

E452 Series Cutting Data

2 Flute Carbide Slot Drill Cutting Data

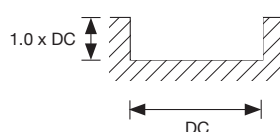


STÄRKE

eco
MILL

The feed rate for long, long reach and uncoated tools should be reduced by up to 50%

E452 SERIES														
VDI Material Group		HRc		Size (mm)										
				2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0
P	1-5	Non-Alloy Steel	<25	v_c (m/min)	50	55	65	70	70	70	70	75	75	70
				n	7960	5835	5170	4455	3715	2785	2225	1855	1705	1490
				f_z	0.008	0.015	0.025	0.031	0.039	0.057	0.064	0.064	0.063	0.062
				f (mm/min)	150	175	260	275	290	315	285	240	215	185
	6-9	Low-Alloy Steel	25-35	v_c (m/min)	50	55	65	70	70	70	70	75	75	70
				n	7960	5835	5170	4455	3715	2785	2225	1855	1705	1490
				f_z	0.008	0.015	0.025	0.031	0.039	0.057	0.064	0.064	0.063	0.062
				f (mm/min)	150	175	260	275	290	315	285	240	215	185
M	12-13	Ferritic/ Martensitic Stainless Steel		v_c (m/min)	25	30	35	35	35	35	35	35	35	35
				n	3980	3180	2785	2225	1855	1390	1115	925	795	695
				f_z	0.009	0.016	0.025	0.031	0.04	0.053	0.059	0.058	0.059	0.068
				f (mm/min)	70	100	140	140	150	150	130	105	95	70
K	15-20	Cast Iron		v_c (m/min)	60	55	60	55	55	55	60	55	55	55
				n	9550	5835	4775	3500	2920	2185	1910	1460	1250	1095
				f_z	0.012	0.018	0.024	0.03	0.043	0.063	0.077	0.102	0.119	0.145
				f (mm/min)	230	210	230	210	250	275	295	300	300	315
N	21-24	Aluminium/ Aluminium Alloys		v_c (m/min)	140	145	140	145	145	145	145	140	145	145
				n	22280	15385	11140	9230	7690	5770	4615	3715	3295	2885
				f_z	0.01	0.015	0.021	0.025	0.032	0.043	0.053	0.065	0.073	0.085
				f (mm/min)	445	460	465	460	490	495	490	480	480	490
	26-27	Copper/ Copper Alloys		v_c (m/min)	105	105	110	105	105	110	105	105	105	110
				n	16710	11140	8755	6685	5570	4375	3340	2785	2385	2190
				f_z	0.01	0.015	0.019	0.025	0.033	0.043	0.055	0.066	0.048	0.085
				f (mm/min)	335	335	330	335	365	375	370	365	370	365



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.

v_c - cutting speed (m/min)
 n - RPM (rev/min)
 f_z - feed per tooth (mm)
 f - feed rate (mm/min)
 z - No. of Teeth
 a_p - axial depth of cut
 a_e - radial depth of cut

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

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