Carbide Drill Mill (VOR45-CDM)

ISO Standard	Materials Class	Vc ft/min	Fz inch/tooth Cutting Diameter		
			Ø.12- Ø.16	Ø.20- Ø.24	Ø.31- Ø.47
P	Low & Medium Carbon Steels <0.55%C	165-380	A: .0001-.0004 B: .0001-.0003 C: .0002-.0006	A: .0002-.0008 B: .0002-.0004 C: .0002-.0010	A: .0005-.0015 B: .0003-.0006 C: .0006-.0015
	High Carbon Steels ≥0.55%C	130-330	A: .0001-.0005 B: .0001-.0003 C: .0002-.0007	A: .0002-.0007 B: .0002-.0004 C: .0004-.0011	A: .0004-.0012 B: .0004-.0007 C: .0006-.0019
	Alloy Steels, Treated Steels	130-330	A: .0001-.0003 B: .0001-.0002 C: .0002-.0006	A: .0002-.0006 B: .0002-.0004 C: .0002-.0007	A: .0005-.0012 B: .0002-.0006 C: .0006-.0012
M	Stainless Steel-Free Cutting	100-280	A: .0002-.0005 B: .0001-.0003 C: .0002-.0007	A: .0003-.0007 B: .0002-.0006 C: .0002-.0007	A: .0001-.0019 B: .0001-.0009 C: .0006-.0019
	Stainless Steel-Austenitic	80-230	A: .0002-.0004 B: .0001-.0002 C: .0002-.0006	A: .0002-.0006 B: .0002-.0006 C: .0002-.0007	A: .0005-.0016 B: .0005-.0008 C: .0007-.0014
	Cast Steels	130-295	A: .0002-.0005 B: .0001-.0003 C: .0002-.0007	A: .0003-.0007 B: .0002-.0006 C: .0002-.0007	A: .0006-.0019 B: .0001-.0009 C: .0006-.0019
K	Cast Iron	100-390	A: .0001-.0004 B: .0001-.0003 C: .0002-.0006	A: .0002-.0008 B: .0002-.0004 C: .0002-.0010	A: .0005-.0015 B: .0003-.0006 C: .0006-.0015
N	Aluminum ≤12%Si, Copper	295-390	A: .0002-.0003 B: .0002-.0003 C: .0002-.0003	A: .0004-.0008 B: .0003-.0006 C: .0004-.0008	A: .0010-.0018 B: .0008-.0016 C: .0010-.0018
	Aluminum >12%Si	245-330	A: .0001-.0002 B: .0001-.0002 C: .0001-.0003	A: .0002-.0006 B: .0002-.0004 C: .0002-.0006	A: .0008-.0013 B: .0006-.0014 C: .0008-.0013
	Synthetics, Duroplastics, Thermoplastics	295-390	A: .0002-.0003 B: .0002-.0003 C: .0002-.0003	A: .0004-.0008 B: .0003-.0006 C: .0004-.0008	A: .0010-.0018 B: .0008-.0016 C: .0010-.0018
S	Nickel alloys, Titanium alloys	65-195	A: .0002-.0003 B: .0001-.0003 C: .0001-.0002	A: .0003-.0004 B: .0002-.0003 C: .0002-.0003	A: .0007-.0010 B: .0001-.0008 C: .0005-.0006
H	Hardened Steel 45-50 HRc	65-195	A: .0002-.0004 B: .0002-.0003 C: .0001-.0002	A: .0003-.0006 B: .0003-.0004 C: .0002-.0003	A: .0006-.0012 B: .0004-.0010 C: .0003-.0008

Key	
Vc	Cutting speed (m/min)
n	RPM (rev/min)
Fz	Feed rate (mm/tooth)
f	Feed rate (mm/rev)
z	No. of teeth

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

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

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.