

CYCLONE CXDCL Series Recommended Cutting Data - Inch 8xD, Coolant-Fed Drilling

Material Group	I S O	Hardness	Vc - SFM			Drill Diameter (inch)			
						1/8	3/16	1/4	5/16
			Low	Mid	High	Feed (in/rev)			
Low Carbon Steels 12L14, 1018, A36	P	≤ 180 HB	400	500	600	.0031 - .0044	.0047 - .0066	.0063 - .0088	.0078 - .0109
Med Carbon / Alloy Steels 1045, 1050, 4140, 4340		≤ 38 HRC	290	360	430	.0031 - .0044	.0047 - .0066	.0063 - .0088	.0078 - .0109
Die / Tool Steels A2, D2, H13, P20		≤ 45 HRC	150	190	230	.0019 - .0031	.0028 - .0047	.0038 - .0063	.0047 - .0078
Ferritic / Martensitic Stainless 400 Series	M	≤ 28 HRC	280	350	420	.0025 - .0038	.0038 - .0056	.0050 - .0075	.0063 - .0094
Austenitic Stainless 300 Series			170	210	250	.0025 - .0038	.0038 - .0056	.0050 - .0075	.0063 - .0094
PH Stainless 15-5 PH, 17-4 PH, 17-7 PH		≤ 45 HRC	120	150	180	.0019 - .0031	.0028 - .0047	.0038 - .0063	.0047 - .0078
High Temp Alloys Inconel, Hastelloy, Monel	S	≤ 42 HRC	60	75	90	.0013 - .0019	.0019 - .0028	.0025 - .0038	.0031 - .0047
Titanium Alloys 6Al-4V			120	150	180	.0019 - .0025	.0028 - .0038	.0038 - .0050	.0047 - .0063
Cast Iron - Gray	K	≤ 240 HB	360	450	540	.0038 - .0050	.0056 - .0075	.0075 - .0100	.0094 - .0125
Cast Iron - Ductile & Malleable		> 240 HB	240	300	360	.0031 - .0044	.0047 - .0066	.0063 - .0088	.0078 - .0109

Material Group	I S O	Hardness	Vc - SFM			Drill Diameter (inch)		
						3/8	1/2	5/8
			Low	Mid	High	Feed (in/rev)		
Low Carbon Steels 12L14, 1018, A36	P	≤ 180 HB	400	500	600	.0094 - .0131	.0125 - .0175	.0156 - .0219
Med Carbon / Alloy Steels 1045, 1050, 4140, 4340		≤ 38 HRC	290	360	430	.0094 - .0131	.0125 - .0175	.0156 - .0219
Die / Tool Steels A2, D2, H13, P20		≤ 45 HRC	150	190	230	.0056 - .0094	.0075 - .0125	.0094 - .0156
Ferritic / Martensitic Stainless 400 Series	M	≤ 28 HRC	280	350	420	.0075 - .0113	.0100 - .0150	.0125 - .0188
Austenitic Stainless 300 Series			170	210	250	.0075 - .0113	.0100 - .0150	.0125 - .0188
PH Stainless 15-5 PH, 17-4 PH, 17-7 PH		≤ 45 HRC	120	150	180	.0056 - .0094	.0075 - .0125	.0094 - .0156
High Temp Alloys Inconel, Hastelloy, Monel	S	≤ 42 HRC	60	75	90	.0038 - .0056	.0050 - .0075	.0063 - .0094
Titanium Alloys 6Al-4V			120	150	180	.0056 - .0075	.0075 - .0100	.0094 - .0125
Cast Iron - Gray	K	≤ 240 HB	360	450	540	.0113 - .0150	.0150 - .0200	.0188 - .0250
Cast Iron - Ductile & Malleable		> 240 HB	240	300	360	.0094 - .0131	.0125 - .0175	.0156 - .0219

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



CXDCL Series Recommended Cutting Data - Metric 8xD, Coolant-Fed Drilling

Material Group	I S O	Hardness	Vc - M/Min			Drill Diameter (mm)			
						3	5	6	8
			Low	Mid	High	Feed (mm/rev)			
Low Carbon Steels 12L14, 1018, A36	P	≤ 180 HB	120	150	180	0.075 - 0.105	0.125 - 0.175	0.150 - 0.210	0.200 - 0.280
Med Carbon / Alloy Steels 1045, 1050, 4140, 4340		≤ 38 HRC	90	110	130	0.075 - 0.105	0.125 - 0.175	0.150 - 0.210	0.200 - 0.280
Die / Tool Steels A2, D2, H13, P20		≤ 45 HRC	50	60	70	0.045 - 0.075	0.075 - 0.125	0.090 - 0.150	0.120 - 0.200
Ferritic / Martensitic Stainless 400 Series	M	≤ 28 HRC	85	105	125	0.060 - 0.090	0.100 - 0.150	0.120 - 0.180	0.160 - 0.240
Austenitic Stainless 300 Series			50	65	80	0.060 - 0.090	0.100 - 0.150	0.120 - 0.180	0.160 - 0.240
PH Stainless 15-5 PH, 17-4 PH, 17-7 PH		≤ 45 HRC	35	45	55	0.045 - 0.075	0.075 - 0.125	0.090 - 0.150	0.120 - 0.200
High Temp Alloys Inconel, Hastelloy, Monel	S	≤ 42 HRC	20	25	30	0.030 - 0.045	0.050 - 0.075	0.060 - 0.090	0.080 - 0.120
Titanium Alloys 6Al-4V			35	45	55	0.045 - 0.060	0.075 - 0.100	0.090 - 0.120	0.120 - 0.160
Cast Iron - Gray	K	≤ 240 HB	110	135	160	0.090 - 0.120	0.150 - 0.200	0.180 - 0.240	0.240 - 0.320
Cast Iron - Ductile & Malleable		> 240 HB	70	90	110	0.075 - 0.105	0.125 - 0.175	0.150 - 0.210	0.200 - 0.280

Material Group	I S O	Hardness	Vc - M/Min			Drill Diameter (mm)		
						10	12	16
			Low	Mid	High	Feed (mm/rev)		
Low Carbon Steels 12L14, 1018, A36	P	≤ 180 HB	120	150	180	0.250 - 0.350	0.300 - 0.420	0.400 - 0.560
Med Carbon / Alloy Steels 1045, 1050, 4140, 4340		≤ 38 HRC	90	110	130	0.250 - 0.350	0.300 - 0.420	0.400 - 0.560
Die / Tool Steels A2, D2, H13, P20		≤ 45 HRC	50	60	70	0.150 - 0.250	0.180 - 0.300	0.240 - 0.400
Ferritic / Martensitic Stainless 400 Series	M	≤ 28 HRC	85	105	125	0.200 - 0.300	0.240 - 0.360	0.320 - 0.480
Austenitic Stainless 300 Series			50	65	80	0.200 - 0.300	0.240 - 0.360	0.320 - 0.480
PH Stainless 15-5 PH, 17-4 PH, 17-7 PH		≤ 45 HRC	35	45	55	0.150 - 0.250	0.180 - 0.300	0.240 - 0.400
High Temp Alloys Inconel, Hastelloy, Monel	S	≤ 42 HRC	20	25	30	0.100 - 0.150	0.120 - 0.180	0.160 - 0.240
Titanium Alloys 6Al-4V			35	45	55	0.150 - 0.200	0.180 - 0.240	0.240 - 0.320
Cast Iron - Gray	K	≤ 240 HB	110	135	160	0.300 - 0.400	0.360 - 0.480	0.480 - 0.640
Cast Iron - Ductile & Malleable		> 240 HB	70	90	110	0.250 - 0.350	0.300 - 0.420	0.400 - 0.560

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