

## Recommended Cutting Data Series HPDSR & HPDCR 5xD - Inch

Workpiece Material Group	Material Type	HPDSR			HPDCR			
		5xD - Solid			5xD - Through Coolant			
		Low	Mid	High	Low	Mid	High	
		Vc - SFM			Vc - SFM			
Steels	P	Low Carbon Steels ≤180HB	425	<b>490</b>	560	525	<b>590</b>	655
		Med Carbon / Alloy Steels 180-350HB	230	<b>260</b>	295	295	<b>330</b>	360
		Pre-Hardened Steels 35-45HRC	130	<b>165</b>	195	165	<b>195</b>	230
Stainless Steels	M	Martensitic Stainless - 400 Series	260	<b>295</b>	330	295	<b>360</b>	425
		Austenitic Stainless - 300 Series	130	<b>165</b>	195	165	<b>195</b>	230
Cast Irons	K	Grey Cast Iron	295	<b>360</b>	425	395	<b>460</b>	525
		Ductile Cast Iron	130	<b>165</b>	195	195	<b>230</b>	260

RPM Formula For Inch Drills Only -  $RPM = SFM \times 3.82 \div \text{Drill } \varnothing D^1$

Workpiece Material Group	Material Type	Drill Diameter (inch)								
		1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	
		Feed (in/rev)								
Steels	P	Low Carbon Steels ≤180HB								
		Med Carbon / Alloy Steels 180-350HB	.0057	.0071	.0071	.0089	.0112	.0143	.0143	.0178
		Pre-Hardened Steels 35-45HRC								
Stainless Steels	M	Martensitic Stainless - 400 Series	.0028	.0035	.0035	.0043	.0055	.0071	.0071	.0089
		Austenitic Stainless - 300 Series								
Cast Irons	K	Grey Cast Iron	.0061	.0076	.0085	.0120	.0120	.0152	.0171	.0209
		Ductile Cast Iron								

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

## Recommended Cutting Data Series HPDSR & HPDCR 5xD - Metric

Workpiece Material Group	Material Type	HPDSR			HPDCR			
		5xD - Solid			5xD - Through Coolant			
		Low	Mid	High	Low	Mid	High	
		Vc-m/min			Vc-m/min			
Steels	P	Low Carbon Steels ≤180HB	130	<b>150</b>	170	160	<b>180</b>	200
		Med Carbon / Alloy Steels 180-350HB	70	<b>80</b>	90	90	<b>100</b>	110
		Pre-Hardened Steels 35-45HRC	40	<b>50</b>	60	50	<b>60</b>	70
Stainless Steels	M	Martensitic Stainless - 400 Series	80	<b>90</b>	100	90	<b>110</b>	130
		Austenitic Stainless - 300 Series	40	<b>50</b>	60	50	<b>60</b>	70
Cast Irons	K	Grey Cast Iron	90	<b>110</b>	130	120	<b>140</b>	160
		Ductile Cast Iron	40	<b>50</b>	60	60	<b>70</b>	80

RPM Formula For Metric Drills -  $RPM = (Vc \times 318) / \text{Drill } \varnothing D$

Workpiece Material Group	Material Type	Drill Diameter (mm)								
		3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	
		Feed (mm/rev)								
Steels	P	Low Carbon Steels ≤180HB								
		Med Carbon / Alloy Steels 180-350HB	0.145	0.181	0.181	0.226	0.285	0.362	0.362	0.453
		Pre-Hardened Steels 35-45HRC								
Stainless Steels	M	Martensitic Stainless - 400 Series	0.07	0.09	0.09	0.11	0.14	0.18	0.18	0.225
		Austenitic Stainless - 300 Series								
Cast Irons	K	Grey 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.