

CUTTING PARAMETERS

3520SUH MINI

	Material Group ISO 513	P1 P2			P3 P4			P5			P6		
	Hardness/Rm	500-700 N/mm ²			600-1000 N/mm ²			900-1200 N/mm ²			1200-1400 N/mm ²		
	Vc (m/min)	45-65*			40-50*			30-40*			20-30*		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
	1.0	17520	0.0063	110	14330	0.0057	80	11150	0.0050	56	7960	0.0044	35
	1.1	15920	0.0070	110	13030	0.0063	80	10130	0.0056	57	7240	0.0049	35
	1.2	14600	0.0077	110	11940	0.0069	80	9290	0.0062	57	6630	0.0054	36
	1.3	13470	0.0084	110	11020	0.0076	80	8570	0.0067	58	6120	0.0059	36
	1.4	12510	0.0091	110	10240	0.0082	80	7960	0.0073	58	5690	0.0064	36
	1.5	11680	0.0105	120	9550	0.0095	90	7430	0.0084	60	5310	0.0074	39
	1.6	10950	0.0119	130	8960	0.0107	100	6970	0.0095	70	4980	0.0083	41
	1.7	10300	0.0133	140	8430	0.0120	100	6560	0.0106	70	4680	0.0093	44
	1.8	9730	0.0147	140	7960	0.0132	110	6190	0.0118	70	4420	0.0103	45
	1.9	9220	0.0161	150	7540	0.0145	110	5870	0.0129	80	4190	0.0113	47
	2.0	8760	0.0175	150	7170	0.0158	110	5570	0.0140	80	3980	0.0123	49
	2.1	8340	0.0189	160	6820	0.0170	120	5310	0.0151	80	3790	0.0132	50
	2.2	7960	0.0203	160	6510	0.0183	120	5070	0.0162	80	3620	0.0142	51
	2.3	7620	0.0217	170	6230	0.0195	120	4850	0.0174	80	3460	0.0152	53
	2.4	7300	0.0231	170	5970	0.0208	120	4640	0.0185	90	3320	0.0162	54
	2.5	7010	0.0245	170	5730	0.0221	130	4460	0.0196	90	3180	0.0172	55
	2.6	6740	0.0259	170	5510	0.0233	130	4290	0.0207	90	3060	0.0181	55
	2.7	6490	0.0273	180	5310	0.0246	130	4130	0.0218	90	2950	0.0191	56
	2.8	6260	0.0287	180	5120	0.0258	130	3980	0.0230	90	2840	0.0201	57
	2.9	6040	0.0301	180	4940	0.0271	130	3840	0.0241	90	2750	0.0211	58
	3.0	5840	0.0315	180	4780	0.0284	140	3720	0.0252	90	2650	0.0221	58

*if the machine tool or the equipment wouldn't allow to reach the requested rpm, please use the max. available rpm recalculating the Vf value
(Vf=n available x fn)

	Material Group ISO 513	M1 M2			M3			M4			M5		
	Hardness/Rm	< 750 N/mm ²			550-850 N/mm ²			650-950 N/mm ²			850-1200 N/mm ²		
	Vc (m/min)	20-30*			15-25*			15-25*			10-20*		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
	1.0	7960	0.0047	38	6370	0.0040	26	6370	0.0033	21	4780	0.0028	14
	1.1	7240	0.0053	38	5790	0.0045	26	5790	0.0037	21	4340	0.0032	14
	1.2	6630	0.0058	38	5310	0.0049	26	5310	0.0040	21	3980	0.0035	14
	1.3	6120	0.0063	39	4900	0.0054	26	4900	0.0044	22	3670	0.0038	14
	1.4	5690	0.0068	39	4550	0.0058	26	4550	0.0048	22	3410	0.0041	14
	1.5	5310	0.0079	42	4250	0.0067	28	4250	0.0055	23	3180	0.0047	15
	1.6	4980	0.0089	44	3980	0.0076	30	3980	0.0062	25	2990	0.0054	16
	1.7	4680	0.0100	47	3750	0.0085	32	3750	0.0070	26	2810	0.0060	17
	1.8	4420	0.0110	49	3540	0.0094	33	3540	0.0077	27	2650	0.0066	18
	1.9	4190	0.0121	51	3350	0.0103	34	3350	0.0085	28	2510	0.0072	18
	2.0	3980	0.0131	52	3180	0.0112	35	3180	0.0092	29	2390	0.0079	19
	2.1	3790	0.0142	54	3030	0.0120	37	3030	0.0099	30	2270	0.0085	19
	2.2	3620	0.0152	55	2900	0.0129	38	2900	0.0107	31	2170	0.0091	20
	2.3	3460	0.0163	56	2770	0.0138	38	2770	0.0114	32	2080	0.0098	20
	2.4	3320	0.0173	58	2650	0.0147	39	2650	0.0121	32	1990	0.0104	21
	2.5	3180	0.0184	58	2550	0.0156	40	2550	0.0129	33	1910	0.0110	21
	2.6	3060	0.0194	59	2450	0.0165	40	2450	0.0136	33	1840	0.0117	21
	2.7	2950	0.0205	60	2360	0.0174	41	2360	0.0143	34	1770	0.0123	22
	2.8	2840	0.0215	60	2270	0.0183	42	2270	0.0151	34	1710	0.0129	22
	2.9	2750	0.0226	60	2200	0.0192	42	2200	0.0158	35	1650	0.0135	22
	3.0	2650	0.0236	60	2120	0.0201	43	2120	0.0165	35	1590	0.0142	23

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(Vf=n available x fn)

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	Material Group ISO 513	K1			K2			K3			K4		
	Hardness/Rm	150-250 HB			150-350 HB			120-260 HB			250-500 HB		
	Vc (m/min)	45-65*			40-50*			30-40*			20-30*		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
	1.0	17520	0.0063	110	14330	0.0057	80	11150	0.0050	56	7960	0.0044	35
	1.1	15920	0.0070	110	13030	0.0063	80	10130	0.0056	57	7240	0.0049	35
	1.2	14600	0.0077	110	11940	0.0069	80	9290	0.0062	57	6630	0.0054	36
	1.3	13470	0.0084	110	11020	0.0076	80	8570	0.0067	58	6120	0.0059	36
	1.4	12510	0.0091	110	10240	0.0082	80	7960	0.0073	58	5690	0.0064	36
	1.5	11680	0.0105	120	9550	0.0095	90	7430	0.0084	62	5310	0.0074	39
	1.6	10950	0.0119	130	8960	0.0107	100	6970	0.0095	66	4980	0.0083	41
	1.7	10300	0.0133	140	8430	0.0120	100	6560	0.0106	70	4680	0.0093	44
	1.8	9730	0.0147	140	7960	0.0132	110	6190	0.0118	70	4420	0.0103	45
	1.9	9220	0.0161	150	7540	0.0145	110	5870	0.0129	80	4190	0.0113	47
	2.0	8760	0.0175	150	7170	0.0158	110	5570	0.0140	80	3980	0.0123	49
	2.1	8340	0.0189	160	6820	0.0170	120	5310	0.0151	80	3790	0.0132	50
	2.2	7960	0.0203	160	6510	0.0183	120	5070	0.0162	80	3620	0.0142	51
	2.3	7620	0.0217	170	6230	0.0195	120	4850	0.0174	80	3460	0.0152	53
	2.4	7300	0.0231	170	5970	0.0208	120	4640	0.0185	90	3320	0.0162	54
	2.5	7010	0.0245	170	5730	0.0221	130	4460	0.0196	90	3180	0.0172	55
	2.6	6740	0.0259	170	5510	0.0233	130	4290	0.0207	90	3060	0.0181	55
	2.7	6490	0.0273	180	5310	0.0246	130	4130	0.0218	90	2950	0.0191	56
	2.8	6260	0.0287	180	5120	0.0258	130	3980	0.0230	90	2840	0.0201	57
	2.9	6040	0.0301	180	4940	0.0271	130	3840	0.0241	90	2750	0.0211	58
	3.0	5840	0.0315	180	4780	0.0284	140	3720	0.0252	90	2650	0.0221	58

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(Vf=n available x fn)

	Material Group ISO 513	N1			N2			N3 N4			N5		
	Hardness/Rm												
	Vc (m/min)	80-100*			80-120*			80-120*			80-120*		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
	1.0	28660	0.0079	230	28660	0.0071	200	28660	0.0063	180	38220	0.0087	330
	1.1	26060	0.0088	230	26060	0.0079	210	26060	0.0070	180	34740	0.0096	330
	1.2	23890	0.0096	230	23890	0.0087	210	23890	0.0077	180	31850	0.0106	340
	1.3	22050	0.0105	230	22050	0.0095	210	22050	0.0084	190	29400	0.0116	340
	1.4	20470	0.0114	230	20470	0.0102	210	20470	0.0091	190	27300	0.0125	340
	1.5	19110	0.0131	250	19110	0.0118	230	19110	0.0105	200	25480	0.0144	370
	1.6	17910	0.0149	270	17910	0.0134	240	17910	0.0119	210	23890	0.0164	390
	1.7	16860	0.0166	280	16860	0.0150	250	16860	0.0133	220	22480	0.0183	410
	1.8	15920	0.0184	290	15920	0.0165	260	15920	0.0147	230	21230	0.0202	430
	1.9	15090	0.0201	300	15090	0.0181	270	15090	0.0161	240	20110	0.0221	450
	2.0	14330	0.0219	310	14330	0.0197	280	14330	0.0175	250	19110	0.0241	460
	2.1	13650	0.0236	320	13650	0.0213	290	13650	0.0189	260	18200	0.0260	470
	2.2	13030	0.0254	330	13030	0.0228	300	13030	0.0203	260	17370	0.0279	480
	2.3	12460	0.0271	340	12460	0.0244	300	12460	0.0217	270	16620	0.0298	500
	2.4	11940	0.0289	340	11940	0.0260	310	11940	0.0231	280	15920	0.0318	510
	2.5	11460	0.0306	350	11460	0.0276	320	11460	0.0245	280	15290	0.0337	520
	2.6	11020	0.0324	360	11020	0.0291	320	11020	0.0259	290	14700	0.0356	520
	2.7	10620	0.0341	360	10620	0.0307	330	10620	0.0273	290	14150	0.0375	530
	2.8	10240	0.0359	370	10240	0.0323	330	10240	0.0287	290	13650	0.0395	540
	2.9	9880	0.0376	370	9880	0.0339	330	9880	0.0301	300	13180	0.0414	550
	3.0	9550	0.0394	380	9550	0.0354	340	9550	0.0315	300	12740	0.0433	550

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(Vf=n available x fn)

CUTTING PARAMETERS

3520SUH MINI



	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	20-30*			10-20*			30-40*			20-30*		
	D (mm)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)	n (rpm)	fn (mm/rev)	Vf (mm/min)
	1.0	7960	0.0044	35	6370	0.0031	20	11150	0.0042	47	7960	0.0035	28
1.1	7240	0.0049	35	5790	0.0034	20	10130	0.0047	47	7240	0.0039	28	
1.2	6630	0.0054	36	5310	0.0038	20	9290	0.0051	48	6630	0.0043	29	
1.3	6120	0.0059	36	4900	0.0041	20	8570	0.0056	48	6120	0.0047	29	
1.4	5690	0.0064	36	4550	0.0045	20	7960	0.0061	48	5690	0.0051	29	
1.5	5310	0.0074	39	4250	0.0051	22	7430	0.0070	52	5310	0.0059	31	
1.6	4980	0.0083	41	3980	0.0058	23	6970	0.0079	55	4980	0.0067	33	
1.7	4680	0.0093	44	3750	0.0065	24	6560	0.0088	58	4680	0.0074	35	
1.8	4420	0.0103	45	3540	0.0072	25	6190	0.0098	60	4420	0.0082	36	
1.9	4190	0.0113	47	3350	0.0079	26	5870	0.0107	60	4190	0.0090	38	
2.0	3980	0.0123	49	3180	0.0086	27	5570	0.0116	60	3980	0.0098	39	
2.1	3790	0.0132	50	3030	0.0093	28	5310	0.0126	70	3790	0.0106	40	
2.2	3620	0.0142	51	2900	0.0099	29	5070	0.0135	70	3620	0.0114	41	
2.3	3460	0.0152	53	2770	0.0106	29	4850	0.0144	70	3460	0.0122	42	
2.4	3320	0.0162	54	2650	0.0113	30	4640	0.0154	70	3320	0.0129	43	
2.5	3180	0.0172	55	2550	0.0120	31	4460	0.0163	70	3180	0.0137	44	
2.6	3060	0.0181	55	2450	0.0127	31	4290	0.0172	70	3060	0.0145	44	
2.7	2950	0.0191	56	2360	0.0134	32	4130	0.0182	70	2950	0.0153	45	
2.8	2840	0.0201	57	2270	0.0141	32	3980	0.0191	80	2840	0.0161	46	
2.9	2750	0.0211	58	2200	0.0147	32	3840	0.0200	80	2750	0.0169	46	
3.0	2650	0.0221	58	2120	0.0154	33	3720	0.0209	80	2650	0.0176	47	

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(Vf=n available x fn)

INFO
TYPHOON TA-HTA-4HTA
TYPHOON PU-HPU
TYPHOON SUH
TYPHOON ALH
TYPHOON HRC
TYPHOON SUH MINI
TYPHOON HL
C-SD-TA
LFTA
SUTA
HSS-HSS/CO DRILLS
G2
MDTA
HF-VH/UP
MEF
ALU
MEX
UH
HSS/CO-HSSP END MILLS
CARBIDE BURRS