



Turning Negative - Metric

Date compiled

Nov. 10 2016

CNMA 120408-UC											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.5	5.0	3.00

CNMA 120412-UC											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.81	0.51	130	390	260	0.7	6.0	4.00

CNMA 160612-UC											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.15	0.70	0.40	130	390	260	2.0	8.0	3.0

CNMG 120404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

CNMG 120408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Low Alloy	200	0.21	0.45	0.30	120	280	200	0.5	5.0	3.0
	High Alloy	220	0.18	0.40	0.25	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.35	170	250	210	0.5	5.0	3.0
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	50	38	0.5	3.0	2.0
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

CNMG 120412-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.26	0.68	0.47	180	330	250	0.7	6.0	4.0
	Low Alloy	200	0.26	0.61	0.44	120	280	200	0.7	6.0	4.0
	High Alloy	220	0.23	0.54	0.39	70	190	130	0.7	4.8	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	220	0.7	6.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.51	170	250	210	0.7	6.0	4.0
S	Heat resistant and super alloys	240	0.25	0.47	0.36	25	45	35	0.7	3.6	2.7
H	Hardened material	45HRc	0.14	0.41	0.28	50	100	75	0.7	3.0	2.7

DNMG 150404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.19	180	330	290	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.14	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.13	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	240	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.18	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	40	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.10	50	100	75	0.2	2.0	1.5

DNMG 150408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.36	180	330	250	0.5	5.0	3.0
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

DNMG 150604-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.19	180	330	290	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.14	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.13	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	240	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.18	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	40	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.10	50	100	75	0.2	2.0	1.5

DNMG 150608-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.36	180	330	250	0.5	5.0	3.0
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

DNMG 150612-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.26	0.68	0.47	180	330	250	0.7	6.0	4.0
	Low Alloy	200	0.26	0.61	0.44	120	280	200	0.7	6.0	4.0
	High Alloy	220	0.23	0.54	0.39	70	190	130	0.7	4.8	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	220	0.7	6.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.51	170	250	210	0.7	6.0	4.0
S	Heat resistant and super alloys	240	0.25	0.47	0.36	25	45	35	0.7	3.6	2.7
H	Hardened material	45HRc	0.14	0.41	0.28	50	100	75	0.7	3.0	2.7

SNMA 120408											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.15	0.70	0.35	130	390	260	1.00	6.00	2.50

SNMA 120412											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.80	0.40	130	390	260	1.50	6.00	3.00

SNMG 120404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.30	0.70	0.55	180	330	250	0.2	4.0	2.1
	Low Alloy	200	0.30	0.63	0.47	120	280	200	0.2	4.0	2.1
	High Alloy	220	0.25	0.56	0.40	70	190	130	0.2	3.0	1.6
M	Austenitic	190	0.28	0.56	0.42	170	270	220	0.2	4.0	2.1
K	Grey Cast Iron	140	0.21	0.84	0.53	170	250	210	0.2	4.0	2.1
S	Heat resistant and super alloys	240	0.28	0.49	0.39	25	45	35	0.2	2.0	1.1
H	Hardened material	45HRc	0.16	0.42	0.29	50	100	75	0.2	2.0	1.1



SNMG 120408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.30	0.70	0.50	180	330	250	0.5	5.0	3.0
	Low Alloy	200	0.30	0.63	0.47	120	280	200	0.5	5.0	3.0
	High Alloy	220	0.25	0.56	0.40	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.28	0.56	0.42	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.21	0.84	0.53	170	250	210	0.5	5.0	3.0
S	Heat resistant and super alloys	240	0.28	0.49	0.39	25	45	35	0.5	3.0	2.0
H	Hardened material	45HRc	0.16	0.42	0.29	50	100	75	0.5	2.5	2.0

SNMG 120412-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.37	0.95	0.65	180	330	250	0.7	6.0	4.0
	Low Alloy	200	0.37	0.86	0.60	120	280	200	0.7	6.0	4.0
	High Alloy	220	0.32	0.76	0.54	70	190	130	0.7	4.8	3.4
M	Austenitic	190	0.35	0.76	0.55	170	270	220	0.7	6.0	4.0
K	Grey Cast Iron	140	0.30	1.14	0.70	170	250	210	0.7	6.0	4.0
S	Heat resistant and super alloys	240	0.35	0.67	0.51	25	45	35	0.7	3.6	2.7
H	Hardened material	45HRc	0.19	0.57	0.38	50	100	75	0.7	3.0	2.7

TNMA 160408											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.15	0.40	0.35	130	390	260	1.0	4.0	2.50

TNMA 160412											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.50	0.40	130	390	260	1.5	4.5	3.00

TNMG 160404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

TNMG 160408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0



TNMG 160412-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.26	0.68	0.47	180	330	250	0.7	5.0	4.0
	Low Alloy	200	0.26	0.61	0.44	120	280	200	0.7	5.0	4.0
	High Alloy	220	0.23	0.54	0.39	70	190	130	0.7	4.0	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	220	0.7	5.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.51	170	250	210	0.7	5.0	4.0
S	Heat resistant and super alloys	240	0.25	0.47	0.36	25	45	35	0.7	3.0	2.7
H	Hardened material	45HRc	0.14	0.41	0.28	50	100	75	0.7	2.5	2.2

TNMG 220404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

TNMG 220408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.36	180	330	250	0.5	7.0	3.0
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	7.0	3.0
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	5.6	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	7.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	190	0.5	7.0	3.0
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	35	0.5	4.2	2.0
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	75	0.5	3.5	2.0

TNMG 220412-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.26	0.68	0.45	180	330	250	0.7	7.0	4.0
	Low Alloy	200	0.26	0.61	0.40	120	280	200	0.7	7.0	4.0
	High Alloy	220	0.23	0.54	0.39	70	190	130	0.7	5.6	3.4
M	Austenitic	190	0.25	0.54	0.40	170	270	180	0.7	7.0	4.0
K	Grey Cast Iron	140	0.20	0.81	0.50	170	250	190	0.7	7.0	4.0
S	Heat resistant and super alloys	240	0.25	0.47	0.36	25	45	35	0.7	4.2	2.7
H	Hardened material	45HRc	0.14	0.41	0.28	50	100	75	0.7	3.5	2.2

TNMX 160404 R/L											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5



TNUX 160408 R/L											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitic	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	75	0.5	2.5	2.0

VNMGM 160404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

VNMGM 160408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.19	0.40	0.30	180	330	250	0.5	4.0	2.7
	Low Alloy	200	0.19	0.36	0.28	120	280	200	0.5	4.0	2.7
	High Alloy	220	0.16	0.32	0.24	70	190	130	0.5	3.2	2.3
M	Austenitic	190	0.18	0.32	0.25	170	270	200	0.5	4.0	2.7
K	Grey Cast Iron	140	0.14	0.48	0.31	170	250	210	0.5	4.0	2.7
S	Heat resistant and super alloys	240	0.18	0.28	0.23	25	45	35	0.5	2.4	2.0
H	Hardened material	45HRc	0.10	0.24	0.17	50	100	75	0.5	2.0	1.8

VNMGM 160412-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.19	0.40	0.30	180	330	250	1.5	4.0	2.7
	Low Alloy	200	0.19	0.36	0.28	120	280	200	1.5	4.0	2.7
	High Alloy	220	0.16	0.32	0.24	70	190	130	1.5	3.2	2.3
M	Austenitic	190	0.18	0.32	0.25	170	270	200	1.5	4.0	2.7
K	Grey Cast Iron	140	0.14	0.48	0.31	170	250	210	1.5	4.0	2.7
S	Heat resistant and super alloys	240	0.18	0.28	0.23	25	45	35	1.5	2.4	2.0
H	Hardened material	45HRc	0.10	0.24	0.17	50	100	75	1.5	2.0	1.8

WNMA 080404											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.30	130	390	260	0.7	6.0	2.00

WNMA 080408											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	0.7	6.0	3.35

WNMA 080412											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
K	Grey Cast Iron	140	0.20	0.78	0.49	130	390	260	1.5	6.0	3.75



WNMG 060404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

WNMG 060408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.36	180	330	250	0.5	2.5	2.2
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	2.5	2.2
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	2.0	1.8
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	2.5	2.2
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	2.5	2.2
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	30	0.5	1.5	1.5
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	70	0.5	1.6	1.5

WNMG 080404-UF											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Low Alloy	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	High Alloy	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitic	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
K	Grey Cast Iron	140	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Heat resistant and super alloys	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0
H	Hardened material	45HRc	0.05	0.12	0.09	50	100	75	0.2	1.8	1.5

WNMG 080408-UG											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.21	0.50	0.36	180	330	250	0.5	3.5	2.4
	Low Alloy	200	0.21	0.45	0.33	120	280	200	0.5	3.5	2.4
	High Alloy	220	0.18	0.40	0.29	70	190	130	0.5	2.8	2.0
M	Austenitic	190	0.20	0.40	0.30	170	270	200	0.5	3.5	2.4
K	Grey Cast Iron	140	0.15	0.60	0.38	170	250	210	0.5	3.5	2.4
S	Heat resistant and super alloys	240	0.20	0.35	0.28	25	45	30	0.5	2.1	1.6
H	Hardened material	45HRc	0.11	0.30	0.21	50	100	70	0.5	1.8	1.6

WNMG 080412-UR											
Material			Cutting conditions								
Group	Sub Group	Hardness (HB)	Feed (mm/rev)			Speed Vc (m/min)			Depth Of Cut (mm)		
			Min	Max	Recommend	Min	Max	Recommend	Min	Max	Recommend
P	Non Alloy	120	0.25	0.65	0.45	180	330	250	0.7	3.5	3.0
	Low Alloy	200	0.25	0.59	0.40	120	280	200	0.7	3.5	3.0
	High Alloy	220	0.22	0.52	0.35	70	190	130	0.7	2.8	2.5
M	Austenitic	190	0.24	0.52	0.35	170	270	200	0.7	3.5	3.0
K	Grey Cast Iron	140	0.18	0.78	0.45	170	250	210	0.7	3.5	3.0
S	Heat resistant and super alloys	240	0.24	0.46	0.35	25	45	30	0.7	2.1	2.0
H	Hardened material	45HRc	0.13	0.39	0.25	50	100	70	0.7	1.8	2.0