	**2.5**	**0.24**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	35	140	**2.5**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.18	0.40	0.70	85	250	**2.5**	**0.20**	**190**
			13		42 HRc	0.5	4.0	0.18	0.40	0.70	60	190	**2.2**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	60	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	60	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	60	190	**3.0**	**0.30**	**140**

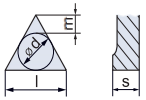
Left

T N U X

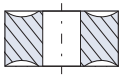
Shape



Clearance Angle



Tolerance
d ± 0.08
m ± 0.13
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNUX 160404 R LT 10	16	4.76	0.4	T0001125	●	●	●
TNUX 160404 L LT 10	16	4.76	0.4	T0001877	●	●	●
TNUX 160408 R LT 10	16	4.76	0.8	T0001137	●	●	●
TNUX 160408 L LT10	16	4.76	0.8	T0001878	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TNUX 160404 R LT 1000	16	4.76	0.4	T0001938	●	●	●
TNUX 160404 L LT 1000	16	4.76	0.4	T0002794	●	●	●
TNUX 160408 R LT 1000	16	4.76	0.8	T0001939	●	●	●
TNUX 160408 L LT 1000	16	4.76	0.8	T0002795	●	●	●

60° triangle shape inserts. Suitable for general turning and longitudinal operations, where there is a concern for work piece vibrations.

Machining Recommendations

Details on page 14

F ⇒ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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TNUX 160404 L/R – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	2.0	0.13	180
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

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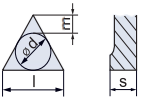
TNUX 160408 L/R – **LT 10 | LT 1000**

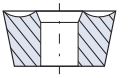
Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			8		350 HB	0.5	3.5	0.18	0.40	1.00	120	180	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

T P M R

Shape **Clearance Angle**



Tolerance
d ± 0.05
m ± 0.08
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
TPMR 160304 NN LT 10	16	3.76	0.4	T0001638	●	●	●
TPMR 160308 NN LT 10	16	3.76	0.8	T0001535	●	●	●

60° triangle shape inserts with positive rake angle. Suitable for boring and internal turing operations.

Machining Recommendations

Details on page 14

F ⇒ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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TPMR 160304 NN – **LT 10**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

TPMR 160308 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5.0	0.21	0.50	1.80	180	330	**3.0**	**0.35**	**240**
			2		190 HB	0.5	5.0	0.21	0.50	1.80	180	280	**3.0**	**0.35**	**220**
			3		250 HB	0.5	5.0	0.21	0.45	1.50	180	250	**3.0**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	5.0	0.21	0.45	1.20	120	280	**3.0**	**0.32**	**200**
			4,6		230 HB	0.5	4.0	0.21	0.45	1.20	120	250	**3.0**	**0.32**	**180**
			5,7		280 HB	0.5	4.0	0.18	0.40	1.20	120	210	**3.0**	**0.30**	**150**
			~~8~~		~~350 HB~~	~~0.5~~	~~3.5~~	~~0.18~~	~~0.40~~	~~1.00~~	~~120~~	~~180~~	**3.0**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4.0	0.18	0.40	1.20	70	190	**2.5**	**0.30**	**140**
			10		280 HB	0.5	4.0	0.18	0.40	1.20	70	150	**2.5**	**0.30**	**120**
			11		320 HB	0.5	3.0	0.18	0.35	0.80	70	130	**2.5**	**0.28**	**100**
			11		350 HB	0.5	3.0	0.18	0.35	0.80	70	110	**2.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	5.0	0.20	0.40	1.20	170	270	**3.0**	**0.35**	**190**
			14		240 HB	0.5	5.0	0.20	0.40	1.00	160	220	**3.0**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	4.0	0.18	0.35	0.80	80	150	**2.5**	**0.28**	**100**
			14		310 HB	0.5	4.0	0.18	0.35	0.80	70	140	**2.5**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5.0	0.22	0.40	1.00	170	250	**3.0**	**0.32**	**190**
			13		42 HRc	0.5	4.0	0.22	0.40	1.00	120	190	**2.5**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	5.0	0.15	0.60	2.00	170	250	**3.0**	**0.35**	**200**
			15		200 HB	0.5	5.0	0.15	0.60	1.80	160	230	**3.0**	**0.35**	**180**
			16		250 HB	0.5	5.0	0.15	0.55	1.80	150	210	**3.0**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	5.0	0.15	0.50	1.50	120	250	**3.0**	**0.30**	**180**
			17,19		200 HB	0.5	5.0	0.15	0.50	1.30	120	230	**3.0**	**0.30**	**160**
			18,20		250 HB	0.5	5.0	0.15	0.50	1.20	120	190	**3.0**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	3.0	0.20	0.35	0.70	25	45	**2.0**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	3.0	0.20	0.35	0.70	23	40	**2.0**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	4.0	0.20	0.40	0.80	45	65	**2.0**	**0.33**	**55**
			37	T40	-	0.5	3.0	0.20	0.35	0.70	35	55	**2.0**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.11	0.30	0.60	50	100	**2.0**	**0.25**	**80**
			38		50 HRc	0.5	2.0	0.11	0.25	0.40	40	90	**1.5**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	2.0	0.11	0.25	0.40	40	60	**1.5**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	6.0	0.20	0.60	1.80	200	400	**3.0**	**0.40**	**280**

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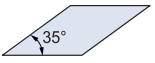


Shape | **Clearance Angle** | **Tolerance** | **Fixing, Chipbreaker**

Tolerance
d ± 0.05
m ± 0.08
s ± 0.13

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VBMT 110304 NN LT 10	11	3.76	0.4	T0001460	●	●	●
VBMT 160404 NN LT 10	16	4.76	0.4	T0000070	●	●	●
VBMT 160408 NN LT 10	16	4.76	0.8	T0000071	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VBMT 110304 NN LT 1000	11	3.76	0.4	T0001942	●	●	●
VBMT 160404 NN LT 1000	16	4.76	0.4	T0001943	●	●	●
VBMT 160408 NN LT 1000	16	4.76	0.8	T0001944	●	●	●

35° diamond shape inserts with positive rake angle. Suitable for internal and external copying operations of complex geometries.

Machining Recommendations

Details on page 14

F ⇒ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

VBMT 110304 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	2.1	0.08	0.20	0.37	180	330	**1.0**	**0.14**	**300**
			2		190 HB	0.3	1.8	0.08	0.19	0.32	180	280	**1.0**	**0.14**	**260**
			3		250 HB	0.3	1.8	0.08	0.17	0.30	180	250	**1.0**	**0.14**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	1.8	0.08	0.17	0.31	120	280	**1.0**	**0.11**	**260**
			4,6		230 HB	0.3	1.8	0.08	0.17	0.30	120	250	**1.0**	**0.11**	**240**
			5,7		280 HB	0.3	1.4	0.08	0.15	0.25	120	210	**1.0**	**0.10**	**200**
			8		350 HB	0.3	1.4	0.08	0.15	0.22	120	180	1.0	0.10	180
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	1.8	0.07	0.15	0.25	70	190	**0.9**	0.08	180
			10		280 HB	0.3	1.8	0.07	0.14	0.25	70	150	**0.9**	0.08	140
			11		320 HB	0.3	1.4	0.07	0.12	0.20	70	130	**0.9**	0.08	120
			11		350 HB	0.3	1.4	0.07	0.12	0.16	70	110	**0.9**	0.08	110
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	1.8	0.06	0.15	0.20	170	270	1.0	0.07	260
			14		240 HB	0.3	1.8	0.06	0.15	0.16	160	220	1.0	0.06	210
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	1.4	0.06	0.12	0.12	80	150	**0.9**	0.06	140
			14		310 HB	0.3	1.4	0.06	0.12	0.12	70	140	**0.9**	0.06	140
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	1.8	0.06	0.15	0.20	170	250	**0.9**	0.07	240
			13		42 HRc	0.3	1.4	0.06	0.14	0.16	120	190	**0.8**	0.06	180
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	2.1	0.06	0.17	0.40	170	250	1.0	0.14	240
			15		200 HB	0.3	2.1	0.06	0.17	0.37	160	230	1.0	0.14	220
			16		250 HB	0.3	2.1	0.06	0.17	0.37	150	210	1.0	0.14	200
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	1.8	0.06	0.15	0.30	120	250	1.0	0.10	240
			17,19		200 HB	0.3	1.8	0.06	0.15	0.25	120	230	1.0	0.10	220
			18,20		250 HB	0.3	1.8	0.06	0.15	0.25	120	190	1.0	0.10	180
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	0.08	40
			33	Inconel 700	250 HB	0.3	1.4	0.07	0.13	0.16	25	50	**0.7**	**0.08**	**40**
			34	Stellite 21	350 HB	0.3	1.4	0.07	0.13	0.16	23	45	**0.7**	**0.08**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	1.4	0.07	0.14	0.20	45	65	**0.7**	**0.11**	**60**
			37	T40	-	0.3	1.4	0.07	0.12	0.16	35	60	**0.7**	**0.08**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.3	0.04	0.10	0.12	50	100	**0.7**	**0.08**	**90**
			38		50 HRc	0.3	1.1	0.04	0.09	0.11	40	90	**0.6**	**0.06**	**80**
			38		55 HRc	0.3	1.0	0.04	0.08	0.08	40	80	**0.5**	**0.05**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.1	0.04	0.10	0.11	40	60	**0.6**	**0.08**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.0	0.04	0.08	0.08	30	50	**0.5**	**0.05**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	2.8	0.08	0.26	0.43	200	400	**1.0**	**0.18**	**350**

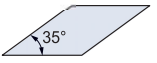
VBMT 160404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

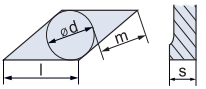
VBMT 160408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.19	0.40	1.26	180	330	**2.5**	**0.30**	**240**
			2		190 HB	0.5	3.5	0.19	0.40	1.26	180	280	**2.5**	**0.30**	**220**
			3		250 HB	0.5	3.5	0.19	0.36	1.05	180	250	**2.5**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.19	0.36	0.84	120	280	**2.5**	**0.27**	**200**
			4,6		230 HB	0.5	2.8	0.19	0.36	0.84	120	250	**2.5**	**0.27**	**180**
			5,7		280 HB	0.5	2.8	0.16	0.32	0.84	120	210	**2.5**	**0.26**	**150**
			8		350 HB	0.5	2.5	0.16	0.32	0.70	120	180	**2.5**	**0.26**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.16	0.32	0.84	70	190	**2.1**	**0.26**	**140**
			10		280 HB	0.5	2.8	0.16	0.32	0.84	70	150	**2.1**	**0.26**	**120**
			11		320 HB	0.5	2.1	0.16	0.28	0.56	70	130	**2.1**	**0.24**	**100**
			11		350 HB	0.5	2.1	0.16	0.28	0.56	70	110	**2.1**	**0.24**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.18	0.32	0.84	170	270	**2.5**	**0.30**	**190**
			14		240 HB	0.5	3.5	0.18	0.32	0.70	160	220	**2.5**	**0.27**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.16	0.28	0.56	80	150	**2.1**	**0.24**	**100**
			14		310 HB	0.5	2.8	0.16	0.28	0.56	70	140	**2.1**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.20	0.32	0.70	170	250	**2.5**	**0.27**	**190**
			13		42 HRc	0.5	2.8	0.20	0.32	0.70	120	190	**2.5**	**0.27**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.14	0.48	1.40	170	250	**2.5**	**0.30**	**200**
			15		200 HB	0.5	3.5	0.14	0.48	1.26	160	230	**2.5**	**0.30**	**180**
			16		250 HB	0.5	3.5	0.14	0.44	1.26	150	210	**2.5**	**0.30**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.14	0.40	1.05	120	250	**2.5**	**0.26**	**180**
			17,19		200 HB	0.5	3.5	0.14	0.40	0.91	120	230	**2.5**	**0.26**	**160**
			18,20		250 HB	0.5	3.5	0.14	0.40	0.84	120	190	**2.5**	**0.26**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.18	0.28	0.49	25	45	**2.0**	**0.24**	**32**
			33	Inconel 700	250 HB	0.5	2.1	0.18	0.28	0.49	25	45	**2.0**	**0.24**	**30**
			34	Stellite 21	350 HB	0.5	2.1	0.18	0.28	0.49	23	40	**2.0**	**0.24**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.8	0.18	0.32	0.56	45	65	**2.0**	**0.28**	**55**
			37	T40	-	0.5	2.1	0.18	0.28	0.49	35	55	**2.0**	**0.26**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.10	0.24	0.42	50	100	**1.6**	**0.21**	**80**
			38		50 HRc	0.5	1.4	0.10	0.20	0.28	40	90	**1.2**	**0.17**	**70**
			38		55 HRc	0.5	1.1	0.10	0.16	0.21	40	80	**1.0**	**0.15**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.10	0.20	0.28	40	60	**1.2**	**0.15**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.10	0.16	0.21	30	50	**1.0**	**0.13**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.2	0.18	0.48	1.40	200	400	**2.5**	**0.34**	**280**

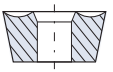
V C M T



Shape | **Clearance Angle**



Tolerance
d ± 0.05
m ± 0.08
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VCMT 160404 NN LT 10	16	4.76	0.4	T0001102	●	●	●
VCMT 160408 NN LT 10	16	4.76	0.8	T0001103	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VCMT 160404 NN LT 1000	16	4.76	0.4	T0001945	●	●	●
VCMT 160408 NN LT 1000	16	4.76	0.8	T0001946	●	●	●

35° diamond shape inserts with positive rake angle. Suitable for internal and external copying operations of complex geometries.

Machining Recommendations

Details on page 14

F ⇒ Productivity

Stainless Steel V_c

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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www.akytec.ru

VCMT 160404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

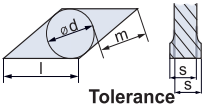
VCMT 160408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.19	0.40	1.26	180	330	**2.5**	**0.30**	**240**
			2		190 HB	0.5	3.5	0.19	0.40	1.26	180	280	**2.5**	**0.30**	**220**
			3		250 HB	0.5	3.5	0.19	0.36	1.05	180	250	**2.5**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.19	0.36	0.84	120	280	**2.5**	**0.27**	**200**
			4,6		230 HB	0.5	2.8	0.19	0.36	0.84	120	250	**2.5**	**0.27**	**180**
			5,7		280 HB	0.5	2.8	0.16	0.32	0.84	120	210	**2.5**	**0.26**	**150**
			8		350 HB	0.5	2.5	0.16	0.32	0.70	120	180	**2.5**	**0.26**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.16	0.32	0.84	70	190	**2.1**	**0.26**	**140**
			10		280 HB	0.5	2.8	0.16	0.32	0.84	70	150	**2.1**	**0.26**	**120**
			11		320 HB	0.5	2.1	0.16	0.28	0.56	70	130	**2.1**	**0.24**	**100**
			11		350 HB	0.5	2.1	0.16	0.28	0.56	70	110	**2.1**	**0.24**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.18	0.32	0.84	170	270	**2.5**	**0.30**	**190**
			14		240 HB	0.5	3.5	0.18	0.32	0.70	160	220	**2.5**	**0.27**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.16	0.28	0.56	80	150	**2.1**	**0.24**	**100**
			14		310 HB	0.5	2.8	0.16	0.28	0.56	70	140	**2.1**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.20	0.32	0.70	170	250	**2.5**	**0.27**	**190**
			13		42 HRc	0.5	2.8	0.20	0.32	0.70	120	190	**2.5**	**0.27**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.14	0.48	1.40	170	250	**2.5**	**0.30**	**200**
			15		200 HB	0.5	3.5	0.14	0.48	1.26	160	230	**2.5**	**0.30**	**180**
			16		250 HB	0.5	3.5	0.14	0.44	1.26	150	210	**2.5**	**0.30**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.14	0.40	1.05	120	250	**2.5**	**0.26**	**180**
			17,19		200 HB	0.5	3.5	0.14	0.40	0.91	120	230	**2.5**	**0.26**	**160**
			18,20		250 HB	0.5	3.5	0.14	0.40	0.84	120	190	**2.5**	**0.26**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.18	0.28	0.49	25	45	**2.0**	**0.24**	**32**
			33	Inconel 700	250 HB	0.5	2.1	0.18	0.28	0.49	25	45	**2.0**	**0.24**	**30**
			34	Stellite 21	350 HB	0.5	2.1	0.18	0.28	0.49	23	40	**2.0**	**0.24**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.8	0.18	0.32	0.56	45	65	**2.0**	**0.28**	**55**
			37	T40	-	0.5	2.1	0.18	0.28	0.49	35	55	**2.0**	**0.26**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.10	0.24	0.42	50	100	**1.6**	**0.21**	**80**
			38		50 HRc	0.5	1.4	0.10	0.20	0.28	40	90	**1.2**	**0.17**	**70**
			38		55 HRc	0.5	1.1	0.10	0.16	0.21	40	80	**1.0**	**0.15**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.10	0.20	0.28	40	60	**1.2**	**0.15**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.10	0.16	0.21	30	50	**1.0**	**0.13**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.2	0.18	0.48	1.40	200	400	**2.5**	**0.34**	**280**

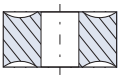
V N M G

Shape

Clearance Angle



Tolerance
d ± 0.05
m ± 0.08
s ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VNMG 160404 NN LT 10	16.00	4.76	0.4	T0000072	●	●	●
VNMG 160408 NN LT 10	16	4.76	0.8	T0000073	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VNMG 160404 NN LT 1000	16	4.76	0.4	T0001947	●	●	●
VNMG 160408 NN LT 1000	16	4.76	0.8	T0001948	●	●	●

LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VNMG 160408 NN LT 1005	16	4.76	0.8	T0004095	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
VNMG 160408 NN LT 1025	16	4.76	0.8	T0004149	●	●	●

35° diamond shape inserts. Suitable for external copying operations.

Machining Recommendations

Details on page 14

F ⇒ Productivity

LT 10 and LT 1000

Stainless Steel V_c

LT 10 and LT 1000

V_c ⇒ Productivity

LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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VNMG 160404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

VNMG 160408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.19	0.40	1.44	180	330	**2.7**	**0.32**	**240**
			2		190 HB	0.5	4.0	0.19	0.40	1.44	180	280	**2.7**	**0.32**	**220**
			3		250 HB	0.5	4.0	0.19	0.36	1.20	180	250	**2.7**	**0.32**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.19	0.36	0.96	120	280	**2.7**	**0.29**	**200**
			4,6		230 HB	0.5	3.2	0.19	0.36	0.96	120	250	**2.7**	**0.29**	**180**
			5,7		280 HB	0.5	3.2	0.16	0.32	0.96	120	210	**2.7**	**0.27**	**150**
			8		350 HB	0.5	2.8	0.16	0.32	0.80	120	180	**2.7**	**0.27**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.16	0.32	0.96	70	190	**2.3**	**0.27**	**140**
			10		280 HB	0.5	3.2	0.16	0.32	0.96	70	150	**2.3**	**0.27**	**120**
			11		320 HB	0.5	2.4	0.16	0.28	0.64	70	130	**2.3**	**0.25**	**100**
			11		350 HB	0.5	2.4	0.16	0.28	0.64	70	110	**2.3**	**0.25**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.18	0.32	0.96	170	270	**2.7**	**0.32**	**190**
			14		240 HB	0.5	4.0	0.18	0.32	0.80	160	220	**2.7**	**0.29**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.16	0.28	0.64	80	150	**2.3**	**0.25**	**100**
			14		310 HB	0.5	3.2	0.16	0.28	0.64	70	140	**2.3**	**0.25**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.20	0.32	0.80	170	250	**2.7**	**0.29**	**190**
			13		42 HRc	0.5	3.2	0.20	0.32	0.80	120	190	**2.5**	**0.29**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.14	0.48	1.60	170	250	**2.7**	**0.32**	**200**
			15		200 HB	0.5	4.0	0.14	0.48	1.44	160	230	**2.7**	**0.32**	**180**
			16		250 HB	0.5	4.0	0.14	0.44	1.44	150	210	**2.7**	**0.32**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.14	0.40	1.20	120	250	**2.7**	**0.27**	**180**
			17,19		200 HB	0.5	4.0	0.14	0.40	1.04	120	230	**2.7**	**0.27**	**160**
			18,20		250 HB	0.5	4.0	0.14	0.40	0.96	120	190	**2.7**	**0.27**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.4	0.18	0.28	0.56	25	45	**2.0**	**0.25**	**32**
			33	Inconel 700	250 HB	0.5	2.4	0.18	0.28	0.56	25	45	**2.0**	**0.25**	**30**
			34	Stellite 21	350 HB	0.5	2.4	0.18	0.28	0.56	23	40	**2.0**	**0.25**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	3.2	0.18	0.32	0.64	45	65	**2.0**	**0.30**	**55**
			37	T40	-	0.5	2.4	0.18	0.28	0.56	35	55	**2.0**	**0.27**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.10	0.24	0.48	50	100	**1.8**	**0.23**	**80**
			38		50 HRc	0.5	1.6	0.10	0.20	0.32	40	90	**1.4**	**0.18**	**70**
			38		55 HRc	0.5	1.2	0.10	0.16	0.24	40	80	**1.0**	**0.16**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.6	0.10	0.20	0.32	40	60	**1.4**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.2	0.10	0.16	0.24	30	50	**1.0**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.8	0.18	0.48	1.40	200	400	**2.7**	**0.36**	**280**

VNMG 160408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.19	0.40	1.44	180	430	**2.7**	**0.34**	**265**
			2		190 HB	0.5	4.0	0.19	0.40	1.44	180	365	**2.7**	**0.32**	**240**
			3		250 HB	0.5	4.0	0.19	0.36	1.20	180	325	**2.7**	**0.30**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.19	0.36	0.96	120	365	**2.7**	**0.29**	**220**
			4,6		230 HB	0.5	3.2	0.19	0.36	0.96	120	325	**2.7**	**0.29**	**200**
			5,7		280 HB	0.5	3.2	0.16	0.32	0.96	120	275	**2.7**	**0.27**	**165**
			8		350 HB	0.5	2.8	0.16	0.32	0.80	120	235	**2.4**	**0.27**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.16	0.32	0.96	70	245	**2.3**	**0.27**	**155**
			10		280 HB	0.5	3.2	0.16	0.32	0.96	70	195	**2.3**	**0.27**	**130**
			11		320 HB	0.5	2.4	0.16	0.28	0.64	70	170	**2.0**	**0.25**	**110**
			11		350 HB	0.5	2.4	0.16	0.28	0.64	70	145	**2.0**	**0.25**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.0	0.14	0.48	1.60	170	325	**2.7**	**0.32**	**220**
			15		200 HB	0.5	4.0	0.14	0.48	1.44	160	300	**2.7**	**0.32**	**200**
			16		250 HB	0.5	4.0	0.14	0.44	1.44	150	275	**2.7**	**0.32**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.14	0.40	1.20	120	325	**2.7**	**0.27**	**200**
			17,19		200 HB	0.5	4.0	0.14	0.40	1.04	120	300	**2.7**	**0.27**	**175**
			18,20		250 HB	0.5	4.0	0.14	0.40	0.96	120	245	**2.7**	**0.27**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.0	0.10	0.24	0.48	50	130	**1.8**	**0.23**	**90**
			38		50 HRc	0.5	1.6	0.10	0.20	0.32	40	115	**1.4**	**0.18**	**75**
			38		55 HRc	0.5	1.2	0.10	0.16	0.24	40	105	**0.9**	**0.16**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.6	0.10	0.20	0.32	40	80	**1.4**	**0.16**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.2	0.10	0.16	0.24	30	65	**0.9**	**0.14**	**45**

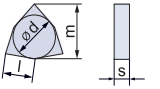
VNMG 160408 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.0	0.19	0.40	1.44	90	330	**2.7**	**0.34**	**240**
			2		190 HB	0.5	4.0	0.19	0.40	1.44	90	280	**2.7**	**0.32**	**220**
			3		250 HB	0.5	4.0	0.19	0.36	1.20	90	250	**2.7**	**0.30**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.0	0.19	0.36	0.96	60	280	**2.7**	**0.29**	**200**
			4,6		230 HB	0.5	3.2	0.19	0.36	0.96	60	250	**2.7**	**0.29**	**180**
			5,7		280 HB	0.5	3.2	0.16	0.32	0.96	60	210	**2.7**	**0.27**	**150**
			8		350 HB	0.5	2.8	0.16	0.32	0.80	60	180	**2.4**	**0.27**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.16	0.32	0.96	35	190	**2.3**	**0.27**	**140**
			10		280 HB	0.5	3.2	0.16	0.32	0.96	35	150	**2.3**	**0.27**	**120**
			11		320 HB	0.5	2.4	0.16	0.28	0.64	35	130	**2.0**	**0.25**	**100**
			11		350 HB	0.5	2.4	0.16	0.28	0.64	35	110	**2.0**	**0.25**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	4.0	0.18	0.32	0.96	85	270	**2.7**	**0.23**	**190**
			14		240 HB	0.5	4.0	0.18	0.32	0.80	80	220	**2.7**	**0.20**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.16	0.28	0.64	40	150	**2.3**	**0.22**	**100**
			14		310 HB	0.5	3.2	0.16	0.28	0.64	35	140	**2.3**	**0.22**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.0	0.16	0.32	0.56	85	250	**2.3**	**0.18**	**190**
			13		42 HRc	0.5	3.2	0.16	0.32	0.56	60	190	**2.0**	**0.18**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	4.0	0.14	0.40	1.20	60	250	**2.7**	**0.27**	**180**
			17,19		200 HB	0.5	4.0	0.14	0.40	1.04	60	230	**2.7**	**0.27**	**160**
			18,20		250 HB	0.5	4.0	0.14	0.40	0.96	60	190	**2.7**	**0.27**	**140**

W N M A

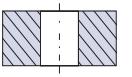
Shape

Clearance Angle



Tolerance

s ± 0.13
For l = 06, **d** ± 0.05 **m** ± 0.08
For l = 08, **d** ± 0.08 **m** ± 0.13



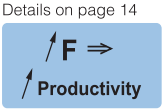
Fixing, Chipbreaker

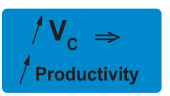
LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMA 080408 LT 1005	8	4.76	0.8	T0002840	●	●	●
WNMA 080412 LT 1005	8	4.76	1.2	T0002841	●	●	●

Strong edge preparation mainly for gray cast iron. For general purpose turning, facing and boring operations.

Machining Recommendations

Details on page 14





LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

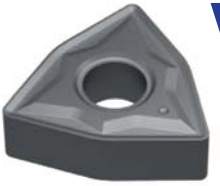
● = Good ● = Acceptable ● = Not recommended

WNMA 080408 – LT 1005

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	4.0	0.20	0.40	1.4	270	450	**3.5**	**0.32**	**350**
			15		200 HB	0.7	4.0	0.20	0.38	1.2	200	320	**3.5**	**0.32**	**250**
			16		250 HB	0.7	4.0	0.20	0.36	1.2	170	240	**3.5**	**0.32**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	4.0	0.20	0.40	1.0	130	260	**2.5**	**0.30**	**240**
			17,19		200 HB	0.7	4.0	0.20	0.38	0.9	130	230	**2.5**	**0.30**	**210**
			18,20		250 HB	0.7	4.0	0.20	0.36	0.8	130	190	**2.5**	**0.30**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.20	0.3	40	60	**1.4**	**0.16**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.20	0.2	30	50	**1.1**	**0.15**	**40**

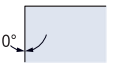
WNMA 080412 – LT 1005

	Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	4.0	0.20	0.60	1.7	270	450	**3.5**	**0.40**	**350**
			15		200 HB	0.7	4.0	0.20	0.58	1.5	200	320	**3.5**	**0.40**	**250**
			16		250 HB	0.7	4.0	0.20	0.56	1.5	170	240	**3.5**	**0.40**	**220**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	4.0	0.20	0.52	1.3	130	260	**3.0**	**0.30**	**240**
			17,19		200 HB	0.7	4.0	0.20	0.50	1.1	130	230	**3.0**	**0.30**	**210**
			18,20		250 HB	0.7	4.0	0.20	0.48	1.0	130	190	**3.0**	**0.30**	**180**
H	Chilled Cast Iron	11	40	Ni-Hard 2	400 HB	0.7	2.4	0.14	0.25	0.3	40	60	**1.5**	**0.19**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.8	0.14	0.20	0.3	30	50	**1.2**	**0.17**	**40**

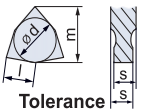


W N M G

Shape

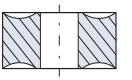


Clearance Angle



Tolerance

s ± 0.13
For l = 06, **d** ± 0.05 **m** ± 0.08
For l = 08, **d** ± 0.08 **m** ± 0.13



Fixing, Chipbreaker

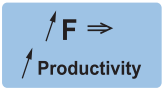
LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMG 060404 NN LT 10	6	4.76	0.4	T0000133	●	●	●
WNMG 060408 NN LT 10	6	4.76	0.8	T0000137	●	●	●
WNMG 080404 NN LT 10	8	4.76	0.4	T0000584	●	●	●
WNMG 080408 NN LT 10	8	4.76	0.8	T0000075	●	●	●
WNMG 080408 NM LT 10	8	4.76	0.8	T0001967	●	●	●
WNMG 080412 NN LT 10	8	4.76	1.2	T0000077	●	●	●

LT 1000 Multi-Mat™ General Usage - Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMG 060404 NN LT 1000	6	4.76	0.4	T0001949	●	●	●
WNMG 060408 NN LT 1000	6	4.76	0.8	T0001950	●	●	●
WNMG 060408 NX LT 1000	6	4.76	0.8	T0003014	●	●	●
WNMG 080404 NN LT 1000	8	4.76	0.4	T0001951	●	●	●
WNMG 080408 NN LT 1000	8	4.76	0.8	T0001952	●	●	●
WNMG 080408 NM LT 1000	8	4.76	0.8	T0001969	●	●	●
WNMG 080408 NX LT 1000	8	4.76	0.8	T0002742	●	●	●
WNMG 080412 NN LT 1000	8	4.76	1.2	T0001953	●	●	●

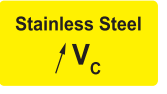
80° trigon shape inserts with 6 cutting edges. Suitable for all-purpose turning, facing and boring operations.

Machining Recommendations

Details on page 14



LT 10 and LT 1000



LT 10 and LT 1000

NX LT 10 and LT 1000

NX LT 10 and LT 1000

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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www.akytec.ru

W N M G

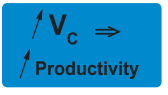
LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMG 060408 NN LT 1005	6	4.76	0.8	T0004099	●	●	●
WNMG 060408 NX LT 1005	6	4.76	0.8	T0004100	●	●	●
WNMG 080408 NN LT 1005	8	4.76	0.8	T0004103	●	●	●
WNMG 080408 NM LT 1005	8	4.76	0.8	T0004102	●	●	●
WNMG 080408 NX LT 1005	8	4.76	0.8	T0004104	●	●	●
WNMG 080412 NN LT 1005	8	4.76	1.2	T0004105	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMG 060408 NN LT 1025	6	4.76	0.8	T0004150	●	●	●
WNMG 060408 NX LT 1025	6	4.76	0.8	T0004151	●	●	●
WNMG 080408 NN LT 1025	8	4.76	0.8	T0004154	●	●	●
WNMG 080408 NM LT 1025	8	4.76	0.8	T0004153	●	●	●
WNMG 080408 NX LT 1025	8	4.76	0.8	T0004155	●	●	●
WNMG 080412 NN LT 1025	8	4.76	1.2	T0004156	●	●	●

Machining Recommendations

Details on page 14

NX for LT 1025



LT 1005

Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

WNMG 060404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

WNMG 060408 NN – LT 10 | LT 1000

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.21	0.50	1.17	180	330	**2.2**	**0.35**	**240**
			2		190 HB	0.5	2.5	0.21	0.50	1.17	180	280	**2.2**	**0.35**	**220**
			3		250 HB	0.5	2.5	0.21	0.45	0.98	180	250	**2.2**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.21	0.45	0.78	120	280	**2.2**	**0.32**	**200**
			4,6		230 HB	0.5	2.0	0.21	0.45	0.78	120	250	**1.8**	**0.32**	**180**
			5,7		280 HB	0.5	2.0	0.18	0.40	0.78	120	210	**1.8**	**0.30**	**150**
			8		350 HB	0.5	1.8	0.18	0.40	0.65	120	180	**1.6**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.18	0.40	0.78	70	190	**1.8**	**0.30**	**140**
			10		280 HB	0.5	2.0	0.18	0.40	0.78	70	150	**1.8**	**0.30**	**120**
			11		320 HB	0.5	1.5	0.18	0.35	0.52	70	130	**1.5**	**0.28**	**100**
			11		350 HB	0.5	1.5	0.18	0.35	0.52	70	110	**1.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.5	0.20	0.40	0.78	170	270	**2.2**	**0.35**	**190**
			14		240 HB	0.5	2.5	0.20	0.40	0.65	160	220	**2.2**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.0	0.18	0.35	0.52	80	150	**1.8**	**0.28**	**100**
			14		310 HB	0.5	2.0	0.18	0.35	0.52	70	140	**1.8**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.5	0.22	0.40	0.65	170	250	**2.2**	**0.32**	**190**
			13		42 HRc	0.5	2.0	0.22	0.40	0.65	120	190	**2.0**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.5	0.15	0.60	1.30	170	250	**2.2**	**0.35**	**200**
			15		200 HB	0.5	2.5	0.15	0.60	1.17	160	230	**2.2**	**0.35**	**180**
			16		250 HB	0.5	2.5	0.15	0.55	1.17	150	210	**2.2**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.15	0.50	0.98	120	250	**2.2**	**0.30**	**180**
			17,19		200 HB	0.5	2.5	0.15	0.50	0.85	120	230	**2.2**	**0.30**	**160**
			18,20		250 HB	0.5	2.5	0.15	0.50	0.78	120	190	**2.2**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	1.5	0.20	0.35	0.46	25	45	**1.5**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	1.5	0.20	0.35	0.46	25	45	**1.5**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	1.5	0.20	0.35	0.46	23	40	**1.5**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.0	0.20	0.40	0.52	45	65	**1.5**	**0.33**	**55**
			37	T40	-	0.5	1.5	0.20	0.35	0.46	35	55	**1.5**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.6	0.11	0.30	0.39	50	100	**1.5**	**0.25**	**80**
			38		50 HRc	0.5	1.3	0.11	0.25	0.26	40	90	**1.0**	**0.20**	**70**
			38		55 HRc	0.5	1.3	0.11	0.20	0.20	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.3	0.11	0.25	0.26	40	60	**1.0**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.3	0.11	0.20	0.20	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	3.0	0.20	0.60	1.80	200	400	**2.2**	**0.40**	**280**

WNMG 060408 NN – LT 1005

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.21	0.50	1.17	180	430	1.8	0.38	265
			2		190 HB	0.5	2.5	0.21	0.50	1.17	180	365	1.8	0.35	240
			3		250 HB	0.5	2.5	0.21	0.45	0.98	180	325	1.8	0.33	220
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.21	0.45	0.78	120	365	1.8	0.32	220
			4,6		230 HB	0.5	2.0	0.21	0.45	0.78	120	325	1.8	0.32	200
			5,7		280 HB	0.5	2.0	0.18	0.40	0.78	120	275	1.8	0.30	165
			8		350 HB	0.5	1.8	0.18	0.40	0.65	120	235	1.6	0.30	145
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.18	0.40	0.78	70	245	1.5	0.30	155
			10		280 HB	0.5	2.0	0.18	0.40	0.78	70	195	1.5	0.30	130
			11		320 HB	0.5	1.5	0.18	0.35	0.52	70	170	1.3	0.28	110
			11		350 HB	0.5	1.5	0.18	0.35	0.52	70	145	1.3	0.28	100
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.5	0.15	0.60	1.30	170	325	1.8	0.35	220
			15		200 HB	0.5	2.5	0.15	0.60	1.17	160	300	1.8	0.35	200
			16		250 HB	0.5	2.5	0.15	0.55	1.17	150	275	1.8	0.35	175
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.15	0.50	0.98	120	325	1.8	0.30	200
			17,19		200 HB	0.5	2.5	0.15	0.50	0.85	120	300	1.8	0.30	175
			18,20		250 HB	0.5	2.5	0.15	0.50	0.78	120	245	1.8	0.30	155
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.3	0.11	0.30	0.39	50	130	1.2	0.25	90
			38		50 HRc	0.5	1.0	0.11	0.25	0.26	40	115	0.9	0.20	75
			38		55 HRc	0.5	0.8	0.11	0.20	0.20	40	105	0.6	0.18	65
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.0	0.11	0.25	0.26	40	80	0.9	0.18	55
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	0.8	0.11	0.20	0.20	30	65	0.6	0.15	45

WNMG 060408 NN – LT 1025

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.21	0.50	1.17	90	330	1.8	0.38	240
			2		190 HB	0.5	2.5	0.21	0.50	1.17	90	280	1.8	0.35	220
			3		250 HB	0.5	2.5	0.21	0.45	0.98	90	250	1.8	0.33	200
Steel	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.21	0.45	0.78	60	280	1.8	0.32	200
			4,6		230 HB	0.5	2.0	0.21	0.45	0.78	60	250	1.8	0.32	180
			5,7		280 HB	0.5	2.0	0.18	0.40	0.78	60	210	1.8	0.30	150
			8		350 HB	0.5	1.8	0.18	0.40	0.65	60	180	1.6	0.30	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.18	0.40	0.78	35	190	1.5	0.30	140
			10		280 HB	0.5	2.0	0.18	0.40	0.78	35	150	1.5	0.30	120
			11		320 HB	0.5	1.5	0.18	0.35	0.52	35	130	1.3	0.28	100
			11		350 HB	0.5	1.5	0.18	0.35	0.52	35	110	1.3	0.28	90
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.5	0.20	0.40	0.78	85	270	1.8	0.25	190
			14		240 HB	0.5	2.5	0.20	0.40	0.65	80	220	1.8	0.22	170
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.0	0.18	0.35	0.52	40	150	1.5	0.24	100
			14		310 HB	0.5	2.0	0.18	0.35	0.52	35	140	1.5	0.24	90
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.5	0.18	0.40	0.46	85	250	1.5	0.20	190
			13		42 HRc	0.5	2.0	0.18	0.40	0.46	60	190	1.3	0.20	130
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.15	0.50	0.98	60	250	1.8	0.30	180
			17,19		200 HB	0.5	2.5	0.15	0.50	0.85	60	230	1.8	0.30	160
			18,20		250 HB	0.5	2.5	0.15	0.50	0.78	60	190	1.8	0.30	140

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WNMG 060408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.18	0.50	1.13	180	330	**1.8**	**0.36**	**240**
			2		190 HB	0.5	2.5	0.18	0.50	1.13	180	280	**1.8**	**0.33**	**220**
			3		250 HB	0.5	2.5	0.18	0.45	0.95	180	250	**1.8**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.18	0.45	0.76	120	280	**1.8**	**0.30**	**200**
			4,6		230 HB	0.5	2.0	0.18	0.45	0.76	120	250	**1.8**	**0.30**	**180**
			5,7		280 HB	0.5	2.0	0.16	0.40	0.76	120	210	**1.8**	**0.29**	**150**
			8		350 HB	0.5	1.8	0.16	0.40	0.63	120	180	**1.8**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.16	0.40	0.76	70	190	**1.5**	**0.29**	**140**
			10		280 HB	0.5	2.0	0.16	0.40	0.76	70	150	**1.5**	**0.29**	**120**
			11		320 HB	0.5	1.5	0.16	0.35	0.50	70	130	**1.3**	**0.27**	**100**
			11		350 HB	0.5	1.5	0.16	0.35	0.50	70	110	**1.3**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.5	0.18	0.40	0.76	170	270	**1.8**	**0.24**	**190**
			14		240 HB	0.5	2.5	0.18	0.40	0.63	160	220	**1.8**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.0	0.16	0.35	0.50	80	150	**1.5**	**0.23**	**100**
			14		310 HB	0.5	2.0	0.16	0.35	0.50	70	140	**1.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.5	0.16	0.40	0.44	170	250	**1.5**	**0.19**	**190**
			13		42 HRc	0.5	2.0	0.16	0.40	0.44	120	190	**1.3**	**0.19**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.5	0.13	0.60	1.26	170	250	**1.8**	**0.33**	**200**
			15		200 HB	0.5	2.5	0.13	0.60	1.13	160	230	**1.8**	**0.33**	**180**
			16		250 HB	0.5	2.5	0.13	0.55	1.13	150	210	**1.8**	**0.33**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.13	0.50	0.95	120	250	**1.8**	**0.29**	**180**
			17,19		200 HB	0.5	2.5	0.13	0.50	0.82	120	230	**1.8**	**0.29**	**160**
			18,20		250 HB	0.5	2.5	0.13	0.50	0.76	120	190	**1.8**	**0.29**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	1.5	0.18	0.35	0.44	25	45	**1.2**	**0.27**	**30**
			33	Inconel 700	250 HB	0.5	1.5	0.18	0.35	0.44	25	45	**1.2**	**0.27**	**30**
			34	Stellite 21	350 HB	0.5	1.5	0.18	0.35	0.44	25	40	**1.2**	**0.27**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	1.8	0.18	0.40	0.50	45	65	**1.2**	**0.31**	**55**
			37	T40	-	0.5	1.5	0.18	0.35	0.44	35	55	**1.2**	**0.29**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.3	0.10	0.30	0.38	50	100	**1.2**	**0.24**	**80**
			38		50 HRc	0.5	1.0	0.10	0.25	0.25	40	90	**0.9**	**0.19**	**70**
			38		55 HRc	0.5	0.8	0.10	0.20	0.19	40	80	**0.6**	**0.17**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.0	0.10	0.25	0.25	40	60	**0.9**	**0.17**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	0.8	0.10	0.20	0.19	30	50	**0.6**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	3.0	0.18	0.60	1.13	200	400	**1.8**	**0.38**	**280**

WNMG 060408 NX – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.18	0.50	1.13	180	430	**1.8**	**0.36**	**265**
			2		190 HB	0.5	2.5	0.18	0.50	1.13	180	365	**1.8**	**0.33**	**240**
			3		250 HB	0.5	2.5	0.18	0.45	0.95	180	325	**1.8**	**0.31**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.18	0.45	0.76	120	365	**1.8**	**0.30**	**220**
			4,6		230 HB	0.5	2.0	0.18	0.45	0.76	120	325	**1.8**	**0.30**	**200**
			5,7		280 HB	0.5	2.0	0.16	0.40	0.76	120	275	**1.8**	**0.29**	**165**
			8		350 HB	0.5	1.8	0.16	0.40	0.63	120	235	**1.6**	**0.29**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.16	0.40	0.76	70	245	**1.5**	**0.29**	**155**
			10		280 HB	0.5	2.0	0.16	0.40	0.76	70	195	**1.5**	**0.29**	**130**
			11		320 HB	0.5	1.5	0.16	0.35	0.50	70	170	**1.3**	**0.27**	**110**
			11		350 HB	0.5	1.5	0.16	0.35	0.50	70	145	**1.3**	**0.27**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.5	0.13	0.60	1.26	170	325	**1.8**	**0.33**	**220**
			15		200 HB	0.5	2.5	0.13	0.60	1.13	160	300	**1.8**	**0.33**	**200**
			16		250 HB	0.5	2.5	0.13	0.55	1.13	150	275	**1.8**	**0.33**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.13	0.50	0.95	120	325	**1.8**	**0.29**	**200**
			17,19		200 HB	0.5	2.5	0.13	0.50	0.82	120	300	**1.8**	**0.29**	**175**
			18,20		250 HB	0.5	2.5	0.13	0.50	0.76	120	245	**1.8**	**0.29**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.3	0.10	0.30	0.38	50	130	**1.2**	**0.24**	**90**
			38		50 HRc	0.5	1.0	0.10	0.25	0.25	40	115	**0.9**	**0.19**	**75**
			38		55 HRc	0.5	0.8	0.10	0.20	0.19	40	105	**0.6**	**0.17**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.0	0.10	0.25	0.25	40	80	**0.9**	**0.17**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	0.8	0.10	0.20	0.19	30	65	**0.6**	**0.14**	**45**

WNMG 060408 NX – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.18	0.50	1.13	90	330	**1.8**	**0.36**	**240**
			2		190 HB	0.5	2.5	0.18	0.50	1.13	90	280	**1.8**	**0.33**	**220**
			3		250 HB	0.5	2.5	0.18	0.45	0.95	90	250	**1.8**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.18	0.45	0.76	60	280	**1.8**	**0.30**	**200**
			4,6		230 HB	0.5	2.0	0.18	0.45	0.76	60	250	**1.8**	**0.30**	**180**
			5,7		280 HB	0.5	2.0	0.16	0.40	0.76	60	210	**1.8**	**0.29**	**150**
			8		350 HB	0.5	1.8	0.16	0.40	0.63	60	180	**1.6**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.16	0.40	0.76	35	190	**1.5**	**0.29**	**140**
			10		280 HB	0.5	2.0	0.16	0.40	0.76	35	150	**1.5**	**0.29**	**120**
			11		320 HB	0.5	1.5	0.16	0.35	0.50	35	130	**1.3**	**0.27**	**100**
			11		350 HB	0.5	1.5	0.16	0.35	0.50	35	110	**1.3**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.5	0.18	0.40	0.76	85	270	**1.8**	**0.24**	**190**
			14		240 HB	0.5	2.5	0.18	0.40	0.63	80	220	**1.8**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.0	0.16	0.35	0.50	40	150	**1.5**	**0.23**	**100**
			14		310 HB	0.5	2.0	0.16	0.35	0.50	35	140	**1.5**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.5	0.16	0.40	0.44	85	250	**1.5**	**0.19**	**190**
			13		42 HRc	0.5	2.0	0.16	0.40	0.44	60	190	**1.3**	**0.19**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.13	0.50	0.95	60	250	**1.8**	**0.29**	**180**
			17,19		200 HB	0.5	2.5	0.13	0.50	0.82	60	230	**1.8**	**0.29**	**160**
			18,20		250 HB	0.5	2.5	0.13	0.50	0.76	60	190	**1.8**	**0.29**	**140**

WNMG 080404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

WNMG 080408 NM – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1		C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.25	0.65	2.16	180	330	**3.0**	**0.44**	**240**
		2			190 HB	0.5	3.5	0.25	0.65	2.16	180	280	**3.0**	**0.44**	**220**
		3			250 HB	0.5	3.5	0.25	0.59	1.80	180	250	**3.0**	**0.44**	**200**
	Low Alloyed	6		42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.25	0.59	1.44	120	280	**3.0**	**0.40**	**200**
		4,6			230 HB	0.5	2.8	0.25	0.59	1.44	120	250	**3.0**	**0.40**	**180**
		5,7			280 HB	0.5	2.8	0.22	0.52	1.44	120	210	**3.0**	**0.38**	**150**
		8			350 HB	0.5	2.5	0.22	0.52	1.20	120	180	**3.0**	**0.38**	**130**
	High Alloyed	10		X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.22	0.52	1.44	70	190	**2.5**	**0.38**	**140**
		10			280 HB	0.5	2.8	0.22	0.52	1.44	70	150	**2.5**	**0.38**	**120**
		11			320 HB	0.5	2.1	0.22	0.46	0.96	70	130	**2.5**	**0.35**	**100**
		11			350 HB	0.5	2.1	0.22	0.46	0.96	70	110	**2.5**	**0.35**	**90**
Stainless Steel	Austenitic	14		304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.24	0.52	1.44	170	270	**3.0**	**0.44**	**190**
		14			240 HB	0.5	3.5	0.24	0.52	1.20	160	220	**3.0**	**0.40**	**170**
	Duplex	14		X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.22	0.46	0.96	80	150	**2.5**	**0.35**	**100**
		14			310 HB	0.5	2.8	0.22	0.46	0.96	70	140	**2.5**	**0.35**	**90**
	Ferritic & Martensitic	12		410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.26	0.52	1.20	170	250	**3.0**	**0.40**	**190**
		13			42 HRc	0.5	2.8	0.26	0.52	1.20	120	190	**2.5**	**0.40**	**130**
Cast Iron	Grey	15		GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.18	0.78	2.40	170	250	**3.0**	**0.44**	**200**
		15			200 HB	0.5	3.5	0.18	0.78	2.16	160	230	**3.0**	**0.44**	**180**
		16			250 HB	0.5	3.5	0.18	0.72	2.16	150	210	**3.0**	**0.44**	**160**
	Malleable & Nodular	17,19		GGG40, GGG70, 50005	150 HB	0.5	3.5	0.18	0.65	1.80	120	250	**3.0**	**0.38**	**180**
		17,19			200 HB	0.5	3.5	0.18	0.65	1.56	120	230	**3.0**	**0.38**	**160**
		18,20			250 HB	0.5	3.5	0.18	0.65	1.44	120	190	**3.0**	**0.38**	**140**
High Temp. Alloys	Fe, Ni & Co Based	31,32		Incoloy 800	240 HB	0.5	2.1	0.24	0.46	0.84	25	45	**2.0**	**0.35**	**32**
		33		Inconel 700	250 HB	0.5	2.1	0.24	0.46	0.84	25	45	**2.0**	**0.35**	**30**
		34		Stellite 21	350 HB	0.5	2.1	0.24	0.46	0.84	23	40	**2.0**	**0.35**	**28**
	Ti Based	36		TiAl6V4	-	0.5	2.8	0.24	0.52	0.96	45	65	**2.0**	**0.41**	**55**
		37		T40	-	0.5	2.1	0.24	0.46	0.84	35	55	**2.0**	**0.38**	**45**
Hardened Mat.	Steel	38		X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.13	0.39	0.72	50	100	**2.0**	**0.31**	**80**
		38			50 HRc	0.5	1.5	0.13	0.33	0.48	40	90	**1.5**	**0.25**	**70**
		38			55 HRc	0.5	1.5	0.13	0.26	0.36	40	80	**1.0**	**0.23**	**60**
	Chilled Cast Iron	40		Ni-Hard 2	400 HB	0.5	1.5	0.13	0.33	0.48	40	60	**1.5**	**0.23**	**50**
	White Cast Iron	41		G-X300CrMo15	55 HRc	0.5	1.5	0.13	0.26	0.36	30	50	**1.0**	**0.19**	**40**
NF	Al (>8%Si)	25		AlSi12	130 HB	0.5	4.2	0.24	0.78	2.20	200	400	**3.0**	**0.50**	**280**

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WNMG 080408 NM – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.25	0.65	2.16	180	430	**2.6**	**0.48**	**265**
			2		190 HB	0.5	3.5	0.25	0.65	2.16	180	365	**2.6**	**0.44**	**240**
			3		250 HB	0.5	3.5	0.25	0.59	1.80	180	325	**2.6**	**0.41**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.25	0.59	1.44	120	365	**2.6**	**0.40**	**220**
			4,6		230 HB	0.5	2.8	0.25	0.59	1.44	120	325	**2.6**	**0.40**	**200**
			5,7		280 HB	0.5	2.8	0.22	0.52	1.44	120	275	**2.6**	**0.38**	**165**
			8		350 HB	0.5	2.5	0.22	0.52	1.20	120	235	**2.3**	**0.38**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.22	0.52	1.44	70	245	**2.1**	**0.38**	**155**
			10		280 HB	0.5	2.8	0.22	0.52	1.44	70	195	**2.1**	**0.38**	**130**
			11		320 HB	0.5	2.1	0.22	0.46	0.96	70	170	**1.9**	**0.35**	**110**
			11		350 HB	0.5	2.1	0.22	0.46	0.96	70	145	**1.9**	**0.35**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.18	0.78	2.40	170	325	**2.6**	**0.44**	**220**
			15		200 HB	0.5	3.5	0.18	0.78	2.16	160	300	**2.6**	**0.44**	**200**
			16		250 HB	0.5	3.5	0.18	0.72	2.16	150	275	**2.6**	**0.44**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.18	0.65	1.80	120	325	**2.6**	**0.38**	**200**
			17,19		200 HB	0.5	3.5	0.18	0.65	1.56	120	300	**2.6**	**0.38**	**175**
			18,20		250 HB	0.5	3.5	0.18	0.65	1.44	120	245	**2.6**	**0.38**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.13	0.39	0.72	50	130	**1.7**	**0.31**	**90**
			38		50 HRc	0.5	1.4	0.13	0.33	0.48	40	115	**1.3**	**0.25**	**75**
			38		55 HRc	0.5	1.1	0.13	0.26	0.36	40	105	**0.9**	**0.23**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.13	0.33	0.48	40	80	**1.3**	**0.23**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.13	0.26	0.36	30	65	**0.9**	**0.19**	**45**

WNMG 080408 NM – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.25	0.65	2.16	90	330	**2.6**	**0.48**	**240**
			2		190 HB	0.5	3.5	0.25	0.65	2.16	90	280	**2.6**	**0.44**	**220**
			3		250 HB	0.5	3.5	0.25	0.59	1.80	90	250	**2.6**	**0.41**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.25	0.59	1.44	60	280	**2.6**	**0.40**	**200**
			4,6		230 HB	0.5	2.8	0.25	0.59	1.44	60	250	**2.6**	**0.40**	**180**
			5,7		280 HB	0.5	2.8	0.22	0.52	1.44	60	210	**2.6**	**0.38**	**150**
			8		350 HB	0.5	2.5	0.22	0.52	1.20	60	180	**2.3**	**0.38**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.22	0.52	1.44	35	190	**2.1**	**0.38**	**140**
			10		280 HB	0.5	2.8	0.22	0.52	1.44	35	150	**2.1**	**0.38**	**120**
			11		320 HB	0.5	2.1	0.22	0.46	0.96	35	130	**1.9**	**0.35**	**100**
			11		350 HB	0.5	2.1	0.22	0.46	0.96	35	110	**1.9**	**0.35**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.24	0.52	1.44	85	270	**2.6**	**0.31**	**190**
			14		240 HB	0.5	3.5	0.24	0.52	1.20	80	220	**2.6**	**0.28**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.22	0.46	0.96	40	150	**2.1**	**0.30**	**100**
			14		310 HB	0.5	2.8	0.22	0.46	0.96	35	140	**2.1**	**0.30**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.22	0.52	0.84	85	250	**2.1**	**0.25**	**190**
			13		42 HRc	0.5	2.8	0.22	0.52	0.84	60	190	**1.9**	**0.25**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.18	0.65	1.80	60	250	**2.6**	**0.38**	**180**
			17,19		200 HB	0.5	3.5	0.18	0.65	1.56	60	230	**2.6**	**0.38**	**160**
			18,20		250 HB	0.5	3.5	0.18	0.65	1.44	60	190	**2.6**	**0.38**	**140**

WNMG 080408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.80	180	330	**2.4**	**0.35**	**240**
			2		190 HB	0.5	3.5	0.21	0.50	1.80	180	280	**2.4**	**0.35**	**220**
			3		250 HB	0.5	3.5	0.21	0.45	1.50	180	250	**2.4**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	1.20	120	280	**2.4**	**0.32**	**200**
			4,6		230 HB	0.5	2.8	0.21	0.45	1.20	120	250	**2.4**	**0.32**	**180**
			5,7		280 HB	0.5	2.8	0.18	0.40	1.20	120	210	**2.4**	**0.30**	**150**
			8		350 HB	0.5	2.5	0.18	0.40	1.00	120	180	**2.4**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	1.20	70	190	**2.0**	**0.30**	**140**
			10		280 HB	0.5	2.8	0.18	0.40	1.20	70	150	**2.0**	**0.30**	**120**
			11		320 HB	0.5	2.1	0.18	0.35	0.80	70	130	**2.0**	**0.28**	**100**
			11		350 HB	0.5	2.1	0.18	0.35	0.80	70	110	**2.0**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.20	0.40	1.20	170	270	**2.4**	**0.35**	**190**
			14		240 HB	0.5	3.5	0.20	0.40	1.00	160	220	**2.4**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.18	0.35	0.80	80	150	**2.0**	**0.28**	**100**
			14		310 HB	0.5	2.8	0.18	0.35	0.80	70	140	**2.0**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.22	0.40	1.00	170	250	**2.4**	**0.32**	**190**
			13		42 HRc	0.5	2.8	0.22	0.40	1.00	120	190	**2.0**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.15	0.60	2.00	170	250	**2.4**	**0.35**	**200**
			15		200 HB	0.5	3.5	0.15	0.60	1.80	160	230	**2.4**	**0.35**	**180**
			16		250 HB	0.5	3.5	0.15	0.55	1.80	150	210	**2.4**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	1.50	120	250	**2.4**	**0.30**	**180**
			17,19		200 HB	0.5	3.5	0.15	0.50	1.30	120	230	**2.4**	**0.30**	**160**
			18,20		250 HB	0.5	3.5	0.15	0.50	1.20	120	190	**2.4**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.20	0.35	0.70	25	45	**1.6**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	2.1	0.20	0.35	0.70	25	45	**1.6**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	2.1	0.20	0.35	0.70	23	40	**1.6**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.8	0.20	0.40	0.80	45	65	**1.6**	**0.33**	**55**
			37	T40	-	0.5	2.1	0.20	0.35	0.70	35	55	**1.6**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.11	0.30	0.60	50	100	**1.6**	**0.25**	**80**
			38		50 HRc	0.5	1.5	0.11	0.25	0.40	40	90	**1.2**	**0.20**	**70**
			38		55 HRc	0.5	1.5	0.11	0.20	0.30	40	80	**0.8**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.5	0.11	0.25	0.40	40	60	**1.2**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.5	0.11	0.20	0.30	30	50	**0.8**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.2	0.20	0.60	1.80	200	400	**2.4**	**0.40**	**280**

WNMG 080408 NN – LT 1005

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.80	180	430	2.4	0.38	265
			2		190 HB	0.5	3.5	0.21	0.50	1.80	180	365	2.4	0.35	240
			3		250 HB	0.5	3.5	0.21	0.45	1.50	180	325	2.4	0.33	220
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	1.20	120	365	2.4	0.32	220
			4,6		230 HB	0.5	2.8	0.21	0.45	1.20	120	325	2.4	0.32	200
			5,7		280 HB	0.5	2.8	0.18	0.40	1.20	120	275	2.4	0.30	165
			8		350 HB	0.5	2.5	0.18	0.40	1.00	120	235	2.2	0.30	145
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	1.20	70	245	2.0	0.30	155
			10		280 HB	0.5	2.8	0.18	0.40	1.20	70	195	2.0	0.30	130
			11		320 HB	0.5	2.1	0.18	0.35	0.80	70	170	1.8	0.28	110
			11		350 HB	0.5	2.1	0.18	0.35	0.80	70	145	1.8	0.28	100
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.15	0.60	2.00	170	325	2.4	0.35	220
			15		200 HB	0.5	3.5	0.15	0.60	1.80	160	300	2.4	0.35	200
			16		250 HB	0.5	3.5	0.15	0.55	1.80	150	275	2.4	0.35	175
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	1.50	120	325	2.4	0.30	200
			17,19		200 HB	0.5	3.5	0.15	0.50	1.30	120	300	2.4	0.30	175
			18,20		250 HB	0.5	3.5	0.15	0.50	1.20	120	245	2.4	0.30	155
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.11	0.30	0.60	50	130	1.6	0.25	90
			38		50 HRc	0.5	1.4	0.11	0.25	0.40	40	115	1.2	0.20	75
			38		55 HRc	0.5	1.1	0.11	0.20	0.30	40	105	0.8	0.18	65
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.11	0.25	0.40	40	80	1.2	0.18	55
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.11	0.20	0.30	30	65	0.8	0.15	45

WNMG 080408 NN – LT 1025

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.80	90	330	2.4	0.38	240
			2		190 HB	0.5	3.5	0.21	0.50	1.80	90	280	2.4	0.35	220
			3		250 HB	0.5	3.5	0.21	0.45	1.50	90	250	2.4	0.33	200
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	1.20	60	280	2.4	0.32	200
			4,6		230 HB	0.5	2.8	0.21	0.45	1.20	60	250	2.4	0.32	180
			5,7		280 HB	0.5	2.8	0.18	0.40	1.20	60	210	2.4	0.30	150
			8		350 HB	0.5	2.5	0.18	0.40	1.00	60	180	2.2	0.30	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	1.20	35	190	2.0	0.30	140
			10		280 HB	0.5	2.8	0.18	0.40	1.20	35	150	2.0	0.30	120
			11		320 HB	0.5	2.1	0.18	0.35	0.80	35	130	1.8	0.28	100
			11		350 HB	0.5	2.1	0.18	0.35	0.80	35	110	1.8	0.28	90
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.20	0.40	1.20	85	270	2.4	0.25	190
			14		240 HB	0.5	3.5	0.20	0.40	1.00	80	220	2.4	0.22	170
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.18	0.35	0.80	40	150	2.0	0.24	100
			14		310 HB	0.5	2.8	0.18	0.35	0.80	35	140	2.0	0.24	90
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.18	0.40	0.70	85	250	2.0	0.20	190
			13		42 HRc	0.5	2.8	0.18	0.40	0.70	60	190	1.8	0.20	130
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	1.50	60	250	2.4	0.30	180
			17,19		200 HB	0.5	3.5	0.15	0.50	1.30	60	230	2.4	0.30	160
			18,20		250 HB	0.5	3.5	0.15	0.50	1.20	60	190	2.4	0.30	140

WNMG 080408 NX – **LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.18	0.50	1.71	180	330	**2.4**	**0.36**	**240**
			2		190 HB	0.5	3.5	0.18	0.50	1.71	180	280	**2.4**	**0.33**	**220**
			3		250 HB	0.5	3.5	0.18	0.45	1.43	180	250	**2.4**	**0.31**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.18	0.45	1.14	120	280	**2.4**	**0.30**	**200**
			4,6		230 HB	0.5	2.8	0.18	0.45	1.14	120	250	**2.4**	**0.30**	**180**
			5,7		280 HB	0.5	2.8	0.16	0.40	1.14	120	210	**2.4**	**0.29**	**150**
			8		350 HB	0.5	2.5	0.16	0.40	0.95	120	180	**2.2**	**0.29**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.16	0.40	1.14	70	190	**2.0**	**0.29**	**140**
			10		280 HB	0.5	2.8	0.16	0.40	1.14	70	150	**2.0**	**0.29**	**120**
			11		320 HB	0.5	2.1	0.16	0.35	0.76	70	130	**1.8**	**0.27**	**100**
			11		350 HB	0.5	2.1	0.16	0.35	0.76	70	110	**1.8**	**0.27**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.18	0.40	1.14	170	270	**2.4**	**0.24**	**190**
			14		240 HB	0.5	3.5	0.18	0.40	0.95	160	220	**2.4**	**0.21**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.16	0.35	0.76	80	150	**2.0**	**0.23**	**100**
			14		310 HB	0.5	2.8	0.16	0.35	0.76	70	140	**2.0**	**0.23**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.16	0.40	0.67	170	250	**2.0**	**0.19**	**190**
			13		42 HRc	0.5	2.8	0.16	0.40	0.67	120	190	**1.8**	**0.19**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.13	0.60	1.90	170	250	**2.4**	**0.33**	**200**
			15		200 HB	0.5	3.5	0.13	0.60	1.71	160	230	**2.4**	**0.33**	**180**
			16		250 HB	0.5	3.5	0.13	0.55	1.71	150	210	**2.4**	**0.33**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.13	0.50	1.43	120	250	**2.4**	**0.29**	**180**
			17,19		200 HB	0.5	3.5	0.13	0.50	1.24	120	230	**2.4**	**0.29**	**160**
			18,20		250 HB	0.5	3.5	0.13	0.50	1.14	120	190	**2.4**	**0.29**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.18	0.35	0.67	25	45	**1.6**	**0.27**	**30**
			33	Inconel 700	250 HB	0.5	2.1	0.18	0.35	0.67	25	45	**1.6**	**0.27**	**30**
			34	Stellite 21	350 HB	0.5	2.1	0.18	0.35	0.67	25	40	**1.6**	**0.27**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	2.5	0.18	0.40	0.76	45	65	**1.6**	**0.31**	**55**
			37	T40	-	0.5	2.1	0.18	0.35	0.67	35	55	**1.6**	**0.29**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.10	0.30	0.57	50	100	**1.6**	**0.24**	**80**
			38		50 HRc	0.5	1.4	0.10	0.25	0.38	40	90	**1.2**	**0.19**	**70**
			38		55 HRc	0.5	1.1	0.10	0.20	0.29	40	80	**0.8**	**0.17**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.10	0.25	0.38	40	60	**1.2**	**0.17**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.10	0.20	0.29	30	50	**0.8**	**0.14**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.2	0.18	0.60	1.71	200	400	**2.4**	**0.38**	**280**

WNMG 080408 NX – LT 1005

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.18	0.50	1.71	180	430	2.4	0.36	265
			2		190 HB	0.5	3.5	0.18	0.50	1.71	180	365	2.4	0.33	240
			3		250 HB	0.5	3.5	0.18	0.45	1.43	180	325	2.4	0.31	220
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.18	0.45	1.14	120	365	2.4	0.30	220
			4,6		230 HB	0.5	2.8	0.18	0.45	1.14	120	325	2.4	0.30	200
			5,7		280 HB	0.5	2.8	0.16	0.40	1.14	120	275	2.4	0.29	165
			8		350 HB	0.5	2.5	0.16	0.40	0.95	120	235	2.2	0.29	145
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.16	0.40	1.14	70	245	2.0	0.29	155
			10		280 HB	0.5	2.8	0.16	0.40	1.14	70	195	2.0	0.29	130
			11		320 HB	0.5	2.1	0.16	0.35	0.76	70	170	1.8	0.27	110
			11		350 HB	0.5	2.1	0.16	0.35	0.76	70	145	1.8	0.27	100
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.13	0.60	1.90	170	325	2.4	0.33	220
			15		200 HB	0.5	3.5	0.13	0.60	1.71	160	300	2.4	0.33	200
			16		250 HB	0.5	3.5	0.13	0.55	1.71	150	275	2.4	0.33	175
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.13	0.50	1.43	120	325	2.4	0.29	200
			17,19		200 HB	0.5	3.5	0.13	0.50	1.24	120	300	2.4	0.29	175
			18,20		250 HB	0.5	3.5	0.13	0.50	1.14	120	245	2.4	0.29	155
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.10	0.30	0.57	50	130	1.6	0.24	90
			38		50 HRc	0.5	1.4	0.10	0.25	0.38	40	115	1.2	0.19	75
			38		55 HRc	0.5	1.1	0.10	0.20	0.29	40	105	0.8	0.17	65
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.10	0.25	0.38	40	80	1.2	0.17	55
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.10	0.20	0.29	30	65	0.8	0.14	45

WNMG 080408 NX – LT 1025

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.18	0.50	1.71	90	330	2.4	0.36	240
			2		190 HB	0.5	3.5	0.18	0.50	1.71	90	280	2.4	0.33	220
			3		250 HB	0.5	3.5	0.18	0.45	1.43	90	250	2.4	0.31	200
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.18	0.45	1.14	60	280	2.4	0.30	200
			4,6		230 HB	0.5	2.8	0.18	0.45	1.14	60	250	2.4	0.30	180
			5,7		280 HB	0.5	2.8	0.16	0.40	1.14	60	210	2.4	0.29	150
			8		350 HB	0.5	2.5	0.16	0.40	0.95	60	180	2.2	0.29	130
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.16	0.40	1.14	35	190	2.0	0.29	140
			10		280 HB	0.5	2.8	0.16	0.40	1.14	35	150	2.0	0.29	120
			11		320 HB	0.5	2.1	0.16	0.35	0.76	35	130	1.8	0.27	100
			11		350 HB	0.5	2.1	0.16	0.35	0.76	35	110	1.8	0.27	90
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.18	0.40	1.14	85	270	2.4	0.24	190
			14		240 HB	0.5	3.5	0.18	0.40	0.95	80	220	2.4	0.21	170
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.16	0.35	0.76	40	150	2.0	0.23	100
			14		310 HB	0.5	2.8	0.16	0.35	0.76	35	140	2.0	0.23	90
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.16	0.40	0.67	85	250	2.0	0.19	190
			13		42 HRc	0.5	2.8	0.16	0.40	0.67	60	190	1.8	0.19	130
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.13	0.50	1.43	60	250	2.4	0.29	180
			17,19		200 HB	0.5	3.5	0.13	0.50	1.24	60	230	2.4	0.29	160
			18,20		250 HB	0.5	3.5	0.13	0.50	1.14	60	190	2.4	0.29	140

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WNMG 080412 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	3.5	0.25	0.65	2.16	180	330	**3.0**	**0.44**	**240**
			2		190 HB	0.7	3.5	0.25	0.65	2.16	180	280	**3.0**	**0.44**	**220**
			3		250 HB	0.7	3.5	0.25	0.59	1.80	180	250	**3.0**	**0.44**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	3.5	0.25	0.59	1.44	120	280	**3.0**	**0.40**	**200**
			4,6		230 HB	0.7	2.8	0.25	0.59	1.44	120	250	**3.0**	**0.40**	**180**
			5,7		280 HB	0.7	2.8	0.22	0.52	1.44	120	210	**3.0**	**0.38**	**150**
			8		350 HB	0.7	2.5	0.22	0.52	1.20	120	180	**3.0**	**0.38**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	2.8	0.22	0.52	1.44	70	190	**2.5**	**0.38**	**140**
			10		280 HB	0.7	2.8	0.22	0.52	1.44	70	150	**2.5**	**0.38**	**120**
			11		320 HB	0.7	2.1	0.22	0.46	0.96	70	130	**2.5**	**0.35**	**100**
			11		350 HB	0.7	2.1	0.22	0.46	0.96	70	110	**2.5**	**0.35**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	3.5	0.24	0.52	1.44	170	270	**3.0**	**0.40**	**190**
			14		240 HB	0.7	3.5	0.24	0.52	1.20	160	220	**3.0**	**0.36**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	2.8	0.22	0.46	0.96	80	150	**2.5**	**0.32**	**100**
			14		310 HB	0.7	2.8	0.22	0.46	0.96	70	140	**2.5**	**0.32**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	3.5	0.26	0.52	1.20	170	250	**3.0**	**0.40**	**190**
			13		42 HRc	0.7	2.8	0.26	0.52	1.20	120	190	**2.5**	**0.36**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	3.5	0.18	0.78	2.40	170	250	**3.0**	**0.44**	**200**
			15		200 HB	0.7	3.5	0.18	0.78	2.16	160	230	**3.0**	**0.44**	**180**
			16		250 HB	0.7	3.5	0.18	0.72	2.16	150	210	**3.0**	**0.44**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	3.5	0.18	0.65	1.80	120	250	**3.0**	**0.38**	**180**
			17,19		200 HB	0.7	3.5	0.18	0.65	1.56	120	230	**3.0**	**0.38**	**160**
			18,20		250 HB	0.7	3.5	0.18	0.65	1.44	120	190	**3.0**	**0.38**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.7	2.1	0.24	0.46	0.84	25	45	**2.0**	**0.35**	**32**
			33	Inconel 700	250 HB	0.7	2.1	0.24	0.46	0.84	25	45	**2.0**	**0.35**	**30**
			34	Stellite 21	350 HB	0.7	2.1	0.24	0.46	0.84	23	40	**2.0**	**0.35**	**28**
	Ti Based	10	36	TiAl6V4	-	0.7	2.8	0.24	0.52	0.96	45	65	**2.0**	**0.40**	**55**
			37	T40	-	0.7	2.1	0.24	0.46	0.84	35	55	**2.0**	**0.36**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	1.8	0.13	0.39	0.72	50	100	**2.0**	**0.31**	**80**
			38		50 HRc	0.7	1.5	0.13	0.33	0.48	40	90	**1.5**	**0.25**	**70**
			38		55 HRc	0.7	1.5	0.13	0.26	0.36	40	80	**1.0**	**0.23**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	1.5	0.13	0.33	0.48	40	60	**1.5**	**0.23**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.5	0.13	0.26	0.36	30	50	**1.0**	**0.19**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.7	4.2	0.24	0.78	2.20	200	400	**3.0**	**0.50**	**280**

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WNMG 080412 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	3.5	0.25	0.65	2.16	180	430	**2.6**	**0.48**	**265**
			2		190 HB	0.7	3.5	0.25	0.65	2.16	180	365	**2.6**	**0.44**	**240**
			3		250 HB	0.7	3.5	0.25	0.59	1.80	180	325	**2.6**	**0.41**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	3.5	0.25	0.59	1.44	120	365	**2.6**	**0.40**	**220**
			4,6		230 HB	0.7	2.8	0.25	0.59	1.44	120	325	**2.6**	**0.40**	**200**
			5,7		280 HB	0.7	2.8	0.22	0.52	1.44	120	275	**2.6**	**0.38**	**165**
			8		350 HB	0.7	2.5	0.22	0.52	1.20	120	235	**2.3**	**0.38**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	2.8	0.22	0.52	1.44	70	245	**2.1**	**0.38**	**155**
			10		280 HB	0.7	2.8	0.22	0.52	1.44	70	195	**2.1**	**0.38**	**130**
			11		320 HB	0.7	2.1	0.22	0.46	0.96	70	170	**1.9**	**0.35**	**110**
			11		350 HB	0.7	2.1	0.22	0.46	0.96	70	145	**1.9**	**0.35**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.7	3.5	0.18	0.78	2.40	170	325	**2.6**	**0.44**	**220**
			15		200 HB	0.7	3.5	0.18	0.78	2.16	160	300	**2.6**	**0.44**	**200**
			16		250 HB	0.7	3.5	0.18	0.72	2.16	150	275	**2.6**	**0.44**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	3.5	0.18	0.65	1.80	120	325	**2.6**	**0.38**	**200**
			17,19		200 HB	0.7	3.5	0.18	0.65	1.56	120	300	**2.6**	**0.38**	**175**
			18,20		250 HB	0.7	3.5	0.18	0.65	1.44	120	245	**2.6**	**0.38**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.7	1.8	0.13	0.39	0.72	50	130	**1.7**	**0.31**	**90**
			38		50 HRc	0.7	1.4	0.13	0.33	0.48	40	115	**1.3**	**0.25**	**75**
			38		55 HRc	0.7	1.1	0.13	0.26	0.36	40	105	**0.9**	**0.23**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.7	1.4	0.13	0.33	0.48	40	80	**1.3**	**0.23**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.7	1.1	0.13	0.26	0.36	30	65	**0.9**	**0.19**	**45**

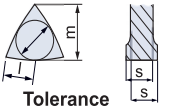
WNMG 080412 NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.7	3.5	0.25	0.65	2.16	90	330	**2.6**	**0.48**	**240**
			2		190 HB	0.7	3.5	0.25	0.65	2.16	90	280	**2.6**	**0.44**	**220**
			3		250 HB	0.7	3.5	0.25	0.59	1.80	90	250	**2.6**	**0.41**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.7	3.5	0.25	0.59	1.44	60	280	**2.6**	**0.40**	**200**
			4,6		230 HB	0.7	2.8	0.25	0.59	1.44	60	250	**2.6**	**0.40**	**180**
			5,7		280 HB	0.7	2.8	0.22	0.52	1.44	60	210	**2.6**	**0.38**	**150**
			8		350 HB	0.7	2.5	0.22	0.52	1.20	60	180	**2.3**	**0.38**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.7	2.8	0.22	0.52	1.44	35	190	**2.1**	**0.38**	**140**
			10		280 HB	0.7	2.8	0.22	0.52	1.44	35	150	**2.1**	**0.38**	**120**
			11		320 HB	0.7	2.1	0.22	0.46	0.96	35	130	**1.9**	**0.35**	**100**
			11		350 HB	0.7	2.1	0.22	0.46	0.96	35	110	**1.9**	**0.35**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.7	3.5	0.24	0.52	1.44	85	270	**2.6**	**0.31**	**190**
			14		240 HB	0.7	3.5	0.24	0.52	1.20	80	220	**2.6**	**0.28**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.7	2.8	0.22	0.46	0.96	40	150	**2.1**	**0.30**	**100**
			14		310 HB	0.7	2.8	0.22	0.46	0.96	35	140	**2.1**	**0.30**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.7	3.5	0.22	0.52	0.84	85	250	**2.1**	**0.25**	**190**
			13		42 HRc	0.7	2.8	0.22	0.52	0.84	60	190	**1.9**	**0.25**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.7	3.5	0.18	0.65	1.80	60	250	**2.6**	**0.38**	**180**
			17,19		200 HB	0.7	3.5	0.18	0.65	1.56	60	230	**2.6**	**0.38**	**160**
			18,20		250 HB	0.7	3.5	0.18	0.65	1.44	60	190	**2.6**	**0.38**	**140**

W N M P

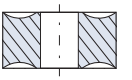
Shape

Clearance Angle



Tolerance

s ± 0.13
For l = 06, **d** ± 0.05 **m** ± 0.08
For l = 08, **d** ± 0.08 **m** ± 0.13



Fixing, Chipbreaker

LT 10 Multi-Mat™ General Usage – Standard					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMP 060404 NN LT 10	6	4.76	0.4	T0000306	●	●	●
WNMP 060408 NN LT 10	6	4.76	0.8	T0000307	●	●	●
WNMP 080408 NN LT 10	8	4.76	0.8	T0000308	●	●	●

LT 1000 Multi-Mat™ General Usage – Premium					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMP 060404 NN LT 1000	6	4.76	0.4	T0001954	●	●	●
WNMP 060408 NN LT 1000	6	4.76	0.8	T0001955	●	●	●
WNMP 080408 NN LT 1000	8	4.76	0.8	T0001956	●	●	●

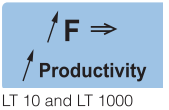
LT 1005 Recommended for moderate to high speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMP 080408 NN LT 1005	8	4.76	0.8	T0004106	●	●	●

LT 1025 Recommended for moderate to low speed					Application Guide		
Insert Designation	l	s	r	Catalog Nr.	F	M	R
WNMP 080408 NN LT 1025	8	4.76	0.8	T0004157	●	●	●

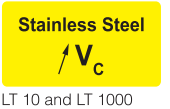
80° trigon shape inserts with positive chipbreaker geometry. Generates lower cutting forces. Suitable for high temperature alloys and stainless steel operations.

Machining Recommendations

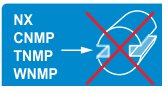
Details on page 14



LT 10 and LT 1000



LT 10 and LT 1000



Application Guide

Finishing: (**F**)
d.o.c. =0.30 - 1.50 mm
fn =0.08 - 0.20 mm/rev

Medium: (**M**)
d.o.c. =0.70 - 4.50 mm
fn =0.15 - 0.45 mm/rev

Roughing: (**R**)
d.o.c. =3.00 - 7.00 mm
fn =0.35 - 0.70 mm/rev

● = Good ● = Acceptable ● = Not recommended

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тел. 8 (499) 550 5039, mail@akytec.ru
www.akytec.ru

WNMP 060404 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	3.0	0.11	0.23	0.60	180	330	**2.0**	**0.18**	**300**
			2		190 HB	0.3	2.5	0.11	0.22	0.52	180	280	**2.0**	**0.18**	**260**
			3		250 HB	0.3	2.5	0.11	0.20	0.48	180	250	**2.0**	**0.18**	**240**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	2.5	0.10	0.20	0.50	120	280	**2.0**	**0.14**	**260**
			4,6		230 HB	0.3	2.5	0.10	0.20	0.48	120	250	**2.0**	**0.14**	**240**
			5,7		280 HB	0.3	2.0	0.10	0.18	0.40	120	210	**2.0**	**0.13**	**200**
			8		350 HB	0.3	2.0	0.10	0.18	0.36	120	180	**2.0**	**0.13**	**180**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.3	2.5	0.09	0.18	0.40	70	190	**1.7**	**0.10**	**180**
			10		280 HB	0.3	2.5	0.09	0.16	0.40	70	150	**1.7**	**0.10**	**140**
			11		320 HB	0.3	2.0	0.09	0.14	0.32	70	130	**1.7**	**0.10**	**120**
			11		350 HB	0.3	2.0	0.09	0.14	0.26	70	110	**1.7**	**0.10**	**110**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.3	2.5	0.08	0.18	0.32	170	270	**2.0**	**0.09**	**260**
			14		240 HB	0.3	2.5	0.08	0.18	0.26	160	220	**2.0**	**0.08**	**210**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.3	2.0	0.08	0.14	0.20	80	150	**1.7**	**0.08**	**140**
			14		310 HB	0.3	2.0	0.08	0.14	0.20	70	140	**1.7**	**0.08**	**140**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	2.5	0.08	0.18	0.32	170	250	**1.7**	**0.09**	**240**
			13		42 HRc	0.3	2.0	0.08	0.16	0.26	120	190	**1.5**	**0.08**	**180**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	3.0	0.08	0.20	0.64	170	250	**2.0**	**0.18**	**240**
			15		200 HB	0.3	3.0	0.08	0.20	0.60	160	230	**2.0**	**0.18**	**220**
			16		250 HB	0.3	3.0	0.08	0.20	0.60	150	210	**2.0**	**0.18**	**200**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.3	2.5	0.08	0.18	0.48	120	250	**2.0**	**0.13**	**240**
			17,19		200 HB	0.3	2.5	0.08	0.18	0.40	120	230	**2.0**	**0.13**	**220**
			18,20		250 HB	0.3	2.5	0.08	0.18	0.40	120	190	**2.0**	**0.13**	**180**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			33	Inconel 700	250 HB	0.3	2.0	0.09	0.15	0.26	25	50	**1.3**	**0.10**	**40**
			34	Stellite 21	350 HB	0.3	2.0	0.09	0.15	0.26	23	45	**1.3**	**0.10**	**35**
	Ti Based	10	36	TiAl6V4	-	0.3	2.0	0.09	0.16	0.32	45	65	**1.3**	**0.14**	**60**
			37	T40	-	0.3	2.0	0.09	0.14	0.26	35	60	**1.3**	**0.10**	**50**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.3	1.8	0.05	0.12	0.20	50	100	**1.4**	**0.10**	**90**
			38		50 HRc	0.3	1.5	0.05	0.10	0.17	40	90	**1.1**	**0.08**	**80**
			38		55 HRc	0.3	1.4	0.05	0.09	0.13	40	80	**0.9**	**0.06**	**70**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.3	1.6	0.05	0.12	0.17	40	60	**1.1**	**0.10**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.3	1.4	0.05	0.09	0.13	30	50	**0.9**	**0.06**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.3	4.0	0.10	0.30	0.70	200	400	**2.0**	**0.23**	**350**

WNMP 060408 NN – **LT 10 | LT 1000**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.5	0.21	0.50	1.17	180	330	**2.2**	**0.35**	**240**
			2		190 HB	0.5	2.5	0.21	0.50	1.17	180	280	**2.2**	**0.35**	**220**
			3		250 HB	0.5	2.5	0.21	0.45	0.98	180	250	**2.2**	**0.35**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	2.5	0.21	0.45	0.78	120	280	**2.2**	**0.32**	**200**
			4,6		230 HB	0.5	2.0	0.21	0.45	0.78	120	250	**1.8**	**0.32**	**180**
			5,7		280 HB	0.5	2.0	0.18	0.40	0.78	120	210	**1.8**	**0.30**	**150**
			8		350 HB	0.5	1.8	0.18	0.40	0.65	120	180	**1.6**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.0	0.18	0.40	0.78	70	190	**1.8**	**0.30**	**140**
			10		280 HB	0.5	2.0	0.18	0.40	0.78	70	150	**1.8**	**0.30**	**120**
			11		320 HB	0.5	1.5	0.18	0.35	0.52	70	130	**1.5**	**0.28**	**100**
			11		350 HB	0.5	1.5	0.18	0.35	0.52	70	110	**1.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	2.5	0.20	0.40	0.78	170	270	**2.2**	**0.35**	**190**
			14		240 HB	0.5	2.5	0.20	0.40	0.65	160	220	**2.2**	**0.32**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.0	0.18	0.35	0.52	80	150	**1.8**	**0.28**	**100**
			14		310 HB	0.5	2.0	0.18	0.35	0.52	70	140	**1.8**	**0.28**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.5	0.22	0.40	0.65	170	250	**2.2**	**0.32**	**190**
			13		42 HRc	0.5	2.0	0.22	0.40	0.65	120	190	**2.0**	**0.32**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.5	0.15	0.60	1.30	170	250	**2.2**	**0.35**	**200**
			15		200 HB	0.5	2.5	0.15	0.60	1.17	160	230	**2.2**	**0.35**	**180**
			16		250 HB	0.5	2.5	0.15	0.55	1.17	150	210	**2.2**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	2.5	0.15	0.50	0.98	120	250	**2.2**	**0.30**	**180**
			17,19		200 HB	0.5	2.5	0.15	0.50	0.85	120	230	**2.2**	**0.30**	**160**
			18,20		250 HB	0.5	2.5	0.15	0.50	0.78	120	190	**2.2**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	1.5	0.20	0.35	0.46	25	45	**1.5**	**0.28**	**32**
			33	Inconel 700	250 HB	0.5	1.5	0.20	0.35	0.46	25	45	**1.5**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	1.5	0.20	0.35	0.46	23	40	**1.5**	**0.28**	**28**
	Ti Based	10	36	TiAl6V4	-	0.5	2.0	0.20	0.40	0.52	45	65	**1.5**	**0.33**	**55**
			37	T40	-	0.5	1.5	0.20	0.35	0.46	35	55	**1.5**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.6	0.11	0.30	0.39	50	100	**1.5**	**0.25**	**80**
			38		50 HRc	0.5	1.3	0.11	0.25	0.26	40	90	**1.0**	**0.20**	**70**
			38		55 HRc	0.5	1.3	0.11	0.20	0.20	40	80	**1.0**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.3	0.11	0.25	0.26	40	60	**1.0**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.3	0.11	0.20	0.20	30	50	**1.0**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	3.0	0.20	0.60	1.80	200	400	**2.2**	**0.40**	**280**

WNMP 080408 NN – LT 10 | LT 1000

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm]		Feed [mm/rev]		Amax [mm²]	V_c [m/min]		Suggested Starting Parameters		
						min	max	min	max		min	max	D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.17	180	330	**2.1**	**0.38**	**240**
			2		190 HB	0.5	3.5	0.21	0.50	1.17	180	280	**2.1**	**0.35**	**220**
			3		250 HB	0.5	3.5	0.21	0.45	0.98	180	250	**2.1**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	0.78	120	280	**2.1**	**0.32**	**200**
			4,6		230 HB	0.5	2.8	0.21	0.45	0.78	120	250	**2.1**	**0.32**	**180**
			5,7		280 HB	0.5	2.8	0.18	0.40	0.78	120	210	**2.1**	**0.30**	**150**
			8		350 HB	0.5	2.5	0.18	0.40	0.65	120	180	**1.9**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	0.78	70	190	**1.8**	**0.30**	**140**
			10		280 HB	0.5	2.8	0.18	0.40	0.78	70	150	**1.8**	**0.30**	**120**
			11		320 HB	0.5	2.1	0.18	0.35	0.52	70	130	**1.5**	**0.28**	**100**
			11		350 HB	0.5	2.1	0.18	0.35	0.52	70	110	**1.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.20	0.40	0.78	170	270	**2.1**	**0.25**	**190**
			14		240 HB	0.5	3.5	0.20	0.40	0.65	160	220	**2.1**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.18	0.35	0.52	80	150	**1.8**	**0.24**	**100**
			14		310 HB	0.5	2.8	0.18	0.35	0.52	70	140	**1.8**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.18	0.40	0.46	170	250	**1.8**	**0.20**	**190**
			13		42 HRc	0.5	2.8	0.18	0.40	0.46	120	190	**1.5**	**0.20**	**130**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.15	0.60	1.30	170	250	**2.1**	**0.35**	**200**
			15		200 HB	0.5	3.5	0.15	0.60	1.17	160	230	**2.1**	**0.35**	**180**
			16		250 HB	0.5	3.5	0.15	0.55	1.17	150	210	**2.1**	**0.35**	**160**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	0.98	120	250	**2.1**	**0.30**	**180**
			17,19		200 HB	0.5	3.5	0.15	0.50	0.85	120	230	**2.1**	**0.30**	**160**
			18,20		250 HB	0.5	3.5	0.15	0.50	0.78	120	190	**2.1**	**0.30**	**140**
High Temp. Alloys	Fe, Ni & Co Based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.20	0.35	0.46	25	45	**1.4**	**0.28**	**30**
			33	Inconel 700	250 HB	0.5	2.1	0.20	0.35	0.46	25	45	**1.4**	**0.28**	**30**
			34	Stellite 21	350 HB	0.5	2.1	0.20	0.35	0.46	25	40	**1.4**	**0.28**	**30**
	Ti Based	10	36	TiAl6V4	-	0.5	2.5	0.20	0.40	0.52	45	65	**1.4**	**0.33**	**55**
			37	T40	-	0.5	2.1	0.20	0.35	0.46	35	55	**1.4**	**0.30**	**45**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.11	0.30	0.39	50	100	**1.4**	**0.25**	**80**
			38		50 HRc	0.5	1.4	0.11	0.25	0.26	40	90	**1.1**	**0.20**	**70**
			38		55 HRc	0.5	1.1	0.11	0.20	0.20	40	80	**0.7**	**0.18**	**60**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.11	0.25	0.26	40	60	**1.1**	**0.18**	**50**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.11	0.20	0.20	30	50	**0.7**	**0.15**	**40**
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.2	0.20	0.60	1.17	200	400	**2.1**	**0.40**	**280**

WNMP 080408 NN – **LT 1005**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non-alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.80	180	430	**2.4**	**0.38**	**265**
			2		190 HB	0.5	3.5	0.21	0.50	1.80	180	365	**2.4**	**0.35**	**240**
			3		250 HB	0.5	3.5	0.21	0.45	1.50	180	325	**2.4**	**0.33**	**220**
	Low alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	1.20	120	365	**2.4**	**0.32**	**220**
			4,6		230 HB	0.5	2.8	0.21	0.45	1.20	120	325	**2.4**	**0.32**	**200**
			5,7		280 HB	0.5	2.8	0.18	0.40	1.20	120	275	**2.4**	**0.30**	**165**
			8		350 HB	0.5	2.5	0.18	0.40	1.00	120	235	**2.2**	**0.30**	**145**
	High alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	1.20	70	245	**2.0**	**0.30**	**155**
			10		280 HB	0.5	2.8	0.18	0.40	1.20	70	195	**2.0**	**0.30**	**130**
			11		320 HB	0.5	2.1	0.18	0.35	0.80	70	170	**1.8**	**0.28**	**110**
			11		350 HB	0.5	2.1	0.18	0.35	0.80	70	145	**1.8**	**0.28**	**100**
Cast Iron	Grey	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	3.5	0.15	0.60	2.00	170	325	**2.4**	**0.35**	**220**
			15		200 HB	0.5	3.5	0.15	0.60	1.80	160	300	**2.4**	**0.35**	**200**
			16		250 HB	0.5	3.5	0.15	0.55	1.80	150	275	**2.4**	**0.35**	**175**
	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	1.50	120	325	**2.4**	**0.30**	**200**
			17,19		200 HB	0.5	3.5	0.15	0.50	1.30	120	300	**2.4**	**0.30**	**175**
			18,20		250 HB	0.5	3.5	0.15	0.50	1.20	120	245	**2.4**	**0.30**	**155**
Hardened Mat.	Steel	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	1.8	0.11	0.30	0.60	50	130	**1.6**	**0.25**	**90**
			38		50 HRc	0.5	1.4	0.11	0.25	0.40	40	115	**1.2**	**0.20**	**75**
			38		55 HRc	0.5	1.1	0.11	0.20	0.30	40	105	**0.8**	**0.18**	**65**
	Chilled Cast Iron		40	Ni-Hard 2	400 HB	0.5	1.4	0.11	0.25	0.40	40	80	**1.2**	**0.18**	**55**
	White Cast Iron		41	G-X300CrMo15	55 HRc	0.5	1.1	0.11	0.20	0.30	30	65	**0.8**	**0.15**	**45**

WNMP 080408 NN NN – **LT 1025**

Material Group		Gr. N°	VDI Group	Material Exemples	Hardness	D.O.C [mm] min	D.O.C [mm] max	Feed [mm/rev] min	Feed [mm/rev] max	Amax [mm²]	V_c [m/min] min	V_c [m/min] max	Suggested Starting Parameters D.O.C	Feed	V_c
Steel	Non Alloyed	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	3.5	0.21	0.50	1.17	90	330	**2.1**	**0.38**	**240**
			2		190 HB	0.5	3.5	0.21	0.50	1.17	90	280	**2.1**	**0.35**	**220**
			3		250 HB	0.5	3.5	0.21	0.45	0.98	90	250	**2.1**	**0.33**	**200**
	Low Alloyed	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	3.5	0.21	0.45	0.78	60	280	**2.1**	**0.32**	**200**
			4,6		230 HB	0.5	2.8	0.21	0.45	0.78	60	250	**2.1**	**0.32**	**180**
			5,7		280 HB	0.5	2.8	0.18	0.40	0.78	60	210	**2.1**	**0.30**	**150**
			8		350 HB	0.5	2.5	0.18	0.40	0.65	60	180	**1.9**	**0.30**	**130**
	High Alloyed	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	2.8	0.18	0.40	0.78	35	190	**1.8**	**0.30**	**140**
			10		280 HB	0.5	2.8	0.18	0.40	0.78	35	150	**1.8**	**0.30**	**120**
			11		320 HB	0.5	2.1	0.18	0.35	0.52	35	130	**1.5**	**0.28**	**100**
			11		350 HB	0.5	2.1	0.18	0.35	0.52	35	110	**1.5**	**0.28**	**90**
Stainless Steel	Austenitic	4	14	304, 316, X5CrNi18-9	180 HB	0.5	3.5	0.20	0.40	0.78	85	270	**2.1**	**0.25**	**190**
			14		240 HB	0.5	3.5	0.20	0.40	0.65	80	220	**2.1**	**0.22**	**170**
	Duplex	5	14	X2CrNiN23-4, S31500	290 HB	0.5	2.8	0.18	0.35	0.52	40	150	**1.8**	**0.24**	**100**
			14		310 HB	0.5	2.8	0.18	0.35	0.52	35	140	**1.8**	**0.24**	**90**
	Ferritic & Martensitic	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	3.5	0.18	0.40	0.46	85	250	**1.8**	**0.20**	**190**
			13		42 HRc	0.5	2.8	0.18	0.40	0.46	60	190	**1.5**	**0.20**	**130**
Cast Iron	Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.5	3.5	0.15	0.50	0.98	60	250	**2.1**	**0.30**	**180**
			17,19		200 HB	0.5	3.5	0.15	0.50	0.85	60	230	**2.1**	**0.30**	**160**
			18,20		250 HB	0.5	3.5	0.15	0.50	0.78	60	190	**2.1**	**0.30**	**140**

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