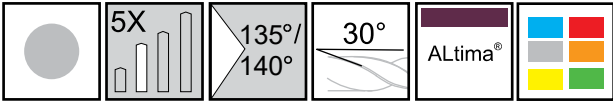




**NEW**

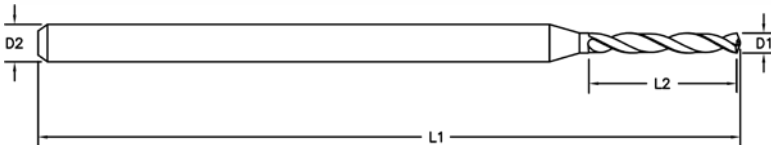
**Twister® Micro XD Series MXDSR**



- Designed for high performance drilling in a broad range of materials
- Web thinned point helps to reduce cutting forces during the drilling operation
- 0.8mm diameters and above have honed cutting edges on the point which increases the strength of the cutting edges
- All sizes have post coat polishing to improve chip evacuation
- Coated with ALtima® Coating



Web Thinned Point



ALtima®		Diameter		Shank	OAL	Flute Length
Tool No.	EDP	D1		D2	L1	L2
		mm	Decimal	mm	mm	mm
MXDSRM0050A	04694	0.50	.0197	3.0	57	4.0
MXDSRM0055A	04696	0.55	.0217	3.0	57	4.0
MXDSRM0060A	04698	0.60	.0236	3.0	57	5.0
MXDSRM0065A	04700	0.65	.0256	3.0	57	5.0
MXDSRM0070A	04702	0.70	.0276	3.0	57	5.0
MXDSRM0075A	04704	0.75	.0295	3.0	57	6.0
MXDSRM0080A	04706	0.80	.0315	3.0	57	6.0
MXDSRM0085A	04708	0.85	.0335	3.0	57	7.0
MXDSRM0090A	04710	0.90	.0354	3.0	57	7.0
MXDSRM0095A	04712	0.95	.0374	3.0	57	7.0
MXDSRM0100A	04714	1.00	.0394	3.0	57	8.0
MXDSRM0105A	04716	1.05	.0413	3.0	57	8.0
MXDSRM0110A	04718	1.10	.0433	3.0	57	8.0
MXDSRM0115A	04720	1.15	.0453	3.0	57	9.0
MXDSRM0120A	04722	1.20	.0472	3.0	57	9.0
MXDSRM0125A	04724	1.25	.0492	3.0	57	9.0
MXDSRM0130A	04726	1.30	.0512	3.0	57	10.0
MXDSRM0135A	04728	1.35	.0531	3.0	57	10.0
MXDSRM0140A	04730	1.40	.0551	3.0	57	10.0
MXDSRM0145A	04732	1.45	.0571	3.0	57	11.0
MXDSRM0150A	04734	1.50	.0591	3.0	57	11.0
MXDSRM0155A	04736	1.55	.0610	3.0	57	12.0
MXDSRM0160A	04738	1.60	.0630	3.0	57	12.0
MXDSRM0165A	04740	1.65	.0650	3.0	57	12.0
MXDSRM0170A	04742	1.70	.0669	3.0	57	13.0
MXDSRM0175A	04744	1.75	.0689	3.0	57	13.0
MXDSRM0180A	04746	1.80	.0709	3.0	57	13.0
MXDSRM0185A	04748	1.85	.0725	3.0	57	14.0

ALtima®		Diameter		Shank	OAL	Flute Length
Tool No.	EDP	D1		D2	L1	L2
		mm	Decimal	mm	mm	mm
MXDSRM0190A	04750	1.90	.0748	3.0	57	14.0
MXDSRM0195A	04752	1.95	.0768	3.0	57	14.0
MXDSRM0200A	04754	2.00	.0787	3.0	57	15.0
MXDSRM0205A	04756	2.05	.0807	3.0	57	15.0
MXDSRM0210A	04758	2.10	.0827	3.0	57	15.0
MXDSRM0215A	04760	2.15	.0846	3.0	57	16.0
MXDSRM0220A	04762	2.20	.0866	3.0	57	16.0
MXDSRM0225A	04764	2.25	.0886	3.0	57	17.0
MXDSRM0230A	04766	2.30	.0906	3.0	57	17.0
MXDSRM0235A	04768	2.35	.0925	3.0	57	17.0
MXDSRM0240A	04770	2.40	.0945	3.0	57	18.0
MXDSRM0245A	04772	2.45	.0965	3.0	57	18.0
MXDSRM0250A	04774	2.50	.0984	3.0	57	18.0
MXDSRM0255A	04776	2.55	.1004	3.0	57	19.0
MXDSRM0260A	04778	2.60	.1024	3.0	57	19.0
MXDSRM0265A	04780	2.65	.1043	3.0	57	19.0
MXDSRM0270A	04782	2.70	.1063	3.0	57	20.0
MXDSRM0275A	04784	2.75	.1083	3.0	57	20.0
MXDSRM0280A	04786	2.80	.1102	3.0	57	20.0
MXDSRM0285A	04788	2.85	.1122	3.0	57	21.0
MXDSRM0290A	04790	2.90	.1142	3.0	57	21.0
MXDSRM0295A	04792	2.95	.1161	3.0	57	22.0

Metric (mm)	
D1	Tolerance (h7)
0 - 3.0	+0/-0.010

Metric (mm)	
D2	Tolerance (h6)
0 - 3.0	+0/-0.006



## Recommended Cutting Data MXDSR Series - Inch

Workpiece Material Group	I S O	Hardness	vc - SFM	Drill Diameter (mm)					
				0.5	1.0	1.5	2.0	2.5	2.95
				f - IPR					
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	150	.0005	.0010	.0015	.0020	.0025	.0030
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	130	.0005	.0010	.0015	.0020	.0025	.0030
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	120	.0005	.0010	.0015	.0020	.0025	.0030
Hardened Steels A2 / 52100	H	55 Rc	50	.0002	.0004	.0007	.0009	.0011	.0014
Free Machining Stainless	M	up to 28 Rc	140	.0005	.0010	.0015	.0020	.0025	.0030
Stainless Steel - Austenitic 304 / 316	M	up to 28 Rc	125	.0005	.0010	.0015	.0020	.0025	.0030
Stainless Steel - Ferritic / Martensitic	M	up to 28 Rc	110	.0005	.0010	.0015	.0020	.0025	.0030
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	over 28 Rc	60	.0005	.0010	.0015	.0020	.0025	.0030
Aluminum (<10% Si)	N		175	.0007	.0015	.0020	.0025	.0030	.0040
Plastics	N		175	.0007	.0015	.0020	.0025	.0030	.0040
Cast Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	150	.0005	.0010	.0015	.0020	.0025	.0030
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	150	.0005	.0010	.0015	.0020	.0025	.0030
Titanium 6Al-4V	S	up to 40 Rc	70	.0005	.0010	.0015	.0020	.0025	.0030
High Temp Alloys Inconel / Hastelloy / Waspeloy / Nickel Based Alloys-Monel	S	up to 40 Rc	60	.0002	.0004	.0007	.0009	.0011	.0014

Recommended Peck Depths by Diameter\*

Diameter	Peck Depth
0.50 mm	.2 x Diameter
1.00 mm	.3 x Diameter
1.50 mm	.6 x Diameter
2.00 mm	.8 x Diameter
2.50 mm	1.0 x Diameter
2.95 mm	3.0 x Diameter

\*Peck depths can vary by material type.

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

## Recommended Cutting Data MXDSR Series - Metric

Workpiece Material Group	I S O	Hardness	vc - m/min	Drill Diameter (mm)					
				0.5	1.0	1.5	2.0	2.5	2.95
				f - mm/Rev					
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	45	.10	.20	.30	.40	.60	.75
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	40	.10	.20	.30	.40	.60	.75
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A128, D2, D3, D4, D5, D7	P	28 to 44 Rc	40	.10	.20	.30	.40	.60	.75
Hardened Steels A2 / 52100	H	55 Rc	15	.005	.010	.015	.020	.025	.035
Free Machining Stainless	M	up to 28 Rc	45	.10	.20	.30	.40	.60	.75
Stainless Steel - Austenitic 304 / 316	M	up to 28 Rc	40	.10	.20	.30	.40	.60	.75
Stainless Steel - Ferritic / Martensitic	M	up to 28 Rc	35	.10	.20	.30	.40	.60	.75
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	over 28 Rc	20	.10	.20	.30	.40	.60	.75
Aluminum (<10% Si)	N		55	.15	.25	.40	.50	.75	1.00
Plastics	N		55	.15	.25	.40	.50	.75	1.00
Cast Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	45	.10	.20	.30	.40	.60	.75
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	45	.10	.20	.30	.40	.60	.75
Titanium 6Al-4V	S	up to 40 Rc	20	.10	.20	.30	.40	.60	.75
High Temp Alloys Inconel / Hastelloy / Waspeloy / Nickel Based Alloys-Monel	S		20	.005	.010	.015	.020	.025	.035



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