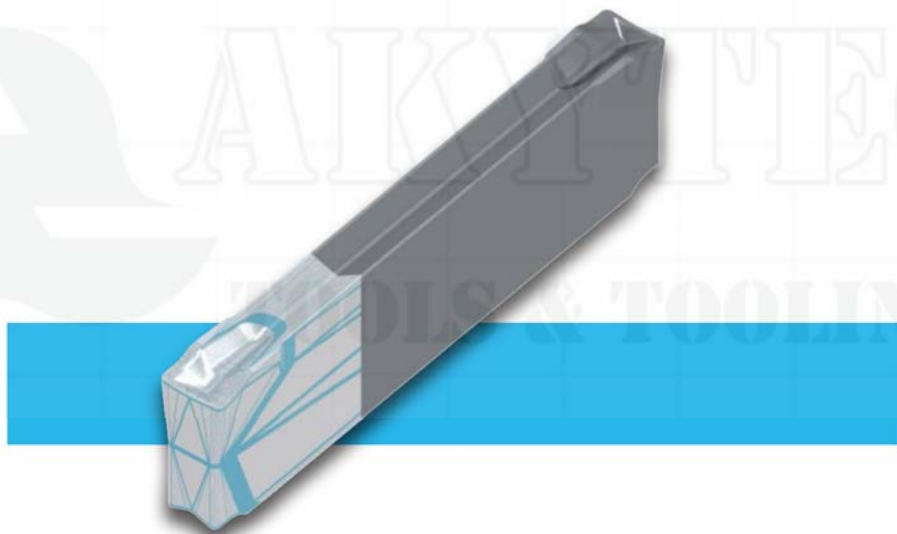


# PARTING & GROOVING

LT 1000 | LT 10





# G C T X

**Shape**  
"Dog bone"

**Clearance Angle**  
C = 7° Rake angle

**Tolerance**  
d ± 0.05  
m ± 0.16  
s ± 0.13

**Insert Type**  
Special

LT 1000 Multi-Mat™ General Usage - Premium					Application Guide		
Insert Designation	W	R	Catalog Nr.	P	G	ST	
GCTX 2002 NN LT 1000	2.00	0.18	T0002825	●	●	●	
GCTX 3003 NN LT 1000	3.00	0.25	T0002826	●	●	●	
GCTX 3003 PP LT 1000	3.00	0.25	T0002826	●	●	●	

LT 10 Multi-Mat™ General Usage - Standard					Application Guide		
Insert Designation	W	R	Catalog Nr.	P	G	ST	
MGMN 200 G LT 10	2.00	0.2	T0003909	●	●	●	
MGMN 300 M LT 10	3.00	0.4	T0003910	●	●	●	
MGMN 400 M LT 10	4.00	0.4	T0003911	●	●	●	
MGMN 500 M LT 10	5.00	0.8	T0003921	●	●	●	

LT 10 Multi-Mat™ General Usage - Standard					Application Guide		
Insert Designation	W	R	Catalog Nr.	P	G	ST	
WGE 2000 LT 10	2.00	0.2	T0003932	●	●	●	
WGE 3000 LT 10	3.00	0.4	T0003933	●	●	●	
WGE 4000 LT 10	4.00	0.4	T0003934	●	●	●	
WGE 5000 LT 10	5.00	0.8	T0003935	●	●	●	

PP: All-purpose chipbreaker

NN: For steel and cast iron

### Machining Recommendations

Details on page 14

### Application Guide

**Parting : (P)**

d.o.c. = 0.30 - 1.50 mm  
f<sub>n</sub> = 0.08 - 0.20 mm/rev

**Grooving : (G)**

d.o.c. = 3.00 - 7.00 mm  
f<sub>n</sub> = 0.35 - 0.70 mm/rev

**Side Turning : (ST)**

d.o.c. = 0.70 - 4.50 mm  
f<sub>n</sub> = 0.15 - 0.45 mm/rev

● = Good

● = Acceptable

● = Not recommended

Parting Tool Holders for GCTX 2002

Designation	D1	D2	L	W	P <sub>max</sub>	Hand	Catalog Nr.
LT PNG-L 12-2.0	12	12	120	1.6	15	Left	T2001164
LT PNG-R 12-2.0	12	12	120	1.6	15	Right	T2001165
LT PNG-L 16-2.0	16	16	120	1.6	15	Left	T2001166
LT PNG-R 16-2.0	16	16	120	1.6	15	Right	T2001167
LT PNG-L 20-2.0	20	20	120	1.6	15	Left	T2001484
LT PNG-R 20-2.0	20	20	120	1.6	15	Right	T2001485
LT PNG-L 25-2.0	25	25	120	1.6	15	Left	T2001482
LT PNG-R 25-2.0	25	25	120	1.6	15	Right	T2001483

Screw: M2001797

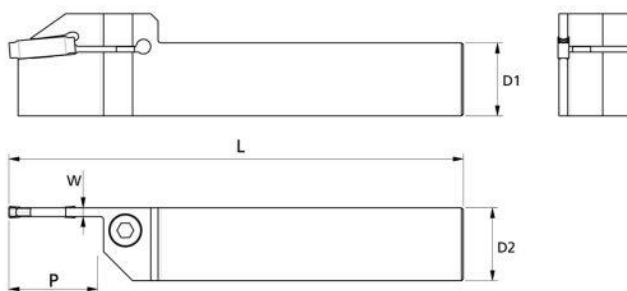
Key: M2000609

Parting Tool Holders for GCTX 3003

Designation	D1	D2	L	W	P <sub>max</sub>	Hand	Catalog Nr.
LT PNG-L 16-3.0	16	16	120	2.4	15	Left	T2001168
LT PNG-R 16-3.0	16	16	120	2.4	15	Right	T2001169
LT PNG-L 20-3.0	20	20	125	2.4	15	Left	T2001170
LT PNG-R 20-3.0	20	20	125	2.4	15	Right	T2001171
LT PNG-L 25-3.0	25	25	125	2.4	15	Left	T2001197
LT PNG-R 25-3.0	25	25	125	2.4	15	Right	T2001198

Screw: M2001797

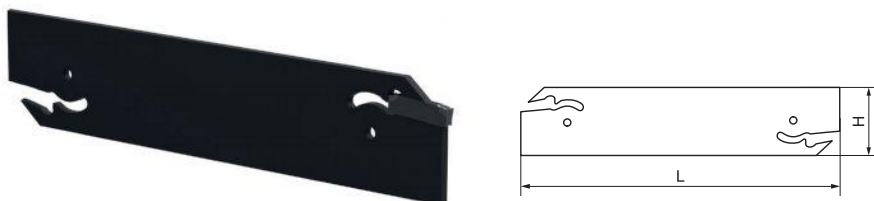
Key: M2000609



PARTING & GROOVING

Blades			
Designation	L	H	Catalog Nr.
LT BNG-32-3	145	32	T2002751

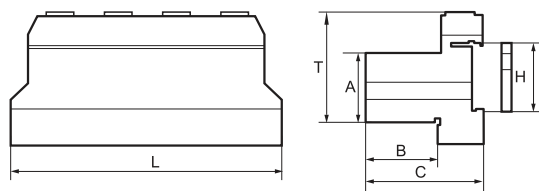
Key: T2002761



Blocks							
Designation	H	A	B	C	L	T	Catalog Nr.
LT PNB-N 2020-32	32	20	19	38	120	48	T2002762
LT PNB-N 2525-32	32	25	23	42	120	48	T2002763

Screw: T2002785

Key: T2002786



## GCTX 2002 NN – LT 1000

Material Group	Gr. №	VDI Group	Material Exemples	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Suggested Starting Parameters		
					min	max	min	max	Feed	V <sub>c</sub>	
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.05	0.17	130	220	<b>0.11</b>	<b>175</b>	
		2		190 HB	0.05	0.17	130	220	<b>0.11</b>	<b>175</b>	
		3		250 HB	0.05	0.17	130	200	<b>0.11</b>	<b>165</b>	
	Low Alloyed	2	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	0.05	0.15	90	200	<b>0.10</b>	<b>145</b>	
		4,6		230 HB	0.05	0.15	90	200	<b>0.10</b>	<b>145</b>	
		5,7		280 HB	0.05	0.15	90	170	<b>0.10</b>	<b>130</b>	
		8		350 HB	0.05	0.15	90	150	<b>0.10</b>	<b>120</b>	
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12N19	220 HB	0.05	0.14	60	170	<b>0.10</b>	<b>115</b>	
		10		280 HB	0.05	0.14	60	150	<b>0.10</b>	<b>105</b>	
		11		320 HB	0.05	0.13	60	130	<b>0.09</b>	<b>95</b>	
		11		350 HB	0.05	0.12	60	100	<b>0.09</b>	<b>80</b>	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.05	0.10	90	150	<b>0.07</b>	<b>120</b>	
		14		240 HB	0.05	0.10	70	140	<b>0.07</b>	<b>105</b>	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.05	0.09	60	100	<b>0.07</b>	<b>80</b>	
		14		310 HB	0.05	0.09	60	100	<b>0.07</b>	<b>80</b>	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.05	0.09	60	130	<b>0.07</b>	<b>95</b>	
		13		42 HRc	0.05	0.08	50	90	<b>0.07</b>	<b>70</b>	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.05	0.16	130	190	<b>0.11</b>	<b>160</b>	
		15		200 HB	0.05	0.16	130	190	<b>0.11</b>	<b>160</b>	
		16		250 HB	0.05	0.16	130	190	<b>0.11</b>	<b>160</b>	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.05	0.14	90	150	<b>0.10</b>	<b>120</b>	
		17,19		200 HB	0.05	0.14	90	150	<b>0.10</b>	<b>120</b>	
		18,20		250 HB	0.05	0.14	90	150	<b>0.10</b>	<b>120</b>	
High Temp. Alloys	Fe, Ni & Co Based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.05	0.08	25	35	<b>0.07</b>	<b>30</b>	
		33		250 HB	0.05	0.08	25	35	<b>0.07</b>	<b>30</b>	
		34		350 HB	0.05	0.08	23	35	<b>0.07</b>	<b>29</b>	
	Ti Based	10	TiAl6V4, T40	-	0.05	0.08	35	60	<b>0.07</b>	<b>45</b>	
		36		-	0.05	0.08	28	40	<b>0.07</b>	<b>34</b>	
		37		-	0.05	0.08	28	40	<b>0.07</b>	<b>34</b>	
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.05	0.11	50	90	<b>0.08</b>	<b>70</b>	
		38		50 HRc	0.05	0.10	40	70	<b>0.08</b>	<b>55</b>	
		38		55 HRc	0.05	0.09	30	60	<b>0.07</b>	<b>45</b>	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.05	0.08	40	60	<b>0.07</b>	<b>50</b>	
		41	G-X300CrMo15	55 HRc	0.05	0.08	30	50	<b>0.07</b>	<b>40</b>	
White Cast Iron	41	G-X300CrMo15	55 HRc	0.05	0.08	30	50	<b>0.07</b>	<b>40</b>		
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.05	0.10	100	300	<b>0.08</b>	<b>200</b>

## GCTX 3003 NN – LT 1000

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Suggested Starting Parameters		
					min	max	min	max	Feed	V <sub>c</sub>	
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.07	0.20	130	220	<b>0.14</b>	<b>175</b>	
		2		190 HB	0.07	0.20	130	220	<b>0.14</b>	<b>175</b>	
		3		250 HB	0.07	0.20	130	200	<b>0.14</b>	<b>165</b>	
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.07	0.18	90	200	<b>0.13</b>	<b>145</b>	
		4,6		230 HB	0.07	0.18	90	200	<b>0.13</b>	<b>145</b>	
		5,7		280 HB	0.07	0.18	90	170	<b>0.13</b>	<b>130</b>	
		8		350 HB	0.07	0.18	90	150	<b>0.13</b>	<b>120</b>	
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.07	0.17	60	170	<b>0.12</b>	<b>115</b>	
		10		280 HB	0.07	0.17	60	150	<b>0.12</b>	<b>105</b>	
		11		320 HB	0.07	0.16	60	130	<b>0.11</b>	<b>95</b>	
		11		350 HB	0.07	0.14	60	100	<b>0.11</b>	<b>80</b>	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.07	0.12	90	150	<b>0.09</b>	<b>120</b>	
		14		240 HB	0.07	0.12	70	140	<b>0.09</b>	<b>105</b>	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.07	0.11	60	100	<b>0.09</b>	<b>80</b>	
		14		310 HB	0.07	0.11	60	100	<b>0.09</b>	<b>80</b>	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.07	0.11	60	130	<b>0.09</b>	<b>95</b>	
		13		42 HRc	0.07	0.10	50	90	<b>0.08</b>	<b>70</b>	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.07	0.19	130	190	<b>0.13</b>	<b>160</b>	
		15		200 HB	0.07	0.19	130	190	<b>0.13</b>	<b>160</b>	
		16		250 HB	0.07	0.19	130	190	<b>0.13</b>	<b>160</b>	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.07	0.17	90	150	<b>0.12</b>	<b>120</b>	
		17,19		200 HB	0.07	0.17	90	150	<b>0.12</b>	<b>120</b>	
		18,20		250 HB	0.07	0.17	90	150	<b>0.12</b>	<b>120</b>	
High Temp. Alloys	Fe, Ni & Co Based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.07	0.10	25	35	<b>0.08</b>	<b>30</b>	
		33		250 HB	0.07	0.10	25	35	<b>0.08</b>	<b>30</b>	
		34		350 HB	0.07	0.10	23	35	<b>0.08</b>	<b>29</b>	
	Ti Based	10	TiAl6V4, T40	-	0.07	0.10	35	60	<b>0.08</b>	<b>45</b>	
37		-		0.07	0.10	28	40	<b>0.08</b>	<b>34</b>		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.07	0.13	50	90	<b>0.10</b>	<b>70</b>	
		38		50 HRc	0.07	0.12	40	70	<b>0.10</b>	<b>55</b>	
		38		55 HRc	0.07	0.11	30	60	<b>0.09</b>	<b>45</b>	
	Chilled Cast Iron White Cast Iron	40	Ni-Hard 2	400 HB	0.07	0.10	40	60	<b>0.08</b>	<b>50</b>	
		41	G-X300CrMo15	55 HRc	0.07	0.10	30	50	<b>0.08</b>	<b>40</b>	
MF	Al (>8%Si)	12	25	AlSi12	130 HB	0.07	0.12	100	300	<b>0.10</b>	<b>200</b>

## GCTX 3003 PP – LT 1000

Material Group	Gr. №	VDI Group	Material Examples	Hardness	Feed (mm/rev)		V <sub>c</sub> (m/min)		Suggested Starting Parameters			
					min	max	min	max	Feed	V <sub>c</sub>		
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.05	0.17	130	220	<b>0.11</b>	<b>175</b>		
		2		190 HB	0.05	0.17	130	220	<b>0.11</b>	<b>175</b>		
		3		250 HB	0.05	0.17	130	200	<b>0.11</b>	<b>165</b>		
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.05	0.15	90	200	<b>0.10</b>	<b>145</b>		
				4,6	230 HB	0.05	0.15	90	200	<b>0.10</b>	<b>145</b>	
				5,7	280 HB	0.05	0.15	90	170	<b>0.10</b>	<b>130</b>	
				8	350 HB	0.05	0.15	90	150	<b>0.10</b>	<b>120</b>	
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.05	0.14	60	170	<b>0.10</b>	<b>115</b>		
				10	280 HB	0.05	0.14	60	150	<b>0.10</b>	<b>105</b>	
				11	320 HB	0.05	0.13	60	130	<b>0.09</b>	<b>95</b>	
				11	350 HB	0.05	0.12	60	100	<b>0.09</b>	<b>80</b>	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.05	0.10	90	150	<b>0.07</b>	<b>120</b>		
				14	240 HB	0.05	0.10	70	140	<b>0.07</b>	<b>105</b>	
	Duplex	5	X2CrNi23-4, S31500	290 HB	0.05	0.09	60	100	<b>0.07</b>	<b>80</b>		
				14	310 HB	0.05	0.09	60	100	<b>0.07</b>	<b>80</b>	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.05	0.09	60	130	<b>0.07</b>	<b>95</b>		
				13	42 HRc	0.05	0.08	50	90	<b>0.07</b>	<b>70</b>	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.05	0.16	130	190	<b>0.11</b>	<b>160</b>		
				15	200 HB	0.05	0.16	130	190	<b>0.11</b>	<b>160</b>	
				16	250 HB	0.05	0.16	130	190	<b>0.11</b>	<b>160</b>	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.05	0.14	90	150	<b>0.10</b>	<b>120</b>		
				17,19	200 HB	0.05	0.14	90	150	<b>0.10</b>	<b>120</b>	
				18,20	250 HB	0.05	0.14	90	150	<b>0.10</b>	<b>120</b>	
High Temp. Alloys	Fe, Ni & Co Based	9	Incoloy 800	240 HB	0.05	0.08	25	35	<b>0.07</b>	<b>30</b>		
				33	Inconel 700	250 HB	0.05	0.08	25	35	<b>0.07</b>	<b>30</b>
				34	Stellite 21	350 HB	0.05	0.08	23	35	<b>0.07</b>	<b>29</b>
	Ti Based	10	TiAl6V4	-	0.05	0.08	35	60	<b>0.07</b>	<b>45</b>		
				36	TiAl6V4	-	0.05	0.08	28	40	<b>0.07</b>	<b>34</b>
				37	T40	-	0.05	0.08	28	40	<b>0.07</b>	<b>34</b>
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.05	0.11	50	90	<b>0.08</b>	<b>70</b>		
				38	50 HRc	0.05	0.10	40	70	<b>0.08</b>	<b>55</b>	
				38	55 HRc	0.05	0.09	30	60	<b>0.07</b>	<b>45</b>	
	Chilled Cast Iron White Cast Iron	40	Ni-Hard 2	400 HB	0.05	0.08	40	60	<b>0.07</b>	<b>50</b>		
				41	G-X300CrMo15	55 HRc	0.05	0.08	30	50	<b>0.07</b>	<b>40</b>
Al (>8%Si)	12	25	AlSi12	130 HB	0.05	0.10	100	300	<b>0.08</b>	<b>200</b>		

## MGMN 200 G – LT 10

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	D.O.C [mm]		Feed [mm/rev]		A <sub>max</sub> [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Suggested Starting Parameters		
					min	max	min	max		min	max	D.O.C	Feed	V <sub>c</sub>
Steel	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.3	1.5	0.09	0.18	0.21	110	210	1.0	0.11	160
		2		190 HB	0.3	1.3	0.09	0.18	0.18	110	180	1.0	0.11	150
		3		250 HB	0.3	1.3	0.09	0.16	0.17	110	160	1.0	0.11	140
	2	6	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	0.3	1.3	0.08	0.16	0.18	70	180	1.0	0.09	130
		4,6		230 HB	0.3	1.3	0.08	0.16	0.17	70	160	1.0	0.09	120
		5,7		280 HB	0.3	1.0	0.08	0.14	0.14	70	140	1.0	0.09	110
		8		350 HB	0.3	1.0	0.08	0.14	0.13	70	120	1.0	0.09	100
	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12N19	220 HB	0.3	1.3	0.07	0.14	0.14	40	120	1.0	0.07	80
		10		280 HB	0.3	1.3	0.07	0.13	0.14	40	100	1.0	0.07	70
		11		320 HB	0.3	1.0	0.07	0.11	0.11	40	80	1.0	0.07	60
		11		350 HB	0.3	1.0	0.07	0.11	0.09	40	70	1.0	0.07	60
Stainless Steel	4	14	304, 316, X5CrNi18-9	180 HB	0.3	1.3	0.08	0.14	0.11	100	180	1.0	0.07	140
				240 HB	0.3	1.3	0.08	0.14	0.09	100	140	1.0	0.07	120
	5	14	X2CrNiN23-4, S31500	290 HB	0.3	1.0	0.07	0.11	0.07	50	100	1.0	0.07	80
				310 HB	0.3	1.0	0.07	0.11	0.07	40	90	1.0	0.07	70
	6	12, 13	410, X6Cr17, 17-4 PH, 430	200 HB	0.3	1.3	0.08	0.14	0.11	100	160	1.0	0.09	130
				42 HRc	0.3	1.0	0.08	0.13	0.09	70	120	1.0	0.07	100
Cast Iron	7	15, 15, 16	GG20, GG40, EN-GJL-250, No30B	150 HB	0.3	1.5	0.06	0.16	0.22	100	160	1.0	0.11	130
				200 HB	0.3	1.5	0.06	0.16	0.21	100	150	1.0	0.11	130
				250 HB	0.3	1.5	0.06	0.16	0.21	90	140	1.0	0.11	120
Malleable & Nodular	8	17,19, 17,19, 18,20	GGG40, GGG70, 50005	150 HB	0.3	1.3	0.06	0.14	0.17	70	160	1.0	0.09	120
				200 HB	0.3	1.3	0.06	0.14	0.14	70	150	1.0	0.09	110
				250 HB	0.3	1.3	0.06	0.14	0.14	70	120	1.0	0.09	100
High Temp. Alloys	9	31,32, 33, 34	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.3	1.0	0.07	0.12	0.09	15	33	1.0	0.07	20
				250 HB	0.3	1.0	0.07	0.12	0.09	15	33	1.0	0.07	20
				350 HB	0.3	1.0	0.07	0.12	0.09	14	29	1.0	0.07	20
	10	36, 37	TiAl6V4, T40	-	0.3	1.0	0.07	0.13	0.11	27	42	1.0	0.09	30
-				0.3	1.0	0.07	0.11	0.09	21	39	1.0	0.07	30	
Hardened Mat.	11	38, 38, 38, 40, 41	X100CrMo13, 440C, G-X260NiCr42, Ni-Hard 2, G-X300CrMo15	45 HRc	0.3	0.9	0.04	0.10	0.07	30	65	0.8	0.07	50
				50 HRc	0.3	0.8	0.04	0.08	0.06	24	59	0.6	0.06	40
				55 HRc	0.3	0.7	0.04	0.07	0.05	24	52	0.5	0.04	40
				400 HB	0.3	0.8	0.04	0.10	0.06	24	39	0.6	0.07	30
				55 HRc	0.3	0.7	0.04	0.07	0.05	18	33	0.5	0.04	30
NF	12	25	AlSi12	130 HB	0.3	2.0	0.08	0.24	0.25	120	260	1.0	0.12	190



## MGMN 300 M – LT 10

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	D.O.C [mm]		Feed [mm/rev]		A <sub>max</sub> [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Suggested Starting Parameters		
					min	max	min	max		min	max	D.O.C	Feed	V <sub>c</sub>
Steel	Non Alloyed	1	C35, CK45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	2.4	0.11	0.23	0.42	110	210	1.5	0.13	160
		190 HB		0.5	2.0	0.11	0.22	0.36	110	180	1.5	0.13	150	
		250 HB		0.5	2.0	0.11	0.20	0.34	110	160	1.5	0.13	140	
	Low Alloyed	2	42CrMo4, S150, CK60, 4140, 4340, 100Cr6	180 HB	0.5	2.0	0.10	0.20	0.35	70	180	1.5	0.11	130
		230 HB		0.5	2.0	0.10	0.20	0.34	70	160	1.5	0.11	120	
		280 HB		0.5	1.6	0.10	0.18	0.28	70	140	1.5	0.11	110	
		350 HB		0.5	1.6	0.10	0.18	0.25	70	120	1.5	0.11	100	
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12N19	220 HB	0.5	2.0	0.09	0.18	0.28	40	120	1.5	0.08	80
		280 HB		0.5	2.0	0.09	0.16	0.28	40	100	1.5	0.08	70	
		320 HB		0.5	1.6	0.09	0.14	0.22	40	80	1.5	0.08	60	
		350 HB		0.5	1.6	0.09	0.14	0.18	40	70	1.5	0.08	60	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	2.0	0.10	0.18	0.22	100	180	1.5	0.08	140
		240 HB		0.5	2.0	0.10	0.18	0.18	100	140	1.5	0.08	120	
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	1.6	0.09	0.14	0.14	50	100	1.5	0.08	80
		310 HB		0.5	1.6	0.09	0.14	0.14	40	90	1.5	0.08	70	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	2.0	0.10	0.18	0.22	100	160	1.5	0.11	130
		42 HRc		0.5	1.6	0.10	0.16	0.18	70	120	1.5	0.08	100	
Cast Iron	Gray	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	2.4	0.08	0.20	0.45	100	160	1.5	0.13	130
		200 HB		0.5	2.4	0.08	0.20	0.42	100	150	1.5	0.13	130	
		250 HB		0.5	2.4	0.08	0.20	0.42	90	140	1.5	0.13	120	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	2.0	0.08	0.18	0.34	70	160	1.5	0.11	120
		200 HB		0.5	2.0	0.08	0.18	0.28	70	150	1.5	0.11	110	
		250 HB		0.5	2.0	0.08	0.18	0.28	70	120	1.5	0.11	100	
High Temp. Alloys	Fe, Ni & Co Based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	0.5	1.6	0.09	0.15	0.18	15	33	1.5	0.08	20
		250 HB		0.5	1.6	0.09	0.15	0.18	15	33	1.5	0.08	20	
		350 HB		0.5	1.6	0.09	0.15	0.18	14	29	1.5	0.08	20	
	Ti Based	10	TiAl6V4, T40	-	0.5	1.6	0.09	0.16	0.22	27	42	1.5	0.11	30
		-		0.5	1.6	0.09	0.14	0.18	21	39	1.5	0.08	30	
		-		0.5	1.6	0.09	0.14	0.18	21	39	1.5	0.08	30	
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NCR42	45 HRc	0.5	1.4	0.05	0.12	0.14	30	65	1.1	0.08	50
		50 HRc		0.5	1.2	0.05	0.10	0.12	24	59	0.9	0.06	40	
		55 HRc		0.5	1.1	0.05	0.09	0.09	24	52	0.7	0.05	40	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	1.3	0.05	0.12	0.12	24	39	0.9	0.08	30
		55 HRc		0.5	1.1	0.05	0.09	0.09	18	33	0.7	0.05	30	
	White Cast Iron	41	G-X300CrMo15	55 HRc	0.5	1.1	0.05	0.09	0.09	18	33	0.7	0.05	30
Al (>8%Si)	12	25	AlSi12	130 HB	0.5	3.2	0.10	0.30	0.49	120	260	1.5	0.14	190

## MGMN 400 M – LT 10

Material Group	Gr. №	VDI Group	Material Examples	Hardness	D.O.C [mm]		Feed [mm/rev]		A <sub>max</sub> [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Suggested Starting Parameters			
					min	max	min	max		min	max	D.O.C	Feed	V <sub>c</sub>	
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.0	3.6	0.13	0.28	0.60	110	210	<b>2.5</b>	<b>0.22</b>	<b>160</b>	
		190 HB		1.0	3.0	0.13	0.26	0.52	110	180	<b>2.5</b>	<b>0.22</b>	<b>150</b>		
		250 HB		1.0	3.0	0.13	0.24	0.48	110	160	<b>2.5</b>	<b>0.22</b>	<b>140</b>		
	Low Alloyed	2	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	1.0	3.0	0.12	0.24	0.50	70	180	<b>2.5</b>	<b>0.18</b>	<b>130</b>	
		4,6		230 HB	1.0	3.0	0.12	0.24	0.48	70	160	<b>2.5</b>	<b>0.18</b>	<b>120</b>	
		5,7		280 HB	1.0	2.4	0.12	0.22	0.40	70	140	<b>2.5</b>	<b>0.18</b>	<b>110</b>	
		8		350 HB	1.0	2.4	0.12	0.22	0.36	70	120	<b>2.5</b>	<b>0.18</b>	<b>100</b>	
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12N19	220 HB	1.0	3.0	0.11	0.22	0.40	40	120	<b>2.5</b>	<b>0.14</b>	<b>80</b>	
		10		280 HB	1.0	3.0	0.11	0.19	0.40	40	100	<b>2.5</b>	<b>0.14</b>	<b>70</b>	
		11		320 HB	1.0	2.4	0.11	0.17	0.32	40	80	<b>2.5</b>	<b>0.14</b>	<b>60</b>	
		11		350 HB	1.0	2.4	0.11	0.17	0.26	40	70	<b>2.5</b>	<b>0.14</b>	<b>60</b>	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	1.0	3.0	0.12	0.22	0.32	100	180	<b>2.5</b>	<b>0.14</b>	<b>140</b>	
		14		240 HB	1.0	3.0	0.12	0.22	0.26	100	140	<b>2.5</b>	<b>0.14</b>	<b>120</b>	
	Duplex	5	X2CrNi23-4, S31500	290 HB	1.0	2.4	0.11	0.17	0.20	50	100	<b>2.5</b>	<b>0.14</b>	<b>80</b>	
		14		310 HB	1.0	2.4	0.11	0.17	0.20	40	90	<b>2.5</b>	<b>0.14</b>	<b>70</b>	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	1.0	3.0	0.12	0.22	0.32	100	160	<b>2.5</b>	<b>0.18</b>	<b>130</b>	
		13		42 HRC	1.0	2.4	0.12	0.19	0.26	70	120	<b>2.5</b>	<b>0.14</b>	<b>100</b>	
Cast Iron	Gray	7	GG20, GG40, EN-GJL-250, No30B	150 HB	1.0	3.6	0.10	0.24	0.64	100	160	<b>2.5</b>	<b>0.22</b>	<b>130</b>	
		15		200 HB	1.0	3.6	0.10	0.24	0.60	100	150	<b>2.5</b>	<b>0.22</b>	<b>130</b>	
		16		250 HB	1.0	3.6	0.10	0.24	0.60	90	140	<b>2.5</b>	<b>0.22</b>	<b>120</b>	
Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.0	3.0	0.10	0.22	0.48	70	160	<b>2.5</b>	<b>0.18</b>	<b>120</b>		
	17,19		200 HB	1.0	3.0	0.10	0.22	0.40	70	150	<b>2.5</b>	<b>0.18</b>	<b>110</b>		
	18,20		250 HB	1.0	3.0	0.10	0.22	0.40	70	120	<b>2.5</b>	<b>0.18</b>	<b>100</b>		
High Temp. Alloys	Fe, Ni & Co Based	9	Incoloy 800	240 HB	1.0	2.4	0.11	0.18	0.26	15	33	<b>2.5</b>	<b>0.14</b>	<b>20</b>	
		33		Inconel 700	250 HB	1.0	2.4	0.11	0.18	0.26	15	33	<b>2.5</b>	<b>0.14</b>	<b>20</b>
		34		Stellite 21	350 HB	1.0	2.4	0.11	0.18	0.26	14	29	<b>2.5</b>	<b>0.14</b>	<b>20</b>
	Ti Based	10	TiAl6V4	-	1.0	2.4	0.11	0.19	0.32	27	42	<b>2.5</b>	<b>0.18</b>	<b>30</b>	
		36		-	1.0	2.4	0.11	0.17	0.26	21	39	<b>2.5</b>	<b>0.14</b>	<b>30</b>	
		37		T40	-	1.0	2.4	0.11	0.17	0.26	21	39	<b>2.5</b>	<b>0.14</b>	<b>30</b>
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	1.0	2.2	0.06	0.14	0.20	30	65	<b>1.9</b>	<b>0.13</b>	<b>50</b>	
		38		50 HRC	1.0	1.8	0.06	0.12	0.17	24	59	<b>1.5</b>	<b>0.11</b>	<b>40</b>	
		38		55 HRC	1.0	1.7	0.06	0.11	0.13	24	52	<b>1.3</b>	<b>0.08</b>	<b>40</b>	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	1.0	1.9	0.06	0.14	0.17	24	39	<b>1.5</b>	<b>0.13</b>	<b>30</b>	
		White Cast Iron	41	G-X300CrMo15	55 HRC	1.0	1.7	0.06	0.11	0.13	18	33	<b>1.3</b>	<b>0.08</b>	<b>30</b>
NF	Al (>8%Si)		12	25	AlSi12	130 HB	1.0	4.8	0.12	0.36	0.70	120	260	<b>2.5</b>	<b>0.24</b>

## MGMN 500 M – LT 10

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	D.O.C [mm]		Feed [mm/rev]		A <sub>max</sub> [mm <sup>2</sup> ]	V <sub>c</sub> [m/min]		Suggested Starting Parameters			
					min	max	min	max		min	max	D.O.C	Feed	V <sub>c</sub>	
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.2	4.2	0.20	0.41	0.60	110	210	<b>3.0</b>	<b>0.30</b>	<b>160</b>	
		190 HB		1.2	3.5	0.20	0.40	0.52	110	180	<b>3.0</b>	<b>0.30</b>	<b>150</b>		
		250 HB		1.2	3.5	0.20	0.36	0.48	110	160	<b>3.0</b>	<b>0.30</b>	<b>140</b>		
	Low Alloyed	2	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	1.2	3.5	0.18	0.36	0.50	70	180	<b>3.0</b>	<b>0.25</b>	<b>130</b>	
		4,6		230 HB	1.2	3.5	0.18	0.36	0.48	70	160	<b>3.0</b>	<b>0.25</b>	<b>120</b>	
		5,7		280 HB	1.2	2.8	0.18	0.32	0.40	70	140	<b>3.0</b>	<b>0.25</b>	<b>110</b>	
		8		350 HB	1.2	2.8	0.18	0.32	0.36	70	120	<b>3.0</b>	<b>0.25</b>	<b>100</b>	
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12N19	220 HB	1.2	3.5	0.16	0.32	0.40	40	120	<b>3.0</b>	<b>0.20</b>	<b>80</b>	
		10		280 HB	1.2	3.5	0.16	0.29	0.40	40	100	<b>3.0</b>	<b>0.20</b>	<b>70</b>	
		11		320 HB	1.2	2.8	0.16	0.25	0.32	40	80	<b>3.0</b>	<b>0.20</b>	<b>60</b>	
		11		350 HB	1.2	2.8	0.16	0.25	0.26	40	70	<b>3.0</b>	<b>0.20</b>	<b>60</b>	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	1.2	3.5	0.18	0.32	0.32	100	180	<b>3.0</b>	<b>0.20</b>	<b>140</b>	
		14		240 HB	1.2	3.5	0.18	0.32	0.26	100	140	<b>3.0</b>	<b>0.20</b>	<b>120</b>	
	Duplex	5	X2CrNi23-4, S31500	290 HB	1.2	2.8	0.16	0.25	0.20	50	100	<b>3.0</b>	<b>0.20</b>	<b>80</b>	
		14		310 HB	1.2	2.8	0.16	0.25	0.20	40	90	<b>3.0</b>	<b>0.20</b>	<b>70</b>	
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	1.2	3.5	0.18	0.32	0.32	100	160	<b>3.0</b>	<b>0.25</b>	<b>130</b>	
		13		42 HRc	1.2	2.8	0.18	0.29	0.26	70	120	<b>3.0</b>	<b>0.20</b>	<b>100</b>	
Cast Iron	Gray	7	GG20, GG40, EN-GJL-250, No30B	150 HB	1.2	4.2	0.14	0.36	0.64	100	160	<b>3.0</b>	<b>0.30</b>	<b>130</b>	
		15		200 HB	1.2	4.2	0.14	0.36	0.60	100	150	<b>3.0</b>	<b>0.30</b>	<b>130</b>	
		16		250 HB	1.2	4.2	0.14	0.36	0.60	90	140	<b>3.0</b>	<b>0.30</b>	<b>120</b>	
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	1.2	3.5	0.14	0.32	0.48	70	160	<b>3.0</b>	<b>0.25</b>	<b>120</b>	
		17,19		200 HB	1.2	3.5	0.14	0.32	0.40	70	150	<b>3.0</b>	<b>0.25</b>	<b>110</b>	
		18,20		250 HB	1.2	3.5	0.14	0.32	0.40	70	120	<b>3.0</b>	<b>0.25</b>	<b>100</b>	
High Temp. Alloys	Fe, Ni & Co Based	9	Incoloy 800, Inconel 700, Stellite 21	240 HB	1.2	2.8	0.16	0.27	0.26	15	33	<b>3.0</b>	<b>0.20</b>	<b>20</b>	
		33		250 HB	1.2	2.8	0.16	0.27	0.26	15	33	<b>3.0</b>	<b>0.20</b>	<b>20</b>	
		34		350 HB	1.2	2.8	0.16	0.27	0.26	14	29	<b>3.0</b>	<b>0.20</b>	<b>20</b>	
	Ti Based	10	TiAl6V4, T40	-	1.2	2.8	0.16	0.29	0.32	27	42	<b>3.0</b>	<b>0.25</b>	<b>30</b>	
		36		-	1.2	2.8	0.16	0.25	0.26	21	39	<b>3.0</b>	<b>0.20</b>	<b>30</b>	
		37		-	1.2	2.8	0.16	0.25	0.26	21	39	<b>3.0</b>	<b>0.20</b>	<b>30</b>	
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	1.2	2.5	0.09	0.22	0.20	30	65	<b>2.3</b>	<b>0.18</b>	<b>50</b>	
		38		50 HRc	1.2	2.1	0.09	0.18	0.17	24	59	<b>1.8</b>	<b>0.15</b>	<b>40</b>	
		38		55 HRc	1.2	2.0	0.09	0.16	0.13	24	52	<b>1.5</b>	<b>0.12</b>	<b>40</b>	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	1.2	2.2	0.09	0.22	0.17	24	39	<b>1.8</b>	<b>0.18</b>	<b>30</b>	
		41	G-X300CrMo15	55 HRc	1.2	2.0	0.09	0.16	0.13	18	33	<b>1.5</b>	<b>0.12</b>	<b>30</b>	
White Cast Iron															
NF	Al (>8%Si)	12	25	AlSi12	130 HB	1.2	5.6	0.18	0.54	0.70	120	260	<b>3.0</b>	<b>0.33</b>	<b>190</b>

## WGE 2000 – LT 10

Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Suggested Starting Parameters		
					min	max	min	max	Feed	V <sub>c</sub>	
Steel	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.04	0.12	110	215	0.09	160	
		2		190 HB	0.04	0.11	110	180	0.09	150	
		3		250 HB	0.04	0.10	110	165	0.09	140	
	2	6	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	0.04	0.10	70	180	0.08	130	
		4,6		230 HB	0.04	0.10	70	165	0.08	120	
		5,7		280 HB	0.04	0.09	70	135	0.08	110	
		8		350 HB	0.04	0.09	70	115	0.08	100	
	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12N119	220 HB	0.04	0.09	40	125	0.06	80	
		10		280 HB	0.04	0.08	40	100	0.06	70	
		11		320 HB	0.04	0.07	40	85	0.06	60	
		11		350 HB	0.04	0.07	40	70	0.06	60	
Stainless Steel	4	14	304, 316, X5CrNi18-9	180 HB	0.04	0.09	100	175	0.06	140	
			240 HB	0.04	0.09	95	145	0.06	120		
	5	14	X2CrNiN23-4, S31500	290 HB	0.04	0.07	50	100	0.06	80	
				310 HB	0.04	0.07	40	90	0.06	70	
	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.04	0.09	100	165	0.07	110	
				42 HRC	0.04	0.08	70	125	0.06	70	
Cast Iron	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.03	0.10	100	165	0.09	130	
			200 HB	0.03	0.10	95	150	0.09	130		
			250 HB	0.03	0.10	90	135	0.09	120		
Malleable & Nodular	8	17,19	GGG40, GGG70, 50005	150 HB	0.03	0.09	70	165	0.08	120	
			200 HB	0.03	0.09	70	150	0.08	110		
			250 HB	0.03	0.09	70	125	0.08	100		
High Temp. Alloys	9	31,32	Incoloy 800	240 HB	0.04	0.08	15	35	0.06	20	
		33	Inconel 700	250 HB	0.04	0.08	15	35	0.06	20	
		34	Stellite 21	350 HB	0.04	0.08	15	30	0.06	20	
Ti Based	10	36	TiAl6V4	-	0.04	0.08	25	40	0.08	30	
		37	T40	-	0.04	0.07	20	40	0.06	30	
Hardened Mat.	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.03	0.06	30	65	0.06	50	
		38		50 HRC	0.03	0.05	25	60	0.05	40	
		38		55 HRC	0.03	0.05	25	50	0.04	40	
		40	Ni-Hard 2	400 HB	0.03	0.06	25	40	0.06	30	
		41	G-X300CrMo15	55 HRC	0.03	0.05	20	35	0.04	30	
MF	Al (>8%Si)	12	25	AlSi12	130 HB	0.04	0.15	120	260	0.10	190

## WGE 3000 – LT 10

Material Group	Gr. N°	VDI Group	Material Examples	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Suggested Starting Parameters			
					min	max	min	max	Feed	V <sub>c</sub>		
Steel	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.07	0.24	110	215	<b>0.12</b>	<b>160</b>		
		2		190 HB	0.07	0.23	110	180	<b>0.12</b>	<b>150</b>		
		3		250 HB	0.07	0.21	110	165	<b>0.12</b>	<b>140</b>		
	2	6	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	0.06	0.21	70	180	<b>0.10</b>	<b>130</b>		
		4,6		230 HB	0.06	0.21	70	165	<b>0.10</b>	<b>120</b>		
		5,7		280 HB	0.06	0.19	70	135	<b>0.10</b>	<b>110</b>		
		8		350 HB	0.06	0.19	70	115	<b>0.10</b>	<b>100</b>		
	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.05	0.19	40	125	<b>0.08</b>	<b>80</b>		
		10		280 HB	0.05	0.17	40	100	<b>0.08</b>	<b>70</b>		
		11		320 HB	0.05	0.15	40	85	<b>0.08</b>	<b>60</b>		
		11		350 HB	0.05	0.15	40	70	<b>0.08</b>	<b>60</b>		
Stainless Steel	4	14	304, 316, X5CrNi18-9	180 HB	0.06	0.19	100	175	<b>0.08</b>	<b>140</b>		
				240 HB	0.06	0.19	95	145	<b>0.08</b>	<b>120</b>		
	5	14	X2CrNiN23-4, S31500	290 HB	0.05	0.15	50	100	<b>0.08</b>	<b>80</b>		
				310 HB	0.05	0.15	40	90	<b>0.08</b>	<b>70</b>		
6	12	13	410, X6Cr17, 17-4 PH, 430	200 HB	0.06	0.19	100	165	<b>0.09</b>	<b>110</b>		
				42 HRC	0.06	0.17	70	125	<b>0.08</b>	<b>70</b>		
Cast Iron	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.05	0.21	100	165	<b>0.12</b>	<b>130</b>		
				200 HB	0.05	0.21	95	150	<b>0.12</b>	<b>130</b>		
				250 HB	0.05	0.21	90	135	<b>0.12</b>	<b>120</b>		
	8	17,19	18,20	GGG40, GGG70, 50005	150 HB	0.05	0.19	70	165	<b>0.10</b>	<b>120</b>	
					200 HB	0.05	0.19	70	150	<b>0.10</b>	<b>110</b>	
					250 HB	0.05	0.19	70	125	<b>0.10</b>	<b>100</b>	
High Temp. Alloys	9	31,32	Incoloy 800	240 HB	0.05	0.16	15	35	<b>0.08</b>	<b>20</b>		
				33	Inconel 700	250 HB	0.05	0.16	15	35	<b>0.08</b>	<b>20</b>
						34	Stellite 21	350 HB	0.05	0.16	15	30
10	36	37	TiAl6V4	-	0.05	0.17	25	40	<b>0.10</b>	<b>30</b>		
			T40	-	0.05	0.15	20	40	<b>0.08</b>	<b>30</b>		
Hardened Mat.	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.03	0.13	30	65	<b>0.07</b>	<b>50</b>		
				50 HRc	0.03	0.11	25	60	<b>0.06</b>	<b>40</b>		
				55 HRc	0.03	0.09	25	50	<b>0.05</b>	<b>40</b>		
		40	Ni-Hard 2	400 HB	0.03	0.13	25	40	<b>0.07</b>	<b>30</b>		
		41	G-X300CrMo15	55 HRc	0.03	0.09	20	35	<b>0.05</b>	<b>30</b>		
12	25	AlSi12	130 HB	0.06	0.32	120	260	<b>0.13</b>	<b>190</b>			

## WGE 4000 – LT 10

Material Group	Gr. №	VDI Group	Material Examples	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Suggested Starting Parameters	
					min	max	min	max	Feed	V <sub>c</sub>
Steel	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.08	0.26	110	215	0.14	160
		2		190 HB	0.08	0.25	110	180	0.14	150
		3		250 HB	0.08	0.23	110	165	0.14	140
	2	6	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.07	0.23	70	180	0.12	130
		4,6		230 HB	0.07	0.23	70	165	0.12	120
		5,7		280 HB	0.07	0.21	70	135	0.12	110
		8		350 HB	0.07	0.21	70	115	0.12	100
		10		220 HB	0.06	0.21	40	125	0.10	80
	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	280 HB	0.06	0.18	40	100	0.10	70
		11		320 HB	0.06	0.16	40	85	0.10	60
		11		350 HB	0.06	0.16	40	70	0.10	60
11		350 HB		0.06	0.16	40	70	0.10	60	
Stainless Steel	4	14	304, 316, X5CrNi18-9	180 HB	0.07	0.21	100	175	0.10	140
			240 HB	0.07	0.21	95	145	0.10	120	
	5	14	X2CrNiN23-4, S31500	290 HB	0.06	0.16	50	100	0.10	80
				310 HB	0.06	0.16	40	90	0.10	70
	6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.07	0.21	100	165	0.11	110
				42 HRC	0.07	0.18	70	125	0.10	70
Cast Iron	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.06	0.23	100	165	0.14	130
			200 HB	0.06	0.23	95	150	0.14	130	
			250 HB	0.06	0.23	90	135	0.14	120	
	8	17,19	GGG40, GGG70, 50005	150 HB	0.06	0.21	70	165	0.12	120
				200 HB	0.06	0.21	70	150	0.12	110
				250 HB	0.06	0.21	70	125	0.12	100
	9	31,32	Incoloy 800	240 HB	0.06	0.17	15	35	0.10	20
				250 HB	0.06	0.17	15	35	0.10	20
				350 HB	0.06	0.17	15	30	0.10	20
10	36	TiAl6V4	-	0.06	0.18	25	40	0.12	30	
			-	0.06	0.16	20	40	0.10	30	
Hardened Mat.	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.04	0.14	30	65	0.09	50
			50 HRC	0.04	0.12	25	60	0.07	40	
			55 HRC	0.04	0.10	25	50	0.06	40	
		40	Ni-Hard 2	400 HB	0.04	0.14	25	40	0.09	30
		41	G-X300CrMo15	55 HRC	0.04	0.10	20	35	0.06	30
12	25	AlSi12	130 HB	0.07	0.35	120	260	0.16	190	

## WGE 5000 – LT 10

Material Group	Gr. N°	VDI Group	Material Exemples	Hardness	Feed [mm/rev]		V <sub>c</sub> [m/min]		Suggested Starting Parameters	
					min	max	min	max	Feed	V <sub>c</sub>
Steel	1	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.08	0.30	110	215	<b>0.16</b>	<b>160</b>
		2		190 HB	0.08	0.29	110	180	<b>0.16</b>	<b>150</b>
		3		250 HB	0.08	0.26	110	165	<b>0.16</b>	<b>140</b>
	2	6	42CrMo4, S150, Ck60, 4140, 4340, 100Cr6	180 HB	0.07	0.26	70	180	<b>0.14</b>	<b>130</b>
		4,6		230 HB	0.07	0.26	70	165	<b>0.14</b>	<b>120</b>
		5,7		280 HB	0.07	0.23	70	135	<b>0.14</b>	<b>110</b>
		8		350 HB	0.07	0.23	70	115	<b>0.14</b>	<b>100</b>
		10		220 HB	0.06	0.23	40	125	<b>0.11</b>	<b>80</b>
	3	10	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	280 HB	0.06	0.21	40	100	<b>0.11</b>	<b>70</b>
		11		320 HB	0.06	0.18	40	85	<b>0.11</b>	<b>60</b>
		11		350 HB	0.06	0.18	40	70	<b>0.11</b>	<b>60</b>
11		350 HB		0.06	0.18	40	70	<b>0.11</b>	<b>60</b>	
4	14	304, 316, X5CrNi18-9	180 HB	0.07	0.23	100	175	<b>0.11</b>	<b>140</b>	
	14		240 HB	0.07	0.23	95	145	<b>0.11</b>	<b>120</b>	
5	14	X2CrNiN23-4, S31500	290 HB	0.06	0.18	50	100	<b>0.11</b>	<b>80</b>	
	14		310 HB	0.06	0.18	40	90	<b>0.11</b>	<b>70</b>	
6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.07	0.23	100	165	<b>0.13</b>	<b>110</b>	
	13		42 HRC	0.07	0.21	70	125	<b>0.11</b>	<b>70</b>	
Stainless Steel	4	14	304, 316, X5CrNi18-9	180 HB	0.07	0.23	100	175	<b>0.11</b>	<b>140</b>
				240 HB	0.07	0.23	95	145	<b>0.11</b>	<b>120</b>
				290 HB	0.06	0.18	50	100	<b>0.11</b>	<b>80</b>
5	14	X2CrNiN23-4, S31500	310 HB	0.06	0.18	40	90	<b>0.11</b>	<b>70</b>	
	14		310 HB	0.06	0.18	40	90	<b>0.11</b>	<b>70</b>	
6	12	410, X6Cr17, 17-4 PH, 430	200 HB	0.07	0.23	100	165	<b>0.13</b>	<b>110</b>	
	13		42 HRC	0.07	0.21	70	125	<b>0.11</b>	<b>70</b>	
Cast Iron	7	15	GG20, GG40, EN-GJL-250, No30B	150 HB	0.06	0.26	100	165	<b>0.16</b>	<b>130</b>
				200 HB	0.06	0.26	95	150	<b>0.16</b>	<b>130</b>
				250 HB	0.06	0.26	90	135	<b>0.16</b>	<b>120</b>
8	17,19	GGG40, GGG70, 50005	150 HB	0.06	0.23	70	165	<b>0.14</b>	<b>120</b>	
	17,19		200 HB	0.06	0.23	70	150	<b>0.14</b>	<b>110</b>	
	18,20		250 HB	0.06	0.23	70	125	<b>0.14</b>	<b>100</b>	
9	31,32	Incoloy 800	240 HB	0.06	0.20	15	35	<b>0.11</b>	<b>20</b>	
	33		Inconel 700	250 HB	0.06	0.20	15	35	<b>0.11</b>	<b>20</b>
	34		Stellite 21	350 HB	0.06	0.20	15	30	<b>0.11</b>	<b>20</b>
10	36	TiAl6V4	-	0.06	0.21	25	40	<b>0.14</b>	<b>30</b>	
	37	T40	-	0.06	0.18	20	40	<b>0.11</b>	<b>30</b>	
Hardened Mat.	11	38	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.04	0.16	30	65	<b>0.10</b>	<b>50</b>
		38		50 HRC	0.04	0.13	25	60	<b>0.08</b>	<b>40</b>
		38		55 HRC	0.04	0.12	25	50	<b>0.06</b>	<b>40</b>
		40	Ni-Hard 2	400 HB	0.04	0.16	25	40	<b>0.10</b>	<b>30</b>
		41	G-X300CrMo15	55 HRC	0.04	0.12	20	35	<b>0.06</b>	<b>30</b>
NF	12	25	AlSi12	130 HB	0.07	0.39	120	260	<b>0.18</b>	<b>190</b>