

353TA-353HTA

general purpose, TA and HTA (through coolant)

3XD

DIN
6537K

TA

HTA

MG
PV200

140°

30°

353TA 353HTA



353TA



353HTA

P	M	K	N	S	H
★	☆	☆	☆	☆	☆

353TA

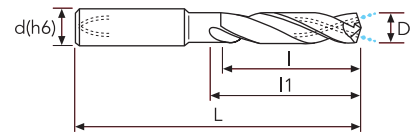
353HTA

★ 1st choice ☆ suitable

353TA



353HTA

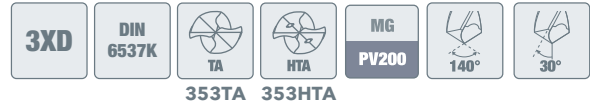


D(m7)	D Tol.	d(h6)	l	l1	L	353TA		353HTA	
						EDP No.	Stock	EDP No.	Stock
3.00	+0.012/+0.002	6	14	20	62	353TA0300	●	353HTA0300	●
3.10	+0.016/+0.004	6	14	20	62	353TA0310	●	353HTA0310	●
3.20	+0.016/+0.004	6	14	20	62	353TA0320	●	353HTA0320	●
3.30	+0.016/+0.004	6	14	20	62	353TA0330	●	353HTA0330	●
3.40	+0.016/+0.004	6	14	20	62	353TA0340	●	353HTA0340	●
3.50	+0.016/+0.004	6	14	20	62	353TA0350	●	353HTA0350	●
3.60	+0.016/+0.004	6	14	20	62	353TA0360	●	353HTA0360	●
3.70	+0.016/+0.004	6	14	20	62	353TA0370	●	353HTA0370	●
3.80	+0.016/+0.004	6	17	24	66	353TA0380	●	353HTA0380	●
3.90	+0.016/+0.004	6	17	24	66	353TA0390	●	353HTA0390	●
4.00	+0.016/+0.004	6	17	24	66	353TA0400	●	353HTA0400	●
4.10	+0.016/+0.004	6	17	24	66	353TA0410	●	353HTA0410	●
4.20	+0.016/+0.004	6	17	24	66	353TA0420	●	353HTA0420	●
4.30	+0.016/+0.004	6	17	24	66	353TA0430	●	353HTA0430	●
4.40	+0.016/+0.004	6	17	24	66	353TA0440	●	353HTA0440	●
4.50	+0.016/+0.004	6	17	24	66	353TA0450	●	353HTA0450	●
4.60	+0.016/+0.004	6	17	24	66	353TA0460	●	353HTA0460	●
4.70	+0.016/+0.004	6	17	24	66	353TA0470	●	353HTA0470	●
4.80	+0.016/+0.004	6	20	28	66	353TA0480	●	353HTA0480	●
4.90	+0.016/+0.004	6	20	28	66	353TA0490	●	353HTA0490	●
5.00	+0.016/+0.004	6	20	28	66	353TA0500	●	353HTA0500	●
5.10	+0.016/+0.004	6	20	28	66	353TA0510	●	353HTA0510	●
5.20	+0.016/+0.004	6	20	28	66	353TA0520	●	353HTA0520	●
5.30	+0.016/+0.004	6	20	28	66	353TA0530	●	353HTA0530	●
5.40	+0.016/+0.004	6	20	28	66	353TA0540	●	353HTA0540	●
5.50	+0.016/+0.004	6	20	28	66	353TA0550	●	353HTA0550	●
5.60	+0.016/+0.004	6	20	28	66	353TA0560	●	353HTA0560	●
5.70	+0.016/+0.004	6	20	28	66	353TA0570	●	353HTA0570	●
5.80	+0.016/+0.004	6	20	28	66	353TA0580	●	353HTA0580	●
5.90	+0.016/+0.004	6	20	28	66	353TA0590	●	353HTA0590	●
6.00	+0.016/+0.004	6	20	28	66	353TA0600	●	353HTA0600	●
6.10	+0.021/+0.006	8	24	34	79	353TA0610	●	353HTA0610	●
6.20	+0.021/+0.006	8	24	34	79	353TA0620	●	353HTA0620	●
6.30	+0.021/+0.006	8	24	34	79	353TA0630	●	353HTA0630	●
6.40	+0.021/+0.006	8	24	34	79	353TA0640	●	353HTA0640	●
6.50	+0.021/+0.006	8	24	34	79	353TA0650	●	353HTA0650	●
6.60	+0.021/+0.006	8	24	34	79	353TA0660	●	353HTA0660	●
6.70	+0.021/+0.006	8	24	34	79	353TA0670	●	353HTA0670	●
6.80	+0.021/+0.006	8	24	34	79	353TA0680	●	353HTA0680	●

● stock standard ○ non-standard stock ▽ stock exhaustion

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P	M	K	N	S	H
★	☆	☆	☆	☆	
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★ 1st choice ☆ suitable

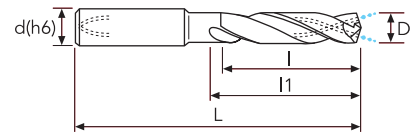
353TA

353HTA

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D(m7)	D Tol.	d(h6)	l	l1	L	353TA		353HTA	
						EDP No.	Stock	EDP No.	Stock
6.90	+0.021/+0.006	8	24	34	79	353TA0690	●	353HTA0690	●
7.00	+0.021/+0.006	8	24	34	79	353TA0700	●	353HTA0700	●
7.10	+0.021/+0.006	8	29	41	79	353TA0710	●	353HTA0710	●
7.20	+0.021/+0.006	8	29	41	79	353TA0720	●	353HTA0720	●
7.30	+0.021/+0.006	8	29	41	79	353TA0730	●	353HTA0730	●
7.40	+0.021/+0.006	8	29	41	79	353TA0740	●	353HTA0740	●
7.50	+0.021/+0.006	8	29	41	79	353TA0750	●	353HTA0750	●
7.60	+0.021/+0.006	8	29	41	79	353TA0760	●	353HTA0760	●
7.70	+0.021/+0.006	8	29	41	79	353TA0770	●	353HTA0770	●
7.80	+0.021/+0.006	8	29	41	79	353TA0780	●	353HTA0780	●
7.90	+0.021/+0.006	8	29	41	79	353TA0790	●	353HTA0790	●
8.00	+0.021/+0.006	8	29	41	79	353TA0800	●	353HTA0800	●
8.10	+0.021/+0.006	10	35	47	89	353TA0810	●	353HTA0810	●
8.20	+0.021/+0.006	10	35	47	89	353TA0820	●	353HTA0820	●
8.30	+0.021/+0.006	10	35	47	89	353TA0830	●	353HTA0830	●
8.40	+0.021/+0.006	10	35	47	89	353TA0840	●	353HTA0840	●
8.50	+0.021/+0.006	10	35	47	89	353TA0850	●	353HTA0850	●
8.60	+0.021/+0.006	10	35	47	89	353TA0860	●	353HTA0860	●
8.70	+0.021/+0.006	10	35	47	89	353TA0870	●	353HTA0870	●
8.80	+0.021/+0.006	10	35	47	89	353TA0880	●	353HTA0880	●
8.90	+0.021/+0.006	10	35	47	89	353TA0890	●	353HTA0890	●
9.00	+0.021/+0.006	10	35	47	89	353TA0900	●	353HTA0900	●
9.10	+0.021/+0.006	10	35	47	89	353TA0910	●	353HTA0910	●
9.20	+0.021/+0.006	10	35	47	89	353TA0920	●	353HTA0920	●
9.30	+0.021/+0.006	10	35	47	89	353TA0930	●	353HTA0930	●
9.40	+0.021/+0.006	10	35	47	89	353TA0940	●	353HTA0940	●
9.50	+0.021/+0.006	10	35	47	89	353TA0950	●	353HTA0950	●
9.60	+0.021/+0.006	10	35	47	89	353TA0960	●	353HTA0960	●
9.70	+0.021/+0.006	10	35	47	89	353TA0970	●	353HTA0970	●
9.80	+0.021/+0.006	10	35	47	89	353TA0980	●	353HTA0980	●
9.90	+0.021/+0.006	10	35	47	89	353TA0990	●	353HTA0990	●
10.00	+0.021/+0.006	10	35	47	89	353TA1000	●	353HTA1000	●
10.10	+0.025/+0.007	12	40	55	102	353TA1010	●		
10.20	+0.025/+0.007	12	40	55	102	353TA1020	●	353HTA1020	●
10.30	+0.025/+0.007	12	40	55	102	353TA1030	●		
10.40	+0.025/+0.007	12	40	55	102	353TA1040	●	353HTA1040	●
10.50	+0.025/+0.007	12	40	55	102	353TA1050	●	353HTA1050	●
10.60	+0.025/+0.007	12	40	55	102	353TA1060	●	353HTA1060	●
10.70	+0.025/+0.007	12	40	55	102	353TA1070	●		

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

● stock standard ○ non-standard stock ▽ stock exhaustion

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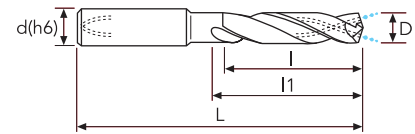
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D(m7)	D Tol.	d(h6)	l	l1	L	353TA		353HTA	
						EDP No.	Stock	EDP No.	Stock
10.80	+0.025/+0.007	12	40	55	102	353TA1080	●	353HTA1080	●
10.90	+0.025/+0.007	12	40	55	102	353TA1090	○	353HTA1090	○
11.00	+0.025/+0.007	12	40	55	102	353TA1100	●	353HTA1100	●
11.10	+0.025/+0.007	12	40	55	102	353TA1110	○		
11.20	+0.025/+0.007	12	40	55	102	353TA1120	●	353HTA1120	●
11.30	+0.025/+0.007	12	40	55	102	353TA1130	●	353HTA1130	●
11.40	+0.025/+0.007	12	40	55	102	353TA1140	○		
11.50	+0.025/+0.007	12	40	55	102	353TA1150	●	353HTA1150	●
11.60	+0.025/+0.007	12	40	55	102	353TA1160	○		
11.70	+0.025/+0.007	12	40	55	102	353TA1170	○		
11.80	+0.025/+0.007	12	40	55	102	353TA1180	●	353HTA1180	●
11.90	+0.025/+0.007	12	40	55	102	353TA1190	○		
12.00	+0.025/+0.007	12	40	55	102	353TA1200	●	353HTA1200	●
12.20	+0.025/+0.007	14	43	60	107	353TA1220	●	353HTA1220	●
12.50	+0.025/+0.007	14	43	60	107	353TA1250	●	353HTA1250	●
12.80	+0.025/+0.007	14	43	60	107	353TA1280	●	353HTA1280	●
13.00	+0.025/+0.007	14	43	60	107	353TA1300	●	353HTA1300	●
13.30	+0.025/+0.007	14	43	60	107			353HTA1330	●
13.50	+0.025/+0.007	14	43	60	107	353TA1350	●	353HTA1350	●
13.80	+0.025/+0.007	14	43	60	107			353HTA1380	●
14.00	+0.025/+0.007	14	43	60	107	353TA1400	●	353HTA1400	●
14.50	+0.025/+0.007	16	45	65	115	353TA1450	●	353HTA1450	●
15.00	+0.025/+0.007	16	65	65	115	353TA1500	●	353HTA1500	●
15.30	+0.025/+0.007	16	65	65	115			353HTA1530	●
15.50	+0.025/+0.007	16	65	65	115	353TA1550	●	353HTA1550	●
15.80	+0.025/+0.007	16	65	65	115			353HTA1580	●
16.00	+0.025/+0.007	16	65	65	115	353TA1600	●	353HTA1600	●
16.50	+0.025/+0.007	18	73	73	123	353TA1650	●	353HTA1650	●
17.00	+0.025/+0.007	18	73	73	123	353TA1700	●	353HTA1700	●
17.50	+0.025/+0.007	18	73	73	123	353TA1750	●	353HTA1750	●
18.00	+0.025/+0.007	18	73	73	123	353TA1800	●	353HTA1800	●
18.50	+0.029/+0.008	20	79	79	131	353TA1850	●	353HTA1850	●
19.00	+0.029/+0.008	20	79	79	131	353TA1900	●	353HTA1900	●
19.50	+0.029/+0.008	20	79	79	131	353TA1950	●	353HTA1950	●
20.00	+0.029/+0.008	20	79	79	131	353TA2000	●	353HTA2000	●

● stock standard ○ non-standard stock ▽ stock exhaustion

353TA

	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)	90-110			80-100			50-70			30-50		
	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)
3	10620	0.100	1060	9550	0.085	810	6370	0.075	480	4250	0.060	260	
4	7960	0.110	880	7170	0.094	670	4780	0.083	390	3180	0.066	210	
5	6370	0.120	760	5730	0.102	580	3820	0.090	340	2550	0.072	180	
6	5310	0.135	720	4780	0.115	550	3180	0.101	320	2120	0.081	170	
7	4550	0.150	680	4090	0.128	520	2730	0.113	310	1820	0.090	160	
8	3980	0.165	660	3580	0.140	500	2390	0.124	300	1590	0.099	160	
9	3540	0.180	640	3180	0.153	490	2120	0.135	290	1420	0.108	150	
10	3180	0.195	620	2870	0.166	480	1910	0.146	280	1270	0.117	150	
11	2900	0.210	610	2610	0.179	470	1740	0.158	270	1160	0.126	150	
12	2650	0.230	610	2390	0.196	470	1590	0.173	270	1060	0.138	150	
13	2450	0.250	610	2200	0.213	470	1470	0.188	280	980	0.150	150	
14	2270	0.270	610	2050	0.230	470	1360	0.203	280	910	0.162	150	
15	2120	0.290	610	1910	0.247	470	1270	0.218	280	850	0.174	150	
16	1990	0.310	620	1790	0.264	470	1190	0.233	280	800	0.186	150	
17	1870	0.330	620	1690	0.281	470	1120	0.248	280	750	0.198	150	
18	1770	0.350	620	1590	0.298	470	1060	0.263	280	710	0.210	150	
19	1680	0.370	620	1510	0.315	470	1010	0.278	280	670	0.222	150	
20	1590	0.390	620	1430	0.332	470	960	0.293	280	640	0.234	150	

353HTA

	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)	100-140			80-120			70-90			50-70		
	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)
3	12740	0.110	1400	10620	0.099	1050	8490	0.088	750	6370	0.077	490	
4	9550	0.130	1240	7960	0.117	930	6370	0.104	660	4780	0.091	430	
5	7640	0.150	1150	6370	0.135	860	5100	0.120	610	3820	0.105	400	
6	6370	0.170	1080	5310	0.153	810	4250	0.136	580	3180	0.119	380	
7	5460	0.190	1040	4550	0.171	780	3640	0.152	550	2730	0.133	360	
8	4780	0.210	1000	3980	0.189	750	3180	0.168	530	2390	0.147	350	
9	4250	0.230	980	3540	0.207	730	2830	0.184	520	2120	0.161	340	
10	3820	0.250	960	3180	0.225	720	2550	0.200	510	1910	0.175	330	
11	3470	0.260	900	2900	0.234	680	2320	0.208	480	1740	0.182	320	
12	3180	0.280	890	2650	0.252	670	2120	0.224	470	1590	0.196	310	
13	2940	0.300	880	2450	0.270	660	1960	0.240	470	1470	0.210	310	
14	2730	0.320	870	2270	0.288	650	1820	0.256	470	1360	0.224	300	
15	2550	0.340	870	2120	0.306	650	1700	0.272	460	1270	0.238	300	
16	2390	0.360	860	1990	0.324	640	1590	0.288	460	1190	0.252	300	
17	2250	0.370	830	1870	0.333	620	1500	0.296	440	1120	0.259	290	
18	2120	0.380	810	1770	0.342	610	1420	0.304	430	1060	0.266	280	
19	2010	0.390	780	1680	0.351	590	1340	0.312	420	1010	0.273	280	
20	1910	0.400	760	1590	0.360	570	1270	0.320	410	960	0.280	270	

- 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

353TA

	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)	35-55			25-45			20-30			15-25		
	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)
	3	4780	0.070	330	3720	0.060	220	2650	0.053	140	2120	0.042	90
	4	3580	0.077	280	2790	0.065	180	1990	0.058	110	1590	0.046	70
	5	2870	0.084	240	2230	0.071	160	1590	0.063	100	1270	0.050	60
	6	2390	0.095	230	1860	0.080	150	1330	0.071	90	1060	0.057	60
	7	2050	0.105	220	1590	0.089	140	1140	0.079	90	910	0.063	60
	8	1790	0.116	210	1390	0.098	140	1000	0.087	90	800	0.069	60
	9	1590	0.126	200	1240	0.107	130	880	0.095	80	710	0.076	50
	10	1430	0.137	200	1110	0.116	130	800	0.102	80	640	0.082	50
	11	1300	0.147	190	1010	0.125	130	720	0.110	80	580	0.088	50
	12	1190	0.161	190	930	0.137	130	660	0.121	80	530	0.097	50
	13	1100	0.175	190	860	0.149	130	610	0.131	80	490	0.105	50
	14	1020	0.189	190	800	0.161	130	570	0.142	80	450	0.113	50
	15	960	0.203	190	740	0.173	130	530	0.152	80	420	0.122	50
	16	900	0.217	200	700	0.184	130	500	0.163	80	400	0.130	50
	17	840	0.231	190	660	0.196	130	470	0.173	80	370	0.139	50
	18	800	0.245	200	620	0.208	130	440	0.184	80	350	0.147	50
	19	750	0.259	190	590	0.220	130	420	0.194	80	340	0.155	50
	20	720	0.273	200	560	0.232	130	400	0.205	80	320	0.164	50

353HTA

	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)	40-60			30-50			25-35			15-25		
	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)
	3	5310	0.070	370	4250	0.056	240	3180	0.049	160	2120	0.042	90
	4	3980	0.090	360	3180	0.072	230	2390	0.063	150	1590	0.054	90
	5	3180	0.100	320	2550	0.080	200	1910	0.070	130	1270	0.060	80
	6	2650	0.110	290	2120	0.088	190	1590	0.077	120	1060	0.066	70
	7	2270	0.130	300	1820	0.104	190	1360	0.091	120	910	0.078	70
	8	1990	0.150	300	1590	0.120	190	1190	0.105	120	800	0.090	70
	9	1770	0.160	280	1420	0.128	180	1060	0.112	120	710	0.096	70
	10	1590	0.175	280	1270	0.140	180	960	0.123	120	640	0.105	70
	11	1450	0.180	260	1160	0.144	170	870	0.126	110	580	0.108	60
	12	1330	0.200	270	1060	0.160	170	800	0.140	110	530	0.120	60
	13	1220	0.215	260	980	0.172	170	730	0.151	110	490	0.129	60
	14	1140	0.230	260	910	0.184	170	680	0.161	110	450	0.138	60
	15	1060	0.245	260	850	0.196	170	640	0.172	110	420	0.147	60
	16	1000	0.260	260	800	0.208	170	600	0.182	110	400	0.156	60
	17	940	0.270	250	750	0.216	160	560	0.189	110	370	0.162	60
	18	880	0.285	250	710	0.228	160	530	0.200	110	350	0.171	60
	19	840	0.300	250	670	0.240	160	500	0.210	110	340	0.180	60
	20	800	0.310	250	640	0.248	160	480	0.217	100	320	0.186	60

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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)	90-110			80-100			50-70			30-50		
	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)
3	10620	0.100	1060	9550	0.085	810	6370	0.075	480	4250	0.060	260	
4	7960	0.110	880	7170	0.094	670	4780	0.083	390	3180	0.066	210	
5	6370	0.120	760	5730	0.102	580	3820	0.090	340	2550	0.072	180	
6	5310	0.135	720	4780	0.115	550	3180	0.101	320	2120	0.081	170	
7	4550	0.150	680	4090	0.128	520	2730	0.113	310	1820	0.090	160	
8	3980	0.165	660	3580	0.140	500	2390	0.124	300	1590	0.099	160	
9	3540	0.180	640	3180	0.153	490	2120	0.135	290	1420	0.108	150	
10	3180	0.195	620	2870	0.166	480	1910	0.146	280	1270	0.117	150	
11	2900	0.210	610	2610	0.179	470	1740	0.158	270	1160	0.126	150	
12	2650	0.230	610	2390	0.196	470	1590	0.173	270	1060	0.138	150	
13	2450	0.250	610	2200	0.213	470	1470	0.188	280	980	0.150	150	
14	2270	0.270	610	2050	0.230	470	1360	0.203	280	910	0.162	150	
15	2120	0.290	610	1910	0.247	470	1270	0.218	280	850	0.174	150	
16	1990	0.310	620	1790	0.264	470	1190	0.233	280	800	0.186	150	
17	1870	0.330	620	1690	0.281	470	1120	0.248	280	750	0.198	150	
18	1770	0.350	620	1590	0.298	470	1060	0.263	280	710	0.210	150	
19	1680	0.370	620	1510	0.315	470	1010	0.278	280	670	0.222	150	
20	1590	0.390	620	1430	0.332	470	960	0.293	280	640	0.234	150	

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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)	100-120			80-100			60-80			50-70		
	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)
3	11680	0.110	1280	9550	0.099	950	7430	0.088	650	6370	0.077	490	
4	8760	0.130	1140	7170	0.117	840	5570	0.104	580	4780	0.091	430	
5	7010	0.150	1050	5730	0.135	770	4460	0.120	540	3820	0.105	400	
6	5840	0.170	990	4780	0.153	730	3720	0.136	510	3180	0.119	380	
7	5000	0.190	950	4090	0.171	700	3180	0.152	480	2730	0.133	360	
8	4380	0.210	920	3580	0.189	680	2790	0.168	470	2390	0.147	350	
9	3890	0.230	890	3180	0.207	660	2480	0.184	460	2120	0.161	340	
10	3500	0.250	880	2870	0.225	650	2230	0.200	450	1910	0.175	330	
11	3180	0.260	830	2610	0.234	610	2030	0.208	420	1740	0.182	320	
12	2920	0.280	820	2390	0.252	600	1860	0.224	420	1590	0.196	310	
13	2690	0.300	810	2200	0.270	590	1710	0.240	410	1470	0.210	310	
14	2500	0.320	800	2050	0.288	590	1590	0.256	410	1360	0.224	300	
15	2340	0.340	800	1910	0.306	580	1490	0.272	410	1270	0.238	300	
16	2190	0.360	790	1790	0.324	580	1390	0.288	400	1190	0.252	300	
17	2060	0.370	760	1690	0.333	560	1310	0.296	390	1120	0.259	290	
18	1950	0.380	740	1590	0.342	540	1240	0.304	380	1060	0.266	280	
19	1840	0.390	720	1510	0.351	530	1170	0.312	370	1010	0.273	280	
20	1750	0.400	700	1430	0.360	510	1110	0.320	360	960	0.280	270	

- INFO
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- 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

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Material Group ISO 513	N1 > 5% Si			N2			N4					
	Hardness/Rm											
	Vc (m/min)			180-220			160-200			160-180		
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)			
3	21230	0.132	2800	19110	0.119	2270	18050	0.119	2140			
4	15920	0.156	2480	14330	0.140	2010	13540	0.140	1900			
5	12740	0.180	2290	11460	0.162	1860	10830	0.162	1750			
6	10620	0.204	2170	9550	0.184	1750	9020	0.184	1660			
7	9100	0.228	2070	8190	0.205	1680	7730	0.205	1590			
8	7960	0.252	2010	7170	0.227	1630	6770	0.227	1540			
9	7080	0.276	1950	6370	0.248	1580	6020	0.248	1500			
10	6370	0.300	1910	5730	0.270	1550	5410	0.270	1460			
11	5790	0.312	1810	5210	0.281	1460	4920	0.281	1380			
12	5310	0.336	1780	4780	0.302	1450	4510	0.302	1360			
13	4900	0.360	1760	4410	0.324	1430	4160	0.324	1350			
14	4550	0.384	1750	4090	0.346	1410	3870	0.346	1340			
15	4250	0.408	1730	3820	0.367	1400	3610	0.367	1330			
16	3980	0.432	1720	3580	0.389	1390	3380	0.389	1310			
17	3750	0.444	1670	3370	0.400	1350	3180	0.400	1270			
18	3540	0.456	1610	3180	0.410	1310	3010	0.410	1240			
19	3350	0.468	1570	3020	0.421	1270	2850	0.421	1200			
20	3180	0.480	1530	2870	0.432	1240	2710	0.432	1170			



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353TA

	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	25-35			15-25			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)
3	3180	0.045	140	2120	0.032	70	3720	0.043	160	2650	0.036	100	
4	2390	0.050	120	1590	0.035	60	2790	0.047	130	1990	0.040	80	
5	1910	0.054	100	1270	0.038	50	2230	0.051	110	1590	0.043	70	
6	1590	0.061	100	1060	0.043	50	1860	0.058	110	1330	0.049	60	
7	1360	0.068	90	910	0.047	40	1590	0.064	100	1140	0.054	60	
8	1190	0.074	90	800	0.052	40	1390	0.071	100	1000	0.059	60	
9	1060	0.081	90	710	0.057	40	1240	0.077	100	880	0.065	60	
10	960	0.088	80	640	0.061	40	1110	0.083	90	800	0.070	60	
11	870	0.095	80	580	0.066	40	1010	0.090	90	720	0.076	50	
12	800	0.104	80	530	0.072	40	930	0.098	90	660	0.083	50	
13	730	0.113	80	490	0.079	40	860	0.107	90	610	0.090	50	
14	680	0.122	80	450	0.085	40	800	0.115	90	570	0.097	60	
15	640	0.131	80	420	0.091	40	740	0.124	90	530	0.104	60	
16	600	0.140	80	400	0.098	40	700	0.133	90	500	0.112	60	
17	560	0.149	80	370	0.104	40	660	0.141	90	470	0.119	60	
18	530	0.158	80	350	0.110	40	620	0.150	90	440	0.126	60	
19	500	0.167	80	340	0.117	40	590	0.158	90	420	0.133	60	
20	480	0.176	80	320	0.123	40	560	0.167	90	400	0.140	60	

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	Material Group ISO 513	S1 S2			S3			S4			S5		
	Hardness/Rm	< 35 HRC			35-45 HRC								
	Vc (m/min)	30-40			20-30			40-60			30-40		
	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)
3	3720	0.046	170	2650	0.032	90	5310	0.044	230	3720	0.037	140	
4	2790	0.055	150	1990	0.039	80	3980	0.052	210	2790	0.044	120	
5	2230	0.063	140	1590	0.044	70	3180	0.060	190	2230	0.050	110	
6	1860	0.073	140	1330	0.051	70	2650	0.069	180	1860	0.058	110	
7	1590	0.080	130	1140	0.056	60	2270	0.076	170	1590	0.064	100	
8	1390	0.090	130	1000	0.063	60	1990	0.086	170	1390	0.072	100	
9	1240	0.100	120	880	0.070	60	1770	0.095	170	1240	0.080	100	
10	1110	0.110	120	800	0.077	60	1590	0.105	170	1110	0.088	100	
11	1010	0.120	120	720	0.084	60	1450	0.114	170	1010	0.096	100	
12	930	0.130	120	660	0.091	60	1330	0.124	160	930	0.104	100	
13	860	0.137	120	610	0.096	60	1220	0.130	160	860	0.110	90	
14	800	0.145	120	570	0.102	60	1140	0.138	160	800	0.116	90	
15	740	0.153	110	530	0.107	60	1060	0.145	150	740	0.122	90	
16	700	0.160	110	500	0.112	60	1000	0.152	150	700	0.128	90	
17	660	0.170	110	470	0.119	60	940	0.162	150	660	0.136	90	
18	620	0.180	110	440	0.126	60	880	0.171	150	620	0.144	90	
19	590	0.190	110	420	0.133	60	840	0.181	150	590	0.152	90	
20	560	0.200	110	400	0.140	60	800	0.190	150	560	0.160	90	

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