

Twister® HPD Series 5xD

Series HPDSR - HPDCR Recommended Cutting Data - Inch

Recommended Speeds By Material Group			Vc (SFM)	
Material Groups	Material Type		HPDSR	HPDCR
			5 X D Solid	5 X D Through Coolant
Steels	P	Low Carbon	490 - 525 - 560	590 - 625 - 655
		Alloy Steel (≤ 35 Rc)	360 - 395 - 425	425 - 460 - 490
		Alloy Steel (36-45 Rc)	330 - 360 - 395	360 - 395 - 425
		Mold/Tool Steel	200 - 230 - 260	230 - 260 - 295
Stainless Steels	M	Austenitic	130 - 165 - 200	165 - 200 - 230
		Martensitic	100 - 130 - 165	130 - 165 - 200
Cast Irons	K	Gray Cast Iron	590 - 625 - 655	625 - 655 - 690
		Ductile Cast Iron	460 - 490 - 525	490 - 525 - 560

RPM Formula For Inch Drills Only - $RPM = SFM \times 3.82 \div \text{Drill } \varnothing D'$

Recommended Feedrates By Material Group			Drill Diameter (inch)							
Material Groups	Material Type		1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8
			Feed (in/rev)							
Steels	P	Low Carbon	0.0057	0.0071	0.0071	0.0089	0.0112	0.0143	0.0143	0.0178
		Alloy Steel (≤ 35 Rc)								
		Alloy Steel (36-45 Rc)								
		Mold/Tool Steel								
Stainless Steels	M	Austenitic	0.0028	0.0035	0.0035	0.0043	0.0055	0.0071	0.0071	0.0089
		Martensitic								
Cast Irons	K	Gray Cast Iron	0.0061	0.0076	0.0085	0.0120	0.0120	0.0152	0.0171	0.0209
		Ductile Cast Iron								

Feedrate Formula For Inch Drills - $\text{Feed} = RPM \times \text{in/rev}$

Series HPDSR - HPDCR Recommended Cutting Data - Metric

Recommended Speeds By Material Group			Vc (m/min)	
Material Groups	Material Type		HPDSR	HPDCR
			5 X D Solid	5 X D Through Coolant
Steels	P	Low Carbon	150 - 160 - 170	180 - 190 - 200
		Alloy Steel (≤ 35 Rc)	110 - 120 - 130	130 - 140 - 150
		Alloy Steel (36-45 Rc)	100 - 110 - 120	110 - 120 - 130
		Mold/Tool Steel	60 - 70 - 80	70 - 80 - 90
Stainless Steels	M	Austenitic	40 - 50 - 60	50 - 60 - 70
		Martensitic	30 - 40 - 50	40 - 50 - 60
Cast Irons	K	Gray Cast Iron	180 - 190 - 200	190 - 200 - 210
		Ductile Cast Iron	140 - 150 - 160	150 - 160 - 170

RPM Formula For Metric Drills Only - $RPM = (Vc \times 318.0) \div \text{Drill } \varnothing D'$

Recommended Feedrates By Material Group			Drill Diameter (mm)							
Material Groups	Material Type		3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0
			Feed (mm/rev)							
Steels	P	Low Carbon	0.145	0.181	0.181	0.226	0.285	0.362	0.362	0.453
		Alloy Steel (≤ 35 Rc)								
		Alloy Steel (36-45 Rc)								
		Mold/Tool Steel								
Stainless Steels	M	Austenitic	0.070	0.090	0.090	0.110	0.140	0.180	0.180	0.225
		Martensitic								
Cast Irons	K	Gray Cast Iron	0.155	0.193	0.217	0.305	0.305	0.386	0.435	0.532
		Ductile Cast Iron								

Feedrate Formula For Metric Drills - $\text{Feed} = RPM \times \text{mm/rev}$

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.