HSS-E Cobalt Stub Drills (820502,820702)

MATERIAL GROUP	Vc (m/min)	Fn (mm/rev)									
		Ø1.0 - 1.9	Ø2.0 - 2.9	Ø3.0 - 3.9	Ø4.0 - 4.9	Ø5.0 - 5.9	Ø6.0 - 6.9	Ø7.0 - 7.9	Ø8.0 - 9.9	Ø10.0 - 11.9	Ø12.0 - 13.0
P	25 (22-17)	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160
	22 (20-25)	0.009	0.020	0.045	0.050	0.060	0.075	0.095	0.125	0.140	0.150
M	18 (15-20)	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160
K	18 (15-20)	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160
S	10 (8 - 12)	0.080	0.020	0.025	0.031	0.038	0.045	0.060	0.075	0.090	0.100
N	48 (45-50)	0.020	0.038	0.063	0.070	0.076	0.120	0.160	0.180	0.200	0.225

MATERIAL GROUP	Vc (m/min)	Fn (mm/rev)								
		Ø14.0 - 15.5	Ø16.0 - 17.5	Ø18.0 - 19.5	Ø20.0 - 21.5	Ø22.0 - 23.5	Ø24.0 - 25.5	Ø26.0 - 27.5	Ø28.0 - 29.5	Ø30.0 - 31.0
P	25 (22-17)	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280
	22 (20-25)	0.170	0.210	0.220	0.230	0.240	0.250	0.260	0.265	0.270
M	18 (15-20)	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280
K	18 (15-20)	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280
S	10 (8 - 12)	0.110	0.120	0.130	0.140	0.150	0.160	0.170	0.175	0.180
N	48 (45-50)	0.250	0.275	0.300	0.325	0.350	0.360	0.370	0.375	0.380

Key	
Vc	Cutting speed (m/min)
n	RPM (rev/min)
Fz	Feed rate (mm/tooth)
f	Feed rate (mm/rev)
HRc	Hardness of metal

To calculate RPM from cutting speed: $n = \frac{V_c \cdot 1000}{\pi \cdot \varnothing}$

To calculate cutting speed from RPM: $V_c = \frac{n \cdot \pi \cdot \varnothing}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.