Double Margin, Coolant Fed, Long Length Drills Technical Information

- RedLine Pro Line Extra High Performance drills reduce cutting forces and provides additional stability for Heavier Feed Rates in most materials and gives increased performance when drilling Stainless Steel, Titanium, Carbon Steels and Cast Iron. Our Double Margin design provides improved hole finishes, quicker hole engagement and better location accuracy when drilling through cross holes.
- All shanks are manufactured to h6 tolerance, suitable for use in shrink-fit holders.
- Multi-Material, Coolant-Fed, High Performance Drills found on pages 275-278.

Double Margin, Solid Carbide, Coolant Fed, Long Length Speeds & Feeds

Material	Grades	SFM	Starting SFM	Tool Diameter (IPR) 1/8 (.1250)	1/4 (.2500)	3/8 (.3750)	1/2 (.5000)	5/8 (.6250)	3/4 (.7500)
P - Steels									
High Strength Tool Steel	A2, D2, P20, H11, H13, S2, 01		170-225	.0019-.0031	.0038-.0063	.0050-.0088	.0063-.0100	.0088-.0120	.0100-.0140
Low Carbon	A36, 12L14, 12L15, 1005, 1018, 1020, 1108-1119, 1213-1215, 1513-1518, 4012, 5015, 9310		530-595	.0038-.0063	.0063-.0088	.0088-.0110	.0100-.0125	.0110-.0150	.0120-.0170
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		280-375	.0038-.0063	.0063-.0088	.0088-.0110	.0100-.0125	.0110-.0150	.0120-.0170
M - Stainless Steels									
Austenitic	301-304L, 310, 316L, 321, 347		185-280	.0038-.0063	.0063-.0088	.0088-.0110	.0100-.0125	.0110-.0150	.0120-.0170
Martensitic	403, 410, 416, 420, 430, 431, 440		280-350	.0030-.0050	.0055-.0080	.0070-.0100	.0080-.0110	.0100-.0140	.0110-.0150
Precipitation Hardening	12/8, 15/5, 17/4, AM-350/355/363, PH13-8MO, PH14-8/MO		125-190	.0019-.0031	.0038-.0063	.0050-.0088	.0063-.010	.0088-.0120	.0100-.0140
K - Cast Irons									
Ductile	A536, J434, 60-40-18		475-590	.0038-.0063	.0063-.0088	.0088-.0110	.0100-.0125	.0110-.0150	.0120-.0170
Gray	A48, A436, A319, Class 20, G4000		530-590	.0038-.0063	.0063-.0088	.0088-.0110	.0100-.0125	.0110-.0150	.0120-.0170
Malleable	A220, A602, J158		250-320	.0038-.0063	.0063-.0088	.0088-.0110	.0100-.0125	.0110-.0150	.0120-.0170
N - Non-Ferrous									
Aluminum & Wrought Aluminum Alloys	600-100 Brinell HB	390-1480	750	.005-.010	.007-.014	.011-.020	.013-.022	.014-.023	.015-.025
Cast Aluminum Alloys	75-90 Brinell HB	390-1150	720	.006-.009	.007-.013	.011-.018	.013-.021	.015-.023	.017-.025
Aluminum Alloys Cast	13-22 SI	330-1310	590	.005-.007	.006-.010	.011-.015	.013-.017	.015-.019	.017-.021
Copper & Copper Alloys, Brass, Bronze	90-110 Brinell HB	330-980	430	.004-.006	.006-.009	.007-.013	.008-.014	.009-.015	.010-.016
S - High Temp Alloys									
Cobalt Base	Stellite, HS-21, Haynes 25/188, X40, L605		50	.0010	.0025	.0040	.0050	.0060	.0075
Iron Base	Incoloy 800-802, Multmet N-155, Timkin 16-25-6, Carpenter 22-b3		95	.0010	.0025	.0040	.0050	.0060	.0075
Nickel Base	Inconel 625/718, Inco 700, 713C, 718, Monel 400-401, 404, K401, Rene, Rene 41 & 95 Hastelloy, Waspoloy, Udimet 500 & 700		120	.0010	.0025	.0040	.0050	.0060	.0075
Titanium	Commercially Pure, 6Al-4V, ASTM 1/2/3, 6Al-25N-4Zr-2Mo-Si, Ti-8Al-1Mo, Ti-8Al-4Mo		180	.0010	.0025	.0040	.0050	.0060	.0075

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

Coolant Pressure Requirements