



Micro-Drills 130° Point, 35° Helix

Technical Information



- RedLine Hole Shot High Performance Drills are designed to give optimal performance in a wide range of materials. Our 130° point is designed to reduce thrust and our flute design stabilizes our drills for better positioning and for a more accurate hole.
- High Performance Micro-Drills found on pages 226-229.

Micro-Drills, Solid Carbide, 130° Point Speeds & Feeds

Material	Grades	Tool Diameter in Decimal																									
		(.0080)		(.0100)		(.0200)		(.0310)		(.0390)		(.0490)		(.0590)		(.0690)		(.0790)		(.0890)		(.0980)		(.1080)		(.1180)	
		RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR	RPM	IPR
P - Steels																											
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, O1	80000	.0002	69970	.0004	34990	.0004	21870	.0008	17490	.0010	13990	.0014	11660	.0015	10000	.0015	8750	.0015	7770	.0015	7000	.0015	6360	.0015	5830	.0015
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310	80000	.0002	80000	.0004	57520	.0004	35780	.0008	28630	.0010	22900	.0014	19080	.0015	16360	.0015	14310	.0015	12720	.0015	11450	.0015	10410	.0015	9540	.0015
Medium Carbon	1040-1095, 1140-1151, 1330-1345, 1520-1572, 4023-4063, 4120-4161, 4330-4340, 4620-4640, 8620-8660, 8740-8750, 6150, 51000, 52100	80000	.0002	80000	.0004	44530	.0004	27830	.0008	22260	.0010	17810	.0014	14840	.0015	12720	.0015	11130	.0015	9900	.0015	8910	.0015	8100	.0015	7420	.0015
M - Stainless Steels																											
Austenitic	301-304L, 310, 316L, 321, 347	80000	.0002	76330	.0003	38170	.0003	23850	.0006	19080	.0008	15270	.0010	12720	.0015	10900	.0015	9540	.0015	8480	.0015	7630	.0015	6940	.0015	6360	.0015
Martensitic	403, 410, 416, 420, 430, 431, 440	47710	.0002	38170	.0004	19080	.0004	11930	.0008	9540	.0010	7630	.0014	6360	.0015	5450	.0015	4770	.0015	4240	.0015	3820	.0015	3470	.0015	3180	.0015
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363 PH13-8MO, PH14-8/MO	39760	.0002	31810	.0004	15900	.0004	9940	.0008	7950	.0010	6360	.0014	5300	.0015	4540	.0015	3980	.0015	3530	.0015	3180	.0015	2890	.0015	2650	.0015
K - Cast Irons																											
Ductile	A536, J434, 60-40-18	80000	.0002	79800	.0004	69270	.0004	44832	.0008	35401	.0010	29635	.0013	23169	.0015	19710	.0015	17551	.0015	15484	.0015	14057	.0015	12598	.0015	11638	.0015
Gray	A48, A436, A319, Class 20, G4000	80000	.0002	80000	.0004	76330	.0004	47710	.0008	38170	.0010	30530	.0014	25440	.0015	21810	.0015	19080	.0015	16960	.0015	15270	.0015	13880	.0015	12720	.0015
Malleable	A220, A602, J158	80000	.0002	80000	.0004	69970	.0004	43730	.0008	34990	.0010	27990	.0014	23320	.0015	19990	.0015	17490	.0015	15550	.0015	13990	.0015	12720	.0015	11660	.0015
N - Non-Ferrous																											
Aluminum Alloys	2014, 2024, 6061, 7075	80000	.0002	80,000	.0004	80,000	.0004	55660	.0008	44530	.0010	35620	.0014	29690	.0015	25440	.0015	22260	.0015	19790	.0015	17810	.0015	16190	.0015	14840	.0015
Aluminum High Silicon	A380, A390	80000	.0002	80,000	.0004	63,610	.0004	39760	.0008	31810	.0010	25440	.0014	21200	.0015	18170	.0015	15900	.0015	14140	.0015	12720	.0015	11570	.0015	10600	.0015
Brass/Bronze	Aluminum Bronze	80000	.0002	80,000	.0004	80,000	.0004	55660	.0008	44530	.0010	35620	.0014	29690	.0015	25440	.0015	22260	.0015	19790	.0015	17810	.0015	16190	.0015	14840	.0015
	Low Silicon Bronze	80000	.0002	80,000	.0004	63,610	.0004	39760	.0008	31810	.0010	25440	.0014	21200	.0015	18170	.0015	15900	.0015	14140	.0015	12720	.0015	11570	.0015	10600	.0015
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics	80000	.0005	80000	.0010	80000	.0010	79520	.0020	63610	.0030	50890	.0040	42410	.0050	36350	.0050	31810	.0050	28270	.0050	25440	.0050	23130	.0050	21200	.0050
Copper		80000	.0002	80,000	.0004	80,000	.0004	55660	.0008	44530	.0010	35620	.0014	29690	.0015	25440	.0015	22260	.0015	19790	.0015	17810	.0015	16190	.0015	14840	.0015
Magnesium		80000	.0002	80,000	.0004	80,000	.0004	55660	.0008	44530	.0010	35620	.0014	29690	.0015	25440	.0015	22260	.0015	19790	.0015	17810	.0015	16190	.0015	14840	.0015
S - High Temp Alloys																											
Cobalt Base	Stellite, HS-21, Haynes 25/188, X40, L605	23850	.0002	19080	.0003	9540	.0003	5960	.0006	4770	.0008	3820	.0010	3180	.0012	2730	.0012	2390	.0012	2120	.0012	1910	.0012	1730	.0012	1590	.0012
Iron Base	Incoloy 800-802, Multimet N-155, Timkin 16-25-6, Carpenter 22-b3	23850	.0002	19080	.0003	9540	.0003	5960	.0006	4770	.0008	3820	.0010	3180	.0012	2730	.0012	2390	.0012	2120	.0012	1910	.0012	1730	.0012	1590	.0012
Nickel Base	Inconel 625/718, Inco 700, 713C, 718, Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoly, Udimet 500 & 700	23850	.0002	19080	.0003	9540	.0003	5960	.0006	4770	.0008	3820	.0010	3180	.0012	2730	.0012	2390	.0012	2120	.0012	1910	.0012	1730	.0012	1590	.0012
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo	23850	.0002	19080	.0003	9540	.0003	5960	.0006	4770	.0008	3820	.0010	3180	.0012	2730	.0012	2390	.0012	2120	.0012	1910	.0012	1730	.0012	1590	.0012

NOTE: Speeds and Feeds listed are estimated and will vary by application.