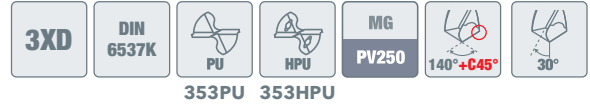


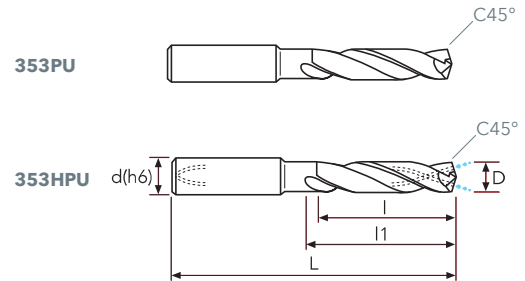
353PU-353HPU

universal application, high productivity



P	M	K	N	S	H
★	★	★	☆	★	

★ 1st choice ☆ suitable



D(m7)	D Tol.	d(h6)	l	l1	L	353PU		353HPU	
						EDP No.	Stock	EDP No.	Stock
3.00	+0.012/+0.002	6	14	20	62	353PU0300	●	353HPU0300	●
3.10	+0.016/+0.004	6	14	20	62	353PU0310	●	353HPU0310	●
3.20	+0.016/+0.004	6	14	20	62	353PU0320	●	353HPU0320	●
3.30	+0.016/+0.004	6	14	20	62	353PU0330	●	353HPU0330	●
3.40	+0.016/+0.004	6	14	20	62	353PU0340	●	353HPU0340	●
3.50	+0.016/+0.004	6	14	20	62	353PU0350	●	353HPU0350	●
3.60	+0.016/+0.004	6	14	20	62	353PU0360	●	353HPU0360	●
3.70	+0.016/+0.004	6	14	20	62	353PU0370	●	353HPU0370	●
3.80	+0.016/+0.004	6	17	24	66	353PU0380	●	353HPU0380	●
3.90	+0.016/+0.004	6	17	24	66	353PU0390	●	353HPU0390	●
4.00	+0.016/+0.004	6	17	24	66	353PU0400	●	353HPU0400	●
4.10	+0.016/+0.004	6	17	24	66	353PU0410	●	353HPU0410	●
4.20	+0.016/+0.004	6	17	24	66	353PU0420	●	353HPU0420	●
4.30	+0.016/+0.004	6	17	24	66	353PU0430	●	353HPU0430	●
4.40	+0.016/+0.004	6	17	24	66	353PU0440	●	353HPU0440	●
4.50	+0.016/+0.004	6	17	24	66	353PU0450	●	353HPU0450	●
4.60	+0.016/+0.004	6	17	24	66	353PU0460	●	353HPU0460	●
4.70	+0.016/+0.004	6	17	24	66	353PU0470	●	353HPU0470	●
4.80	+0.016/+0.004	6	20	28	66	353PU0480	●	353HPU0480	●
4.90	+0.016/+0.004	6	20	28	66	353PU0490	●	353HPU0490	●
5.00	+0.016/+0.004	6	20	28	66	353PU0500	●	353HPU0500	●
5.10	+0.016/+0.004	6	20	28	66	353PU0510	●	353HPU0510	●
5.20	+0.016/+0.004	6	20	28	66	353PU0520	●	353HPU0520	●
5.30	+0.016/+0.004	6	20	28	66	353PU0530	●	353HPU0530	●
5.40	+0.016/+0.004	6	20	28	66	353PU0540	●	353HPU0540	●
5.50	+0.016/+0.004	6	20	28	66	353PU0550	●	353HPU0550	●
5.60	+0.016/+0.004	6	20	28	66	353PU0560	●	353HPU0560	●
5.70	+0.016/+0.004	6	20	28	66	353PU0570	●	353HPU0570	●
5.80	+0.016/+0.004	6	20	28	66	353PU0580	●	353HPU0580	●
5.90	+0.016/+0.004	6	20	28	66	353PU0590	●	353HPU0590	●
6.00	+0.016/+0.004	6	20	28	66	353PU0600	●	353HPU0600	●
6.10	+0.021/+0.006	8	24	34	79	353PU0610	●	353HPU0610	●
6.20	+0.021/+0.006	8	24	34	79	353PU0620	●	353HPU0620	●
6.30	+0.021/+0.006	8	24	34	79	353PU0630	●	353HPU0630	●
6.40	+0.021/+0.006	8	24	34	79	353PU0640	●	353HPU0640	●
6.50	+0.021/+0.006	8	24	34	79	353PU0650	●	353HPU0650	●
6.60	+0.021/+0.006	8	24	34	79	353PU0660	●	353HPU0660	●
6.70	+0.021/+0.006	8	24	34	79	353PU0670	●	353HPU0670	●
6.80	+0.021/+0.006	8	24	34	79	353PU0680	●	353HPU0680	●

INFO

CARBIDE DRILLS

- PU-HPU
- TA-4HTA
- SUH
- ALH
- HRC
- SUH-MINI
- HL
- HSD
- C-SD-TA

HSS DRILLS

- LFTA
- SUTA
- HSS-HSS/CO

CARBIDE END-MILLS

- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX/MH
- UH/MH

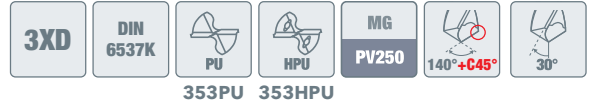
HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

353PU-353HPU

universal application, high productivity



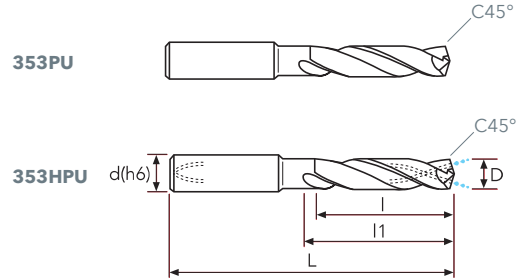
CARBIDE DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH MINI
- HL
- HSD
- C-SD-TA

P	M	K	N	S	H
★	★	★	☆	★	★

★ 1st choice ☆ suitable

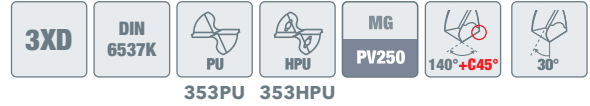


D(m7)	D Tol.	d(h6)	l	l1	L	353PU		353HPU	
						EDP No.	Stock	EDP No.	Stock
6.90	+0.021/+0.006	8	24	34	79	353PU0690	●	353HPU0690	●
7.00	+0.021/+0.006	8	24	34	79	353PU0700	●	353HPU0700	●
7.10	+0.021/+0.006	8	29	41	79	353PU0710	●	353HPU0710	●
7.20	+0.021/+0.006	8	29	41	79	353PU0720	●	353HPU0720	●
7.30	+0.021/+0.006	8	29	41	79	353PU0730	●	353HPU0730	●
7.40	+0.021/+0.006	8	29	41	79	353PU0740	●	353HPU0740	●
7.50	+0.021/+0.006	8	29	41	79	353PU0750	●	353HPU0750	●
7.60	+0.021/+0.006	8	29	41	79	353PU0760	●	353HPU0760	●
7.70	+0.021/+0.006	8	29	41	79	353PU0770	●	353HPU0770	●
7.80	+0.021/+0.006	8	29	41	79	353PU0780	●	353HPU0780	●
7.90	+0.021/+0.006	8	29	41	79	353PU0790	●	353HPU0790	●
8.00	+0.021/+0.006	8	29	41	79	353PU0800	●	353HPU0800	●
8.10	+0.021/+0.006	10	35	47	89	353PU0810	●	353HPU0810	●
8.20	+0.021/+0.006	10	35	47	89	353PU0820	●	353HPU0820	●
8.30	+0.021/+0.006	10	35	47	89	353PU0830	●	353HPU0830	●
8.40	+0.021/+0.006	10	35	47	89	353PU0840	●	353HPU0840	●
8.50	+0.021/+0.006	10	35	47	89	353PU0850	●	353HPU0850	●
8.60	+0.021/+0.006	10	35	47	89	353PU0860	●	353HPU0860	●
8.70	+0.021/+0.006	10	35	47	89	353PU0870	●	353HPU0870	●
8.80	+0.021/+0.006	10	35	47	89	353PU0880	●	353HPU0880	●
8.90	+0.021/+0.006	10	35	47	89	353PU0890	●	353HPU0890	●
9.00	+0.021/+0.006	10	35	47	89	353PU0900	●	353HPU0900	●
9.10	+0.021/+0.006	10	35	47	89	353PU0910	●	353HPU0910	●
9.20	+0.021/+0.006	10	35	47	89	353PU0920	●	353HPU0920	●
9.30	+0.021/+0.006	10	35	47	89	353PU0930	●	353HPU0930	●
9.40	+0.021/+0.006	10	35	47	89	353PU0940	●	353HPU0940	●
9.50	+0.021/+0.006	10	35	47	89	353PU0950	●	353HPU0950	●
9.60	+0.021/+0.006	10	35	47	89	353PU0960	●	353HPU0960	●
9.70	+0.021/+0.006	10	35	47	89	353PU0970	●	353HPU0970	●
9.80	+0.021/+0.006	10	35	47	89	353PU0980	●	353HPU0980	●
9.90	+0.021/+0.006	10	35	47	89	353PU0990	●	353HPU0990	●
10.00	+0.021/+0.006	10	35	47	89	353PU1000	●	353HPU1000	●
10.10	+0.025/+0.007	12	40	55	102	353PU1010	●	353HPU1010	●
10.20	+0.025/+0.007	12	40	55	102	353PU1020	●	353HPU1020	●
10.30	+0.025/+0.007	12	40	55	102	353PU1030	●	353HPU1030	●
10.40	+0.025/+0.007	12	40	55	102	353PU1040	●	353HPU1040	●
10.50	+0.025/+0.007	12	40	55	102	353PU1050	●	353HPU1050	●
10.60	+0.025/+0.007	12	40	55	102	353PU1060	●	353HPU1060	●
10.70	+0.025/+0.007	12	40	55	102	353PU1070	●	353HPU1070	●

● stock standard ○ non-standard stock ▽ stock exhaustion

353PU-353HPU

universal application, high productivity

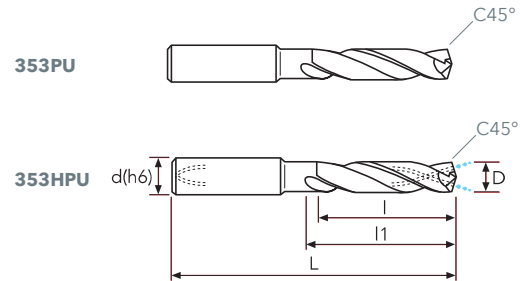


INFO



P	M	K	N	S	H
★	★	★	☆	★	

★ 1st choice ☆ suitable



CARBIDE DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH-MINI
- HL
- HSD
- C-SD-TA

D(m7)	D Tol.	d(h6)	l	l1	L	353PU		353HPU	
						EDP No.	Stock	EDP No.	Stock
10.80	+0.025/+0.007	12	40	55	102	353PU1080	●	353HPU1080	●
10.90	+0.025/+0.007	12	40	55	102	353PU1090	●	353HPU1090	●
11.00	+0.025/+0.007	12	40	55	102	353PU1100	●	353HPU1100	●
11.10	+0.025/+0.007	12	40	55	102	353PU1110	●	353HPU1110	●
11.20	+0.025/+0.007	12	40	55	102	353PU1120	●	353HPU1120	●
11.30	+0.025/+0.007	12	40	55	102	353PU1130	●	353HPU1130	●
11.40	+0.025/+0.007	12	40	55	102	353PU1140	●	353HPU1140	●
11.50	+0.025/+0.007	12	40	55	102	353PU1150	●	353HPU1150	●
11.60	+0.025/+0.007	12	40	55	102	353PU1160	●	353HPU1160	●
11.70	+0.025/+0.007	12	40	55	102	353PU1170	●	353HPU1170	●
11.80	+0.025/+0.007	12	40	55	102	353PU1180	●	353HPU1180	●
11.90	+0.025/+0.007	12	40	55	102	353PU1190	●	353HPU1190	●
12.00	+0.025/+0.007	12	40	55	102	353PU1200	●	353HPU1200	●
12.10	+0.025/+0.007	14	43	60	107	353PU1210	●	353HPU1210	●
12.20	+0.025/+0.007	14	43	60	107	353PU1220	●	353HPU1220	●
12.30	+0.025/+0.007	14	43	60	107	353PU1230	●	353HPU1230	●
12.40	+0.025/+0.007	14	43	60	107	353PU1240	●	353HPU1240	●
12.50	+0.025/+0.007	14	43	60	107	353PU1250	●	353HPU1250	●
12.60	+0.025/+0.007	14	43	60	107	353PU1260	●	353HPU1260	●
12.70	+0.025/+0.007	14	43	60	107	353PU1270	●	353HPU1270	●
12.80	+0.025/+0.007	14	43	60	107	353PU1280	●	353HPU1280	●
12.90	+0.025/+0.007	14	43	60	107	353PU1290	●	353HPU1290	●
13.00	+0.025/+0.007	14	43	60	107	353PU1300	●	353HPU1300	●
13.10	+0.025/+0.007	14	43	60	107	353PU1310	●	353HPU1310	●
13.20	+0.025/+0.007	14	43	60	107	353PU1320	●	353HPU1320	●
13.30	+0.025/+0.007	14	43	60	107	353PU1330	●	353HPU1330	●
13.40	+0.025/+0.007	14	43	60	107	353PU1340	●	353HPU1340	●
13.50	+0.025/+0.007	14	43	60	107	353PU1350	●	353HPU1350	●
13.60	+0.025/+0.007	14	43	60	107	353PU1360	●	353HPU1360	●
13.70	+0.025/+0.007	14	43	60	107	353PU1370	●	353HPU1370	●
13.80	+0.025/+0.007	14	43	60	107	353PU1380	●	353HPU1380	●
13.90	+0.025/+0.007	14	43	60	107	353PU1390	●	353HPU1390	●
14.00	+0.025/+0.007	14	43	60	107	353PU1400	●	353HPU1400	●
14.10	+0.025/+0.007	16	45	65	115	353PU1410	●	353HPU1410	●
14.20	+0.025/+0.007	16	45	65	115	353PU1420	●	353HPU1420	●
14.30	+0.025/+0.007	16	45	65	115	353PU1430	●	353HPU1430	●
14.50	+0.025/+0.007	16	45	65	115	353PU1450	●	353HPU1450	●
14.60	+0.025/+0.007	16	45	65	115	353PU1460	●	353HPU1460	●
14.70	+0.025/+0.007	16	45	65	115	353PU1470	●		

HSS DRILLS

- LFTA
- SUTA
- HSS-HSS/CO

CARBIDE END-MILLS

- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX/MH
- UH/MH

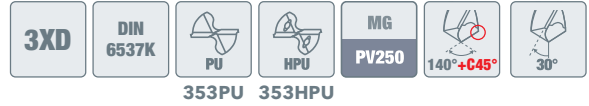
HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

353PU-353HPU

universal application, high productivity



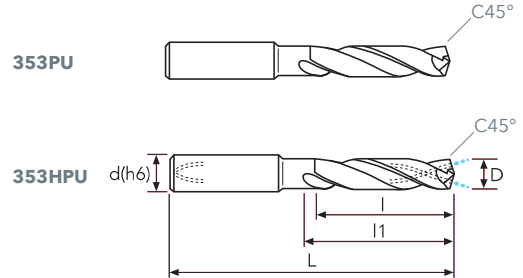
CARBIDE DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH MINI
- HL
- HSD
- C-SD-TA

P	M	K	N	S	H
★	★	★	☆	★	★

★ 1st choice ☆ suitable



D(m7)	D Tol.	d(h6)	l	l1	L	353PU		353HPU	
						EDP No.	Stock	EDP No.	Stock
14.80	+0.025/+0.007	16	45	65	115	353PU1480	●	353HPU1480	●
15.00	+0.025/+0.007	16	65	65	115	353PU1500	●	353HPU1500	●
15.10	+0.025/+0.007	16	65	65	115	353PU1510	●	353HPU1510	●
15.20	+0.025/+0.007	16	65	65	115	353PU1520	●	353HPU1520	●
15.30	+0.025/+0.007	16	65	65	115	353PU1530	●	353HPU1530	●
15.50	+0.025/+0.007	16	65	65	115	353PU1550	●	353HPU1550	●
15.60	+0.025/+0.007	16	65	65	115	353PU1560	●	353HPU1560	●
15.70	+0.025/+0.007	16	65	65	115	353PU1570	●	353HPU1570	●
15.80	+0.025/+0.007	16	65	65	115	353PU1580	●	353HPU1580	●
16.00	+0.025/+0.007	16	65	65	115	353PU1600	●	353HPU1600	●
16.10	+0.025/+0.007	18	73	73	123			353HPU1610	●
16.20	+0.025/+0.007	18	73	73	123			353HPU1620	●
16.30	+0.025/+0.007	18	73	73	123			353HPU1630	●
16.50	+0.025/+0.007	18	73	73	123	353PU1650	●	353HPU1650	●
16.70	+0.025/+0.007	18	73	73	123			353HPU1670	●
16.80	+0.025/+0.007	18	73	73	123			353HPU1680	●
17.00	+0.025/+0.007	18	73	73	123	353PU1700	●	353HPU1700	●
17.10	+0.025/+0.007	18	73	73	123			353HPU1710	●
17.20	+0.025/+0.007	18	73	73	123			353HPU1720	●
17.50	+0.025/+0.007	18	73	73	123	353PU1750	●	353HPU1750	●
17.60	+0.025/+0.007	18	73	73	123			353HPU1760	●
17.70	+0.025/+0.007	18	73	73	123			353HPU1770	●
17.80	+0.025/+0.007	18	73	73	123			353HPU1780	●
18.00	+0.025/+0.007	18	73	73	123	353PU1800	●	353HPU1800	●
18.10	+0.029/+0.008	20	79	79	131			353HPU1810	●
18.20	+0.029/+0.008	20	79	79	131			353HPU1820	●
18.30	+0.029/+0.008	20	79	79	131			353HPU1830	●
18.50	+0.029/+0.008	20	79	79	131	353PU1850	●	353HPU1850	●
18.60	+0.029/+0.008	20	79	79	131			353HPU1860	●
18.70	+0.029/+0.008	20	79	79	131			353HPU1870	●
18.80	+0.029/+0.008	20	79	79	131			353HPU1880	●
19.00	+0.029/+0.008	20	79	79	131	353PU1900	●	353HPU1900	●
19.20	+0.029/+0.008	20	79	79	131			353HPU1920	●
19.30	+0.029/+0.008	20	79	79	131			353HPU1930	●
19.50	+0.029/+0.008	20	79	79	131	353PU1950	●	353HPU1950	●
19.60	+0.029/+0.008	20	79	79	131			353HPU1960	●
19.80	+0.029/+0.008	20	79	79	131			353HPU1980	●
20.00	+0.029/+0.008	20	79	79	131	353PU2000	●	353HPU2000	●

● stock standard ○ non-standard stock ▽ stock exhaustion

CUTTING PARAMETERS

INFO

353PU

	Material Group ISO 513	P1 P2	P3 P4	P5	P6	P7	P8
	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	60÷85	50÷65	35÷50	20÷30
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)
3	0.120	0.108	0.096	0.084	0.074	0.044	
4	0.142	0.128	0.114	0.099	0.087	0.052	
5	0.164	0.147	0.131	0.115	0.101	0.061	
6	0.186	0.167	0.149	0.130	0.120	0.072	
7	0.208	0.187	0.166	0.145	0.134	0.081	
8	0.229	0.206	0.184	0.161	0.148	0.089	
9	0.251	0.226	0.201	0.176	0.162	0.097	
10	0.273	0.246	0.219	0.191	0.177	0.106	
11	0.284	0.256	0.227	0.199	0.184	0.110	
12	0.306	0.275	0.245	0.214	0.198	0.119	
13	0.328	0.295	0.262	0.229	0.212	0.127	
14	0.350	0.315	0.280	0.245	0.226	0.136	
15	0.371	0.334	0.297	0.260	0.240	0.144	
16	0.393	0.354	0.315	0.275	0.246	0.147	
17	0.404	0.364	0.323	0.283	0.249	0.149	
18	0.415	0.374	0.332	0.291	0.256	0.153	
19	0.426	0.383	0.341	0.298	0.262	0.157	
20	0.437	0.393	0.350	0.306	0.269	0.161	

CARBIDE DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

353HPU

	Material Group ISO 513	P1 P2	P3 P4	P5	P6	P7	P8
	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)	120÷160	100÷140	70÷100	60÷80	50÷70	25÷40
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)
3	0.127	0.114	0.101	0.089	0.082	0.049	
4	0.150	0.135	0.120	0.105	0.097	0.058	
5	0.173	0.155	0.138	0.121	0.112	0.067	
6	0.196	0.176	0.156	0.137	0.133	0.080	
7	0.219	0.197	0.175	0.153	0.149	0.089	
8	0.242	0.217	0.193	0.169	0.165	0.099	
9	0.265	0.238	0.212	0.185	0.181	0.108	
10	0.288	0.259	0.230	0.201	0.196	0.118	
11	0.299	0.269	0.239	0.209	0.204	0.122	
12	0.322	0.290	0.258	0.225	0.220	0.132	
13	0.345	0.311	0.276	0.242	0.235	0.141	
14	0.368	0.331	0.294	0.258	0.251	0.151	
15	0.391	0.352	0.313	0.274	0.267	0.160	
16	0.414	0.373	0.331	0.290	0.273	0.163	
17	0.426	0.383	0.340	0.298	0.277	0.166	
18	0.437	0.393	0.350	0.306	0.284	0.170	
19	0.449	0.404	0.359	0.314	0.292	0.175	
20	0.460	0.414	0.368	0.322	0.299	0.179	

CARBIDE END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS

INFO

353PU

CARBIDE DRILLS

PU-HPU

TA-4HTA

SUH

ALH

HRC

SUH MINI

HL

HSD

C-SD-TA



Material Group ISO 513	M1	M2	M3			
Hardness/Rm	<750 N/mm ²	550÷850 N/mm ²	650÷950 N/mm ²			
Vc (m/min)	35÷50	30÷45	20÷35			
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)			
3	0.067	0.053	0.047			
4	0.079	0.063	0.055			
5	0.101	0.081	0.064			
6	0.114	0.091	0.072			
7	0.128	0.102	0.081			
8	0.141	0.113	0.089			
9	0.155	0.124	0.097			
10	0.168	0.135	0.106			
11	0.175	0.140	0.110			
12	0.188	0.151	0.119			
13	0.202	0.161	0.127			
14	0.215	0.172	0.136			
15	0.229	0.183	0.144			
16	0.242	0.194	0.153			
17	0.249	0.199	0.157			
18	0.256	0.205	0.161			
19	0.262	0.210	0.165			
20	0.269	0.215	0.170			

HSS DRILLS

353HPU

LFTA

SUTA

HSS-HSS/CO

CARBIDE END-MILLS

G2

MDTA

HF VH/UP

MEF

ALU

MEX/MH

UH/MH



Material Group ISO 513	M1	M2	M3			
Hardness/Rm	<750 N/mm ²	550÷850 N/mm ²	650÷950 N/mm ²			
Vc (m/min)	50÷70	40÷60	30÷45			
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)			
3	0.074	0.059	0.052			
4	0.087	0.070	0.061			
5	0.112	0.090	0.071			
6	0.127	0.102	0.080			
7	0.142	0.114	0.089			
8	0.157	0.126	0.099			
9	0.172	0.138	0.108			
10	0.187	0.150	0.118			
11	0.194	0.155	0.122			
12	0.209	0.167	0.132			
13	0.224	0.179	0.141			
14	0.239	0.191	0.151			
15	0.254	0.203	0.160			
16	0.269	0.215	0.170			
17	0.277	0.221	0.174			
18	0.284	0.227	0.179			
19	0.292	0.233	0.184			
20	0.299	0.239	0.188			

HSS END-MILLS

CARBIDE BURRS



CUTTING PARAMETERS

INFO

353PU

	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)	110÷150	90÷120	60÷80	40÷60		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
	3	0.120	0.108	0.096	0.084		
4	0.142	0.128	0.114	0.099			
5	0.164	0.147	0.131	0.115			
6	0.186	0.167	0.149	0.130			
7	0.208	0.187	0.166	0.145			
8	0.229	0.206	0.184	0.161			
9	0.251	0.226	0.201	0.176			
10	0.273	0.246	0.219	0.191			
11	0.284	0.256	0.227	0.199			
12	0.306	0.275	0.245	0.214			
13	0.328	0.295	0.262	0.229			
14	0.350	0.315	0.280	0.245			
15	0.371	0.334	0.297	0.260			
16	0.393	0.354	0.315	0.275			
17	0.404	0.364	0.323	0.283			
18	0.415	0.374	0.332	0.291			
19	0.426	0.383	0.341	0.298			
20	0.437	0.393	0.350	0.306			

CARBIDE DRILLS

PU-HPU

TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

353HPU

	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)	120÷160	100÷140	80÷100	60÷80		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
	3	0.127	0.114	0.101	0.089		
4	0.150	0.135	0.120	0.105			
5	0.173	0.155	0.138	0.121			
6	0.196	0.176	0.156	0.137			
7	0.219	0.197	0.175	0.153			
8	0.242	0.217	0.193	0.169			
9	0.265	0.238	0.212	0.185			
10	0.288	0.259	0.230	0.201			
11	0.299	0.269	0.239	0.209			
12	0.322	0.290	0.258	0.225			
13	0.345	0.311	0.276	0.242			
14	0.368	0.331	0.294	0.258			
15	0.391	0.352	0.313	0.274			
16	0.414	0.373	0.331	0.290			
17	0.426	0.383	0.340	0.298			
18	0.437	0.393	0.350	0.306			
19	0.449	0.404	0.359	0.314			
20	0.460	0.414	0.368	0.322			

CARBIDE END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS

INFO

353PU

CARBIDE DRILLS

PU-HPU

TA-4HTA

SUH

ALH

HRC

SUH MINI

HL

HSD

C-SD-TA



Material Group ISO 513	N1	N2	N3	N4		
Hardness/Rm	> 5%Si					
Vc (m/min)	220+260	200+240	160+200	160+200		
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.144	0.132	0.120	0.120		
4	0.170	0.156	0.142	0.142		
5	0.197	0.180	0.164	0.164		
6	0.223	0.204	0.186	0.186		
7	0.249	0.228	0.208	0.208		
8	0.275	0.252	0.229	0.229		
9	0.302	0.276	0.251	0.251		
10	0.328	0.300	0.273	0.273		
11	0.341	0.312	0.284	0.284		
12	0.367	0.336	0.306	0.306		
13	0.393	0.361	0.328	0.328		
14	0.420	0.385	0.350	0.350		
15	0.446	0.409	0.371	0.371		
16	0.472	0.433	0.393	0.393		
17	0.485	0.445	0.404	0.404		
18	0.498	0.457	0.415	0.415		
19	0.511	0.469	0.426	0.426		
20	0.524	0.481	0.437	0.437		

HSS DRILLS

353HPU

LFTA

SUTA

HSS-HSS/CO

CARBIDE END-MILLS

G2

MDTA

HF VH/UP

MEF

ALU

MEX/MH

UH/MH



Material Group ISO 513	N1	N2	N3	N4		
Hardness/Rm	> 5%Si					
Vc (m/min)	260+300	220+260	180+220	180+220		
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.152	0.139	0.127	0.127		
4	0.179	0.164	0.150	0.150		
5	0.207	0.190	0.173	0.173		
6	0.235	0.215	0.196	0.196		
7	0.262	0.240	0.219	0.219		
8	0.290	0.266	0.242	0.242		
9	0.317	0.291	0.265	0.265		
10	0.345	0.316	0.288	0.288		
11	0.359	0.329	0.299	0.299		
12	0.386	0.354	0.322	0.322		
13	0.414	0.380	0.345	0.345		
14	0.442	0.405	0.368	0.368		
15	0.469	0.430	0.391	0.391		
16	0.497	0.455	0.414	0.414		
17	0.511	0.468	0.426	0.426		
18	0.524	0.481	0.437	0.437		
19	0.538	0.493	0.449	0.449		
20	0.552	0.506	0.460	0.460		

HSS END-MILLS

CARBIDE BURRS

CUTTING PARAMETERS

INFO

353PU

	Material Group ISO 513	S1 S2	S3	S4	S5		
	Hardness/Rm	<35 HRC	35÷45 HRC				
	Vc (m/min)	15÷25	10÷20	20÷30	15÷25		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.054	0.049	0.037	0.031			
4	0.064	0.058	0.043	0.037			
5	0.074	0.066	0.050	0.042			
6	0.084	0.075	0.057	0.048			
7	0.093	0.084	0.064	0.053			
8	0.103	0.093	0.070	0.059			
9	0.113	0.102	0.077	0.065			
10	0.123	0.111	0.084	0.070			
11	0.128	0.115	0.087	0.073			
12	0.138	0.124	0.094	0.079			
13	0.147	0.133	0.100	0.084			
14	0.157	0.142	0.107	0.090			
15	0.167	0.150	0.114	0.096			
16	0.177	0.159	0.120	0.101			
17	0.182	0.164	0.124	0.104			
18	0.187	0.168	0.127	0.107			
19	0.192	0.173	0.130	0.110			
20	0.197	0.177	0.134	0.113			

CARBIDE DRILLS

PU-HPU

TA-4HTA
SUH
ALH
HRC
SUH-MINI
HL
HSD
C-SD-TA

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

353HPU

	Material Group ISO 513	S1 S2	S3	S4	S5		
	Hardness/Rm	<35 HRC	35÷45 HRC				
	Vc (m/min)	30÷40	25÷35	40÷50	30÷40		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.057	0.054	0.046	0.039			
4	0.067	0.064	0.054	0.046			
5	0.078	0.074	0.063	0.053			
6	0.088	0.084	0.071	0.060			
7	0.098	0.093	0.079	0.067			
8	0.109	0.103	0.088	0.074			
9	0.119	0.113	0.096	0.081			
10	0.129	0.123	0.104	0.088			
11	0.135	0.128	0.109	0.091			
12	0.145	0.138	0.117	0.099			
13	0.155	0.147	0.125	0.106			
14	0.166	0.157	0.134	0.113			
15	0.176	0.167	0.142	0.120			
16	0.186	0.177	0.150	0.127			
17	0.191	0.182	0.155	0.130			
18	0.197	0.187	0.159	0.134			
19	0.202	0.192	0.163	0.137			
20	0.207	0.197	0.167	0.141			

CARBIDE END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

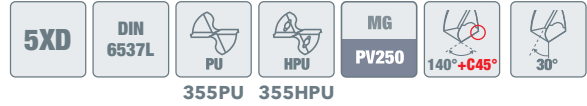
CARBIDE BURRS



INFO

355PU-355HPU

universal application, high productivity



355PU



355HPU

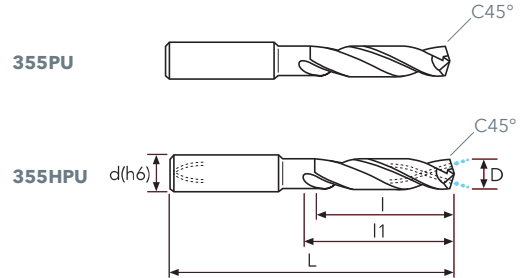
CARBIDE DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH MINI
- HL
- HSD
- C-SD-TA

P	M	K	N	S	H
★	★	★	☆	★	★

★ 1st choice ☆ suitable



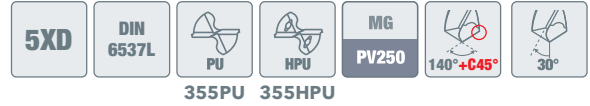
355PU 355HPU

D(m7)	D Tol.	d(h6)	l	l1	L	355PU		355HPU	
						EDP No.	Stock	EDP No.	Stock
3.00	+0.012/+0.002	6	23	28	66	355PU0300	●	355HPU0300	●
3.10	+0.016/+0.004	6	23	28	66	355PU0310	●	355HPU0310	●
3.20	+0.016/+0.004	6	23	28	66	355PU0320	●	355HPU0320	●
3.25	+0.016/+0.004	6	23	28	66			355HPU0325	●
3.30	+0.016/+0.004	6	23	28	66	355PU0330	●	355HPU0330	●
3.40	+0.016/+0.004	6	23	28	66	355PU0340	●	355HPU0340	●
3.50	+0.016/+0.004	6	23	28	66	355PU0350	●	355HPU0350	●
3.60	+0.016/+0.004	6	23	28	66	355PU0360	●	355HPU0360	●
3.70	+0.016/+0.004	6	23	28	66	355PU0370	●	355HPU0370	●
3.80	+0.016/+0.004	6	29	36	74	355PU0380	●	355HPU0380	●
3.90	+0.016/+0.004	6	29	36	74	355PU0390	●	355HPU0390	●
4.00	+0.016/+0.004	6	29	36	74	355PU0400	●	355HPU0400	●
4.10	+0.016/+0.004	6	29	36	74	355PU0410	●	355HPU0410	●
4.20	+0.016/+0.004	6	29	36	74	355PU0420	●	355HPU0420	●
4.30	+0.016/+0.004	6	29	36	74	355PU0430	●	355HPU0430	●
4.40	+0.016/+0.004	6	29	36	74	355PU0440	●	355HPU0440	●
4.50	+0.016/+0.004	6	29	36	74	355PU0450	●	355HPU0450	●
4.60	+0.016/+0.004	6	29	36	74	355PU0460	●	355HPU0460	●
4.65	+0.016/+0.004	6	29	36	74			355HPU0465	●
4.70	+0.016/+0.004	6	29	36	74	355PU0470	●	355HPU0470	●
4.80	+0.016/+0.004	6	35	44	82	355PU0480	●	355HPU0480	●
4.90	+0.016/+0.004	6	35	44	82	355PU0490	●	355HPU0490	●
5.00	+0.016/+0.004	6	35	44	82	355PU0500	●	355HPU0500	●
5.10	+0.016/+0.004	6	35	44	82	355PU0510	●	355HPU0510	●
5.20	+0.016/+0.004	6	35	44	82	355PU0520	●	355HPU0520	●
5.30	+0.016/+0.004	6	35	44	82	355PU0530	●	355HPU0530	●
5.40	+0.016/+0.004	6	35	44	82	355PU0540	●	355HPU0540	●
5.50	+0.016/+0.004	6	35	44	82	355PU0550	●	355HPU0550	●
5.55	+0.016/+0.004	6	35	44	82			355HPU0555	●
5.60	+0.016/+0.004	6	35	44	82	355PU0560	●	355HPU0560	●
5.70	+0.016/+0.004	6	35	44	82	355PU0570	●	355HPU0570	●
5.80	+0.016/+0.004	6	35	44	82	355PU0580	●	355HPU0580	●
5.90	+0.016/+0.004	6	35	44	82	355PU0590	●	355HPU0590	●
6.00	+0.016/+0.004	6	35	44	82	355PU0600	●	355HPU0600	●
6.10	+0.021/+0.006	8	43	53	91	355PU0610	●	355HPU0610	●
6.20	+0.021/+0.006	8	43	53	91	355PU0620	●	355HPU0620	●
6.30	+0.021/+0.006	8	43	53	91	355PU0630	●	355HPU0630	●
6.40	+0.021/+0.006	8	43	53	91	355PU0640	●	355HPU0640	●
6.50	+0.021/+0.006	8	43	53	91	355PU0650	●	355HPU0650	●

● stock standard ○ non-standard stock ▽ stock exhaustion

355PU-355HPU

universal application, high productivity



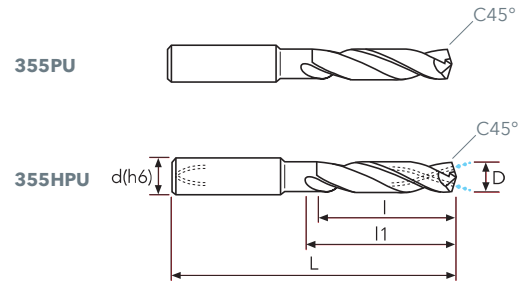
355PU



355HPU

P	M	K	N	S	H
★	★	★	☆	★	

★ 1st choice ☆ suitable



CARBIDE DRILLS

- PU-HPU**
 TA-4HTA
 SUH
 ALH
 HRC
 SUH-MINI
 HL
 HSD
 C-SD-TA

D(m7)	D Tol.	d(h6)	l	l1	L	355PU		355HPU	
						EDP No.	Stock	EDP No.	Stock
6.60	+0.021/+0.006	8	43	53	91	355PU0660	●	355HPU0660	●
6.70	+0.021/+0.006	8	43	53	91	355PU0670	●	355HPU0670	●
6.80	+0.021/+0.006	8	43	53	91	355PU0680	●	355HPU0680	●
6.90	+0.021/+0.006	8	43	53	91	355PU0690	●	355HPU0690	●
7.00	+0.021/+0.006	8	43	53	91	355PU0700	●	355HPU0700	●
7.10	+0.021/+0.006	8	43	53	91	355PU0710	●	355HPU0710	●
7.20	+0.021/+0.006	8	43	53	91	355PU0720	●	355HPU0720	●
7.30	+0.021/+0.006	8	43	53	91	355PU0730	●	355HPU0730	●
7.40	+0.021/+0.006	8	43	53	91	355PU0740	●	355HPU0740	●
7.45	+0.021/+0.006	8	43	53	91			355HPU0745	●
7.50	+0.021/+0.006	8	43	53	91	355PU0750	●	355HPU0750	●
7.60	+0.021/+0.006	8	43	53	91	355PU0760	●	355HPU0760	●
7.70	+0.021/+0.006	8	43	53	91	355PU0770	●	355HPU0770	●
7.80	+0.021/+0.006	8	43	53	91	355PU0780	●	355HPU0780	●
7.90	+0.021/+0.006	8	43	53	91	355PU0790	●	355HPU0790	●
8.00	+0.021/+0.006	8	43	53	91	355PU0800	●	355HPU0800	●
8.10	+0.021/+0.006	10	49	61	103	355PU0810	●	355HPU0810	●
8.20	+0.021/+0.006	10	49	61	103	355PU0820	●	355HPU0820	●
8.30	+0.021/+0.006	10	49	61	103	355PU0830	●	355HPU0830	●
8.40	+0.021/+0.006	10	49	61	103	355PU0840	●	355HPU0840	●
8.50	+0.021/+0.006	10	49	61	103	355PU0850	●	355HPU0850	●
8.60	+0.021/+0.006	10	49	61	103	355PU0860	●	355HPU0860	●
8.70	+0.021/+0.006	10	49	61	103	355PU0870	●	355HPU0870	●
8.80	+0.021/+0.006	10	49	61	103	355PU0880	●	355HPU0880	●
8.90	+0.021/+0.006	10	49	61	103	355PU0890	●	355HPU0890	●
9.00	+0.021/+0.006	10	49	61	103	355PU0900	●	355HPU0900	●
9.10	+0.021/+0.006	10	49	61	103	355PU0910	●	355HPU0910	●
9.20	+0.021/+0.006	10	49	61	103	355PU0920	●	355HPU0920	●
9.25	+0.021/+0.006	10	49	61	103			355HPU0925	●
9.30	+0.021/+0.006	10	49	61	103	355PU0930	●	355HPU0930	●
9.35	+0.021/+0.006	10	49	61	103			355HPU0935	●
9.40	+0.021/+0.006	10	49	61	103	355PU0940	●	355HPU0940	●
9.45	+0.021/+0.006	10	49	61	103			355HPU0945	●
9.50	+0.021/+0.006	10	61	61	103	355PU0950	●	355HPU0950	●
9.60	+0.021/+0.006	10	61	61	103	355PU0960	●	355HPU0960	●
9.70	+0.021/+0.006	10	61	61	103	355PU0970	●	355HPU0970	●
9.80	+0.021/+0.006	10	61	61	103	355PU0980	●	355HPU0980	●
9.90	+0.021/+0.006	10	61	61	103	355PU0990	●	355HPU0990	●
10.00	+0.021/+0.006	10	61	61	103	355PU1000	●	355HPU1000	●

HSS DRILLS

- LFTA
 SUTA
 HSS-HSS/CO

CARBIDE END-MILLS

- G2
 MDTA
 HF VH/UP
 MEF
 ALU
 MEX/MH
 UH/MH

HSS END-MILLS

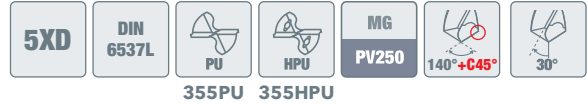
CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

INFO

355PU-355HPU

universal application, high productivity



355PU



355HPU

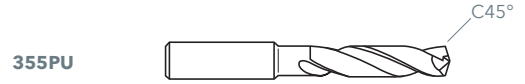
CARBIDE DRILLS

PU-HPU

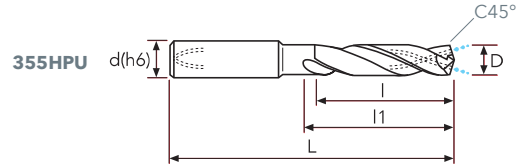
- TA-4HTA
- SUH
- ALH
- HRC
- SUH MINI
- HL
- HSD
- C-SD-TA

P	M	K	N	S	H
★	★	★	☆	★	★

★ 1st choice ☆ suitable



355PU



355HPU

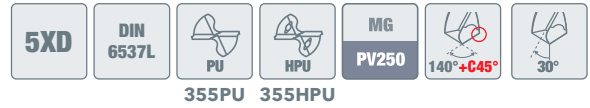
355PU		355HPU	
EDP No.	Stock	EDP No.	Stock

D(m7)	D Tol.	d(h6)	l	l1	L	EDP No.	Stock	EDP No.	Stock
10.10	+0.025/+0.007	12	71	71	118	355PU1010	●	355HPU1010	●
10.20	+0.025/+0.007	12	71	71	118	355PU1020	●	355HPU1020	●
10.30	+0.025/+0.007	12	71	71	118	355PU1030	●	355HPU1030	●
10.40	+0.025/+0.007	12	71	71	118	355PU1040	●	355HPU1040	●
10.50	+0.025/+0.007	12	71	71	118	355PU1050	●	355HPU1050	●
10.60	+0.025/+0.007	12	71	71	118	355PU1060	●	355HPU1060	●
10.70	+0.025/+0.007	12	71	71	118	355PU1070	●	355HPU1070	●
10.80	+0.025/+0.007	12	71	71	118	355PU1080	●	355HPU1080	●
10.90	+0.025/+0.007	12	71	71	118	355PU1090	●	355HPU1090	●
11.00	+0.025/+0.007	12	71	71	118	355PU1100	●	355HPU1100	●
11.10	+0.025/+0.007	12	71	71	118	355PU1110	●	355HPU1110	●
11.20	+0.025/+0.007	12	71	71	118	355PU1120	●	355HPU1120	●
11.25	+0.025/+0.007	12	71	71	118			355HPU1125	●
11.30	+0.025/+0.007	12	71	71	118	355PU1130	●	355HPU1130	●
11.40	+0.025/+0.007	12	71	71	118	355PU1140	●	355HPU1140	●
11.50	+0.025/+0.007	12	71	71	118	355PU1150	●	355HPU1150	●
11.60	+0.025/+0.007	12	71	71	118	355PU1160	●	355HPU1160	●
11.70	+0.025/+0.007	12	71	71	118	355PU1170	●	355HPU1170	●
11.80	+0.025/+0.007	12	71	71	118	355PU1180	●	355HPU1180	●
11.90	+0.025/+0.007	12	71	71	118	355PU1190	●	355HPU1190	●
12.00	+0.025/+0.007	12	71	71	118	355PU1200	●	355HPU1200	●
12.10	+0.025/+0.007	14	77	77	124	355PU1210	●	355HPU1210	●
12.20	+0.025/+0.007	14	77	77	124	355PU1220	●	355HPU1220	●
12.30	+0.025/+0.007	14	77	77	124			355HPU1230	●
12.40	+0.025/+0.007	14	77	77	124			355HPU1240	●
12.50	+0.025/+0.007	14	77	77	124	355PU1250	●	355HPU1250	●
12.60	+0.025/+0.007	14	77	77	124			355HPU1260	●
12.70	+0.025/+0.007	14	77	77	124	355PU1270	●	355HPU1270	●
12.80	+0.025/+0.007	14	77	77	124	355PU1280	●	355HPU1280	●
12.90	+0.025/+0.007	14	77	77	124			355HPU1290	●
13.00	+0.025/+0.007	14	77	77	124	355PU1300	●	355HPU1300	●
13.10	+0.025/+0.007	14	77	77	124	355PU1310	●	355HPU1310	●
13.20	+0.025/+0.007	14	77	77	124	355PU1320	●	355HPU1320	●
13.30	+0.025/+0.007	14	77	77	124	355PU1330	●	355HPU1330	●
13.40	+0.025/+0.007	14	77	77	124			355HPU1340	●
13.50	+0.025/+0.007	14	77	77	124	355PU1350	●	355HPU1350	●
13.60	+0.025/+0.007	14	77	77	124			355HPU1360	●
13.70	+0.025/+0.007	14	77	77	124	355PU1370	●	355HPU1370	●
13.80	+0.025/+0.007	14	77	77	124	355PU1380	●	355HPU1380	●

● stock standard ○ non-standard stock ▽ stock exhaustion

355PU-355HPU

universal application, high productivity



INFO



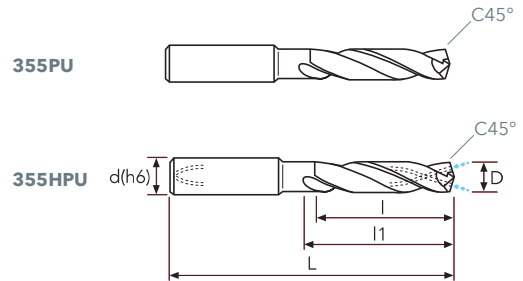
355PU



355HPU

P	M	K	N	S	H
★	★	★	☆	★	

★ 1st choice ☆ suitable



CARBIDE DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH-MINI
- HL
- HSD
- C-SD-TA

D(m7)	D Tol.	d(h6)	l	l1	L	355PU		355HPU	
						EDP No.	Stock	EDP No.	Stock
13.90	+0.025/+0.007	14	77	77	124			355HPU1390	●
14.00	+0.025/+0.007	14	77	77	124	355PU1400	●	355HPU1400	●
14.10	+0.025/+0.007	16	83	83	133			355HPU1410	●
14.20	+0.025/+0.007	16	83	83	133			355HPU1420	●
14.30	+0.025/+0.007	16	83	83	133			355HPU1430	●
14.40	+0.025/+0.007	16	83	83	133			355HPU1440	●
14.50	+0.025/+0.007	16	83	83	133	355PU1450	●	355HPU1450	●
14.60	+0.025/+0.007	16	83	83	133			355HPU1460	●
14.70	+0.025/+0.007	16	83	83	133			355HPU1470	●
14.80	+0.025/+0.007	16	83	83	133			355HPU1480	●
14.90	+0.025/+0.007	16	83	83	133			355HPU1490	●
15.00	+0.025/+0.007	16	83	83	133	355PU1500	●	355HPU1500	●
15.10	+0.025/+0.007	16	83	83	133			355HPU1510	●
15.20	+0.025/+0.007	16	83	83	133			355HPU1520	●
15.30	+0.025/+0.007	16	83	83	133	355PU1530	●	355HPU1530	●
15.40	+0.025/+0.007	16	83	83	133			355HPU1540	●
15.50	+0.025/+0.007	16	83	83	133	355PU1550	●	355HPU1550	●
15.60	+0.025/+0.007	16	83	83	133			355HPU1560	●
15.70	+0.025/+0.007	16	83	83	133			355HPU1570	●
15.80	+0.025/+0.007	16	83	83	133	355PU1580	●	355HPU1580	●
15.90	+0.025/+0.007	16	83	83	133			355HPU1590	●
16.00	+0.025/+0.007	16	83	83	133	355PU1600	●	355HPU1600	●
16.10	+0.025/+0.007	18	93	93	143			355HPU1610	●
16.20	+0.025/+0.007	18	93	93	143			355HPU1620	●
16.30	+0.025/+0.007	18	93	93	143			355HPU1630	●
16.40	+0.025/+0.007	18	93	93	143			355HPU1640	●
16.50	+0.025/+0.007	18	93	93	143	355PU1650	●	355HPU1650	●
16.60	+0.025/+0.007	18	93	93	143			355HPU1660	●
16.70	+0.025/+0.007	18	93	93	143			355HPU1670	●
16.80	+0.025/+0.007	18	93	93	143			355HPU1680	●
16.90	+0.025/+0.007	18	93	93	143			355HPU1690	●
17.00	+0.025/+0.007	18	93	93	143	355PU1700	●	355HPU1700	●
17.10	+0.025/+0.007	18	93	93	143			355HPU1710	●
17.20	+0.025/+0.007	18	93	93	143			355HPU1720	●
17.30	+0.025/+0.007	18	93	93	143			355HPU1730	●
17.40	+0.025/+0.007	18	93	93	143			355HPU1740	●
17.50	+0.025/+0.007	18	93	93	143	355PU1750	●	355HPU1750	●
17.60	+0.025/+0.007	18	93	93	143			355HPU1760	●
17.70	+0.025/+0.007	18	93	93	143			355HPU1770	●

HSS DRILLS

- LFTA
- SUTA
- HSS-HSS/CO

CARBIDE END-MILLS

- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX/MH
- UH/MH

HSS END-MILLS

CARBIDE BURRS

● stock standard ○ non-standard stock ▽ stock exhaustion

INFO

355PU-355HPU

universal application, high productivity

5XD

DIN
6537L

PU

HPU

MG
PV250

140°+C45°

30°

355PU 355HPU



355PU



355HPU

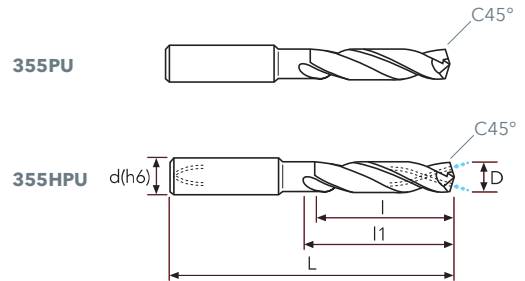
CARBIDE
DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH MINI
- HL
- HSD
- C-SD-TA

P	M	K	N	S	H
★	★	★	☆	★	

★ 1st choice ☆ suitable



D(m7)	D Tol.	d(h6)	l	l1	L	355PU		355HPU	
						EDP No.	Stock	EDP No.	Stock
17.80	+0.025/+0.007	18	93	93	143			355HPU1780	●
17.90	+0.025/+0.007	18	93	93	143			355HPU1790	●
18.00	+0.025/+0.007	18	93	93	143	355PU1800	●	355HPU1800	●
18.10	+0.029/+0.008	20	101	101	153			355HPU1810	●
18.20	+0.029/+0.008	20	101	101	153			355HPU1820	●
18.30	+0.029/+0.008	20	101	101	153			355HPU1830	●
18.40	+0.029/+0.008	20	101	101	153			355HPU1840	●
18.50	+0.029/+0.008	20	101	101	153	355PU1850	●	355HPU1850	●
18.60	+0.029/+0.008	20	101	101	153			355HPU1860	●
18.70	+0.029/+0.008	20	101	101	153			355HPU1870	●
18.80	+0.029/+0.008	20	101	101	153			355HPU1880	●
18.90	+0.029/+0.008	20	101	101	153			355HPU1890	●
19.00	+0.029/+0.008	20	101	101	153	355PU1900	●	355HPU1900	●
19.10	+0.029/+0.008	20	101	101	153			355HPU1910	●
19.20	+0.029/+0.008	20	101	101	153			355HPU1920	●
19.30	+0.029/+0.008	20	101	101	153			355HPU1930	●
19.40	+0.029/+0.008	20	101	101	153			355HPU1940	●
19.50	+0.029/+0.008	20	101	101	153	355PU1950	●	355HPU1950	●
19.60	+0.029/+0.008	20	101	101	153			355HPU1960	●
19.70	+0.029/+0.008	20	101	101	153			355HPU1970	●
19.80	+0.029/+0.008	20	101	101	153			355HPU1980	●
19.90	+0.029/+0.008	20	101	101	153			355HPU1990	●
20.00	+0.029/+0.008	20	101	101	153	355PU2000	●	355HPU2000	●

● stock standard ○ non-standard stock ▽ stock exhaustion

CUTTING PARAMETERS

INFO

355PU

	Material Group ISO 513	P1 P2	P3 P4	P5	P6	P7	P8
	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	60÷85	50÷65	35÷50	20÷30
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)
3	0.114	0.103	0.091	0.080	0.070	0.042	
4	0.135	0.121	0.108	0.094	0.083	0.050	
5	0.156	0.140	0.125	0.109	0.096	0.058	
6	0.176	0.159	0.141	0.124	0.114	0.068	
7	0.197	0.177	0.158	0.138	0.128	0.077	
8	0.218	0.196	0.174	0.153	0.141	0.085	
9	0.239	0.215	0.191	0.167	0.154	0.093	
10	0.259	0.234	0.208	0.182	0.168	0.101	
11	0.270	0.243	0.216	0.189	0.174	0.105	
12	0.291	0.262	0.232	0.203	0.188	0.113	
13	0.311	0.280	0.249	0.218	0.201	0.121	
14	0.332	0.299	0.266	0.232	0.215	0.129	
15	0.353	0.318	0.282	0.247	0.228	0.137	
16	0.374	0.338	0.299	0.262	0.233	0.139	
17	0.384	0.346	0.307	0.269	0.236	0.142	
18	0.394	0.355	0.316	0.276	0.243	0.146	
19	0.405	0.364	0.324	0.283	0.249	0.150	
20	0.415	0.374	0.332	0.291	0.256	0.153	

CARBIDE DRILLS

PU-HPU
TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

355HPU

	Material Group ISO 513	P1 P2	P3 P4	P5	P6	P7	P8
	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)	120÷160	100÷140	70÷100	60÷80	50÷70	25÷40
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)
3	0.120	0.108	0.096	0.084	0.078	0.047	
4	0.142	0.128	0.114	0.099	0.092	0.055	
5	0.164	0.147	0.131	0.115	0.107	0.064	
6	0.186	0.167	0.149	0.130	0.127	0.076	
7	0.208	0.187	0.166	0.145	0.142	0.085	
8	0.229	0.206	0.184	0.161	0.157	0.094	
9	0.251	0.226	0.201	0.176	0.171	0.103	
10	0.273	0.246	0.219	0.191	0.186	0.112	
11	0.284	0.256	0.227	0.199	0.194	0.116	
12	0.306	0.275	0.245	0.214	0.209	0.125	
13	0.328	0.295	0.262	0.229	0.224	0.134	
14	0.350	0.315	0.280	0.245	0.239	0.143	
15	0.371	0.334	0.297	0.260	0.254	0.152	
16	0.393	0.356	0.315	0.275	0.259	0.155	
17	0.404	0.364	0.323	0.283	0.263	0.158	
18	0.415	0.374	0.332	0.291	0.270	0.162	
19	0.426	0.383	0.341	0.298	0.277	0.166	
20	0.437	0.393	0.350	0.306	0.284	0.170	

CARBIDE END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS



INFO

355PU

CARBIDE DRILLS

PU-HPU

TA-4HTA

SUH

ALH

HRC

SUH MINI

HL

HSD

C-SD-TA



Material Group ISO 513	M1	M2	M3			
Hardness/Rm	<750 N/mm ²	550÷850 N/mm ²	650÷950 N/mm ²			
Vc (m/min)	35÷50	30÷45	20÷35			
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)			
3	0.063	0.051	0.044			
4	0.075	0.060	0.052			
5	0.096	0.077	0.060			
6	0.109	0.087	0.068			
7	0.121	0.097	0.077			
8	0.134	0.107	0.085			
9	0.147	0.118	0.093			
10	0.160	0.128	0.101			
11	0.166	0.133	0.105			
12	0.179	0.143	0.113			
13	0.192	0.153	0.121			
14	0.205	0.164	0.129			
15	0.217	0.174	0.137			
16	0.230	0.184	0.145			
17	0.236	0.189	0.149			
18	0.243	0.194	0.153			
19	0.249	0.199	0.157			
20	0.256	0.205	0.161			

HSS DRILLS

355HPU

LFTA

SUTA

HSS-HSS/CO

CARBIDE END-MILLS

G2

MDTA

HF VH/UP

MEF

ALU

MEX/MH

UH/MH



Material Group ISO 513	M1	M2	M3			
Hardness/Rm	<750 N/mm ²	550÷850 N/mm ²	650÷950 N/mm ²			
Vc (m/min)	50÷70	40÷60	30÷45			
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)			
3	0.070	0.056	0.049			
4	0.083	0.066	0.058			
5	0.107	0.085	0.067			
6	0.121	0.097	0.076			
7	0.135	0.108	0.085			
8	0.149	0.119	0.094			
9	0.163	0.131	0.103			
10	0.178	0.142	0.112			
11	0.185	0.148	0.116			
12	0.199	0.159	0.125			
13	0.213	0.170	0.134			
14	0.227	0.182	0.143			
15	0.241	0.193	0.152			
16	0.256	0.205	0.161			
17	0.263	0.210	0.166			
18	0.270	0.216	0.170			
19	0.277	0.222	0.174			
20	0.284	0.227	0.179			

HSS END-MILLS

CARBIDE BURRS

CUTTING PARAMETERS

INFO

355PU

	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)	110÷150	90÷120	60÷80	40÷60		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
	3	0.114	0.103	0.091	0.080		
4	0.135	0.121	0.108	0.094			
5	0.156	0.140	0.125	0.109			
6	0.176	0.159	0.141	0.124			
7	0.197	0.177	0.158	0.138			
8	0.218	0.196	0.174	0.153			
9	0.239	0.215	0.191	0.167			
10	0.259	0.234	0.208	0.182			
11	0.270	0.243	0.216	0.189			
12	0.291	0.262	0.232	0.203			
13	0.311	0.280	0.249	0.218			
14	0.332	0.299	0.266	0.232			
15	0.353	0.318	0.282	0.247			
16	0.374	0.338	0.299	0.262			
17	0.384	0.346	0.307	0.269			
18	0.394	0.355	0.316	0.276			
19	0.405	0.364	0.324	0.283			
20	0.415	0.374	0.332	0.291			

CARBIDE DRILLS

PU-HPU

TA-4HTA
SUH
ALH
HRC
SUH MINI
HL
HSD
C-SD-TA

HSS DRILLS

LFTA
SUTA
HSS-HSS/CO

355HPU

	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)	120÷160	100÷140	80÷100	60÷80		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
	3	0.120	0.108	0.096	0.084		
4	0.142	0.128	0.114	0.099			
5	0.164	0.147	0.131	0.115			
6	0.186	0.167	0.149	0.130			
7	0.208	0.187	0.166	0.145			
8	0.229	0.206	0.184	0.161			
9	0.251	0.226	0.201	0.176			
10	0.273	0.246	0.219	0.191			
11	0.284	0.256	0.227	0.199			
12	0.306	0.275	0.245	0.214			
13	0.328	0.295	0.262	0.229			
14	0.350	0.315	0.280	0.245			
15	0.371	0.334	0.297	0.260			
16	0.393	0.356	0.315	0.275			
17	0.404	0.364	0.323	0.283			
18	0.415	0.374	0.332	0.291			
19	0.426	0.383	0.341	0.298			
20	0.437	0.393	0.350	0.306			

CARBIDE END-MILLS

G2
MDTA
HF VH/UP
MEF
ALU
MEX/MH
UH/MH

HSS END-MILLS

CARBIDE BURRS



INFO

355PU

CARBIDE DRILLS

PU-HPU

TA-4HTA

SUH

ALH

HRC

SUH MINI

HL

HSD

C-SD-TA



Material Group ISO 513	N1	N2	N3	N4		
Hardness/Rm	> 5%Si					
Vc (m/min)	220±260	200±240	160±200	160±200		
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.137	0.126	0.114	0.114		
4	0.162	0.148	0.135	0.135		
5	0.187	0.171	0.156	0.156		
6	0.212	0.194	0.176	0.176		
7	0.237	0.217	0.197	0.197		
8	0.262	0.240	0.218	0.218		
9	0.286	0.263	0.239	0.239		
10	0.311	0.285	0.259	0.259		
11	0.324	0.297	0.270	0.270		
12	0.349	0.320	0.291	0.291		
13	0.374	0.342	0.311	0.311		
14	0.399	0.365	0.332	0.332		
15	0.423	0.388	0.353	0.353		
16	0.448	0.411	0.374	0.374		
17	0.461	0.422	0.384	0.384		
18	0.473	0.434	0.394	0.394		
19	0.486	0.445	0.405	0.405		
20	0.498	0.457	0.415	0.415		

HSS DRILLS

355HPU

LFTA

SUTA

HSS-HSS/CO

CARBIDE END-MILLS

G2

MDTA

HF VH/UP

MEF

ALU

MEX/MH

UH/MH



Material Group ISO 513	N1	N2	N3	N4		
Hardness/Rm	> 5%Si					
Vc (m/min)	260±300	220±260	180±220	180±220		
D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.144	0.132	0.120	0.120		
4	0.170	0.156	0.142	0.142		
5	0.197	0.180	0.164	0.164		
6	0.223	0.204	0.186	0.186		
7	0.249	0.228	0.208	0.208		
8	0.275	0.252	0.229	0.229		
9	0.302	0.276	0.251	0.251		
10	0.328	0.300	0.273	0.273		
11	0.341	0.312	0.284	0.284		
12	0.367	0.336	0.306	0.306		
13	0.393	0.361	0.328	0.328		
14	0.420	0.385	0.350	0.350		
15	0.446	0.409	0.371	0.371		
16	0.472	0.433	0.393	0.393		
17	0.485	0.445	0.404	0.404		
18	0.498	0.457	0.415	0.415		
19	0.511	0.469	0.426	0.426		
20	0.524	0.481	0.437	0.437		

HSS END-MILLS

CARBIDE BURRS

CUTTING PARAMETERS

INFO

355PU

	Material Group ISO 513	S1 S2	S3	S4	S5		
	Hardness/Rm	<35 HRC	35÷45 HRC				
	Vc (m/min)	15÷25	10÷20	20÷30	15÷25		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.051	0.044	0.035	0.029			
4	0.061	0.052	0.041	0.035			
5	0.070	0.060	0.048	0.040			
6	0.079	0.068	0.054	0.045			
7	0.089	0.076	0.060	0.051			
8	0.098	0.084	0.067	0.056			
9	0.107	0.092	0.073	0.062			
10	0.117	0.100	0.079	0.067			
11	0.121	0.104	0.083	0.070			
12	0.131	0.112	0.089	0.075			
13	0.140	0.120	0.095	0.080			
14	0.149	0.128	0.102	0.086			
15	0.159	0.136	0.108	0.091			
16	0.168	0.144	0.114	0.096			
17	0.173	0.148	0.118	0.099			
18	0.177	0.152	0.121	0.102			
19	0.182	0.156	0.124	0.104			
20	0.187	0.160	0.127	0.107			

CARBIDE DRILLS

PU-HPU

- TA-4HTA
- SUH
- ALH
- HRC
- SUH-MINI
- HL
- HSD
- C-SD-TA

HSS DRILLS

- LFTA
- SUTA
- HSS-HSS/CO

355HPU

	Material Group ISO 513	S1 S2	S3	S4	S5		
	Hardness/Rm	<35 HRC	35÷45 HRC				
	Vc (m/min)	30÷40	25÷35	40÷50	30÷40		
	D (mm)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)	fn (mm/rev)		
3	0.054	0.049	0.044	0.037			
4	0.064	0.058	0.052	0.043			
5	0.074	0.067	0.060	0.050			
6	0.084	0.075	0.067	0.057			
7	0.093	0.084	0.075	0.064			
8	0.103	0.093	0.083	0.070			
9	0.113	0.102	0.091	0.077			
10	0.123	0.111	0.099	0.084			
11	0.128	0.115	0.103	0.087			
12	0.138	0.124	0.111	0.094			
13	0.147	0.133	0.119	0.100			
14	0.157	0.142	0.127	0.107			
15	0.167	0.151	0.135	0.114			
16	0.177	0.160	0.143	0.120			
17	0.182	0.164	0.147	0.124			
18	0.187	0.169	0.151	0.127			
19	0.192	0.173	0.155	0.130			
20	0.197	0.177	0.159	0.134			

CARBIDE END-MILLS

- G2
- MDTA
- HF VH/UP
- MEF
- ALU
- MEX/MH
- UH/MH

HSS END-MILLS

CARBIDE BURRS

