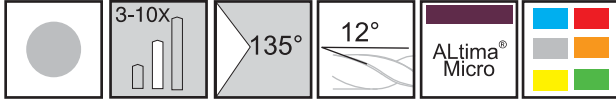


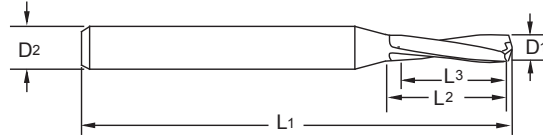
Twister® Micro-Tuff® Series 305



Designed for high performance drilling in a broad range of materials.



• Depth setting rings available on 1/8" shank tools.



Uncoated		ALtima® Micro		Diameter			Shank		OAL		Flute Length max.*		Drill Length		
				D1			D2		L1		L2		L3 Ref.		
Tool No.	EDP	Tool No.	EDP	Inch	Letter/Wire	mm	Decimal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
30500390	33999				102		0.0039	1/8		1-1/2		0.065		0.05	
305M0010	34000					0.1	0.0039		3.0		38		1.70		1.28
30500430	34001				101		0.0043	1/8		1-1/2		0.065		0.05	
305M0011	33900					0.11	0.0043		3.0		38		1.70		1.28
30500470	34002				100		0.0047	1/8		1-1/2		0.065		0.05	
305M0012	33901					0.12	0.0047		3.0		38		1.70		1.28
30500510	34003				99		0.0051	1/8		1-1/2		0.065		0.05	
305M0013	33902					0.13	0.0051		3.0		38		1.70		1.28
30500550	34004				98		0.0055	1/8		1-1/2		0.065		0.05	
305M0014	33903					0.14	0.0055		3.0		38		1.70		1.28
305M0015	34005					0.15	0.0059		3.0		38		2.50		1.88
30500600	34006						0.0060	1/8		1-1/2		0.100		0.08	
305M0016	33904					0.16	0.0063		3.0		38		2.50		1.88
30500630	34007				96		0.0063	1/8		1-1/2		0.100		0.08	
305M0017	33905					0.17	0.0067		3.0		38		2.50		1.88
30500670	34008				95		0.0067	1/8		1-1/2		0.100		0.08	
30500700	34009						0.0070	1/8		1-1/2		0.100		0.08	
305M0018	33906					0.18	0.0071		3.0		38		2.50		1.88
30500710	34010				94		0.0071	1/8		1-1/2		0.100		0.08	
305M0019	33907					0.19	0.0075		3.0		38		2.50		1.88
30500750	34011				93		0.0075	1/8		1-1/2		0.100		0.08	
305M0020	34012					0.20	0.0078		3.0		38		2.50		1.88
30500790	34013				92		0.0079	1/8		1-1/2		0.125		0.09	
30500800	34014						0.0080	1/8		1-1/2		0.125		0.09	
305M0021	33908					0.21	0.0083		3.0		38		2.50		1.88
30500830	34015				91		0.0083	1/8		1-1/2		0.125		0.09	
305M0022	33909					0.22	0.0087		3.0		38		2.50		1.88
30500870	34016				90		0.0087	1/8		1-1/2		0.125		0.09	
30500900	34017						0.0090	1/8		1-1/2		0.125		0.09	
305M0023	33910					0.23	0.0091		3.0		38		2.50		1.88

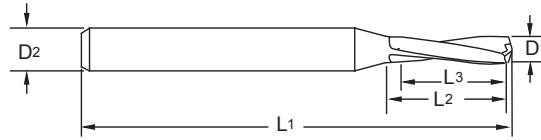
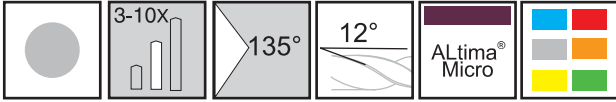
*Do not drill beyond specified flute length. Peck cycles may be utilized to achieve best tool performance.

Inch			
D1	Tolerance	D2	Tolerance
.0039-.1250	+0/-0.0003	.0039-.1250	+0/-0.0002
L1	Tolerance	L2	Tolerance
.0039-.1250	+/-0.015	.0039-.1250	+0.015/-0

Metric (mm)			
D1	Tolerance	D2	Tolerance
0.1-3.0	+0/-0.008	0.1-3.0	+0/-0.005
L1	Tolerance	L2	Tolerance
0.1-3.0	+/-0.4	0.1-3.0	+0.4/-0



Series 305 Continued



Uncoated		ALtima® Micro		Diameter			Shank		OAL		Flute Length max.*		Drill Length		
				D1			D2		L1		L2		L3 Ref.		
Tool No.	EDP	Tool No.	EDP	Inch	Letter/ Wire	mm	Deci- mal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
30500910	34018				89		0.0091	1/8		1-1/2		0.125		0.09	
305M0024	33911					0.24	0.0094		3.0		38		2.50		1.88
30500950	34019				88		0.0095	1/8		1-1/2		0.125		0.09	
305M0025	34020					0.25	0.0098		3.0		38		3.20		2.40
30501000	34021				87		0.0100	1/8		1-1/2		0.150		0.11	
305M0026	33912					0.26	0.0102		3.0		38		3.20		2.40
30501050	34022				86		0.0105	1/8		1-1/2		0.150		0.11	
305M0027	33913					0.27	0.0106		3.0		38		3.20		2.40
30501100	34023				85		0.0110	1/8		1-1/2		0.150		0.11	
305M0028	33914					0.28	0.0110		3.0		38		3.20		2.40
305M0029	33915					0.29	0.0114		3.0		38		3.20		2.40
30501150	34024				84		0.0115	1/8		1-1/2		0.150		0.11	
305M0030	34025	305M0030AM	34206			0.30	0.0118		3.0		38		4.80		3.60
30501200	34026	30501200AM	34145		83		0.0120	1/8		1-1/2		0.190		0.14	
305M0031	33916					0.31	0.0122		3.0		38		4.80		3.60
30501250	34027	30501250AM	34146		82		0.0125	1/8		1-1/2		0.190		0.14	
305M0032	33917					0.32	0.0126		3.0		38		4.80		3.60
305M0033	33918					0.33	0.0130		3.0		38		4.80		3.60
30501300	34028	30501300AM	34147		81		0.0130	1/8		1-1/2		0.190		0.14	
305M0034	33919					0.34	0.0134		3.0		38		4.80		3.60
30501350	34029	30501350AM	34148		80		0.0135	1/8		1-1/2		0.190		0.14	
305M0035	34030	305M0035AM	34207			0.35	0.0138		3.0		38		4.80		3.60
305M0036	33920					0.36	0.0142		3.0		38		4.80		3.60
30501450	34031	30501450AM	34149		79		0.0145	1/8		1-1/2		0.190		0.14	
305M0037	33921					0.37	0.0146		3.0		38		4.80		3.60
305M0038	33922					0.38	0.0150		3.0		38		4.80		3.60
305M0039	33923					0.39	0.0154		3.0		38		4.80		3.60
30501560	34032	30501560AM	34150	1/64			0.0156	1/8		1-1/2		0.190		0.14	
305M0040	34033	305M0040AM	34208			0.40	0.0157		3.0		38		4.80		3.60
30501600	34034	30501600AM	34151		78		0.0160	1/8		1-1/2		0.190		0.14	
305M0041	33924					0.41	0.0161		3.0		38		6.35		4.76
305M0042	33925					0.42	0.0165		3.0		38		6.35		4.76
305M0043	33926					0.43	0.0169		3.0		38		6.35		4.76
305M0044	33927					0.44	0.0173		3.0		38		6.35		4.76
305M0045	34035	305M0045AM	34209			0.45	0.0177		3.0		38		6.35		4.76
30501800	34036	30501800AM	34152		77		0.0180	1/8		1-1/2		0.250		0.19	
305M0046	33928					0.46	0.0181		3.0		38		6.35		4.76
305M0047	33929					0.47	0.0185		3.0		38		6.35		4.76

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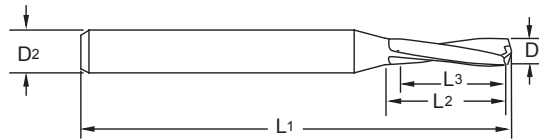
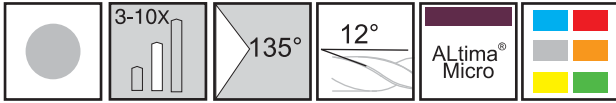
Series 305 Continued

Uncoated		ALtima® Micro		Diameter				Shank		OAL		Flute Length max.*		Drill Length	
				D1				D2		L1		L2		L3 Ref.	
Tool No.	EDP	Tool No.	EDP	Inch	Letter/ Wire	mm	Deci- mal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
305M0048	33930					0.48	0.0189		3.0		38		6.35		4.76
305M0049	33931					0.49	0.0193		3.0		38		6.35		4.76
305M0050	34037	305M0050AM	34210			0.50	0.0197		3.0		38		6.35		4.76
30502000	34038	30502000AM	34153		76		0.0200	1/8		1-1/2		0.250		0.19	
305M0051	33932					0.51	0.0201		3.0		38		6.35		4.76
305M0052	33933					0.52	0.0205		3.0		38		6.35		4.76
305M0053	33934					0.53	0.0209		3.0		38		6.35		4.76
30502100	34039	30502100AM	34154		75		0.0210	1/8		1-1/2		0.250		0.19	
305M0054	33935					0.54	0.0213		3.0		38		6.35		4.76
305M0055	34040	305M0055AM	34211			0.55	0.0217		3.0		38		6.35		4.76
305M0056	33936					0.56	0.0220		3.0		38		6.35		4.76
305M0057	33937					0.57	0.0224		3.0		38		6.35		4.76
30502250	34041	30502250AM	34155		74		0.0225	1/8		1-1/2		0.250		0.19	
305M0058	33938					0.58	0.0228		3.0		38		6.35		4.76
305M0059	33939					0.59	0.0232		3.0		38		6.35		4.76
305M0060	34042	305M0060AM	34212			0.60	0.0236		3.0		38		6.35		4.76
30502400	34043	30502400AM	34156		73		0.0240	1/8		1-1/2		0.250		0.19	
305M0061	33940					0.61	0.0240		3.0		38		6.35		4.76
305M0062	33941					0.62	0.0244		3.0		38		6.35		4.76
305M0063	33942					0.63	0.0248		3.0		38		6.35		4.76
30502500	34044	30502500AM	34157		72		0.0250	1/8		1-1/2		0.250		0.19	
305M0064	33943					0.64	0.0252		3.0		38		6.35		4.76
305M0065	34045	305M0065AM	34213			0.65	0.0256		3.0		38		6.35		4.76
305M0066	33944					0.66	0.0260		3.0		38		8.13		6.10
30502600	34046	30502600AM	34158		71		0.0260	1/8		1-1/2		0.250		0.19	
305M0067	33945					0.67	0.0264		3.0		38		8.13		6.10
305M0068	33946					0.68	0.0268		3.0		38		8.13		6.10
305M0069	33947					0.69	0.0272		3.0		38		8.13		6.10
305M0070	34047	305M0070AM	34214			0.70	0.0276		3.0		38		8.13		6.10
305M0071	33948					0.71	0.0280		3.0		38		8.13		6.10
30502800	34048	30502800AM	34159		70		0.0280	1/8		1-1/2		0.320		0.24	
305M0072	33949					0.72	0.0283		3.0		38		8.13		6.10
305M0073	33950					0.73	0.0287		3.0		38		8.13		6.10
305M0074	33951					0.74	0.0291		3.0		38		8.13		6.10
30502920	34049	30502920AM	34160		69		0.0292	1/8		1-1/2		0.320		0.24	
305M0075	34050	305M0075AM	34215			0.75	0.0295		3.0		38		8.13		6.10
305M0076	33952					0.76	0.0299		3.0		38		10.16		7.62
305M0077	33953					0.77	0.0303		3.0		38		10.16		7.62
305M0078	33954					0.78	0.0307		3.0		38		10.16		7.62
30503100	34051	30503100AM	34161		68		0.0310	1/8		1-1/2		0.400		0.30	
305M0079	33955					0.79	0.0311		3.0		38		10.16		7.62
30503120	34052	30503120AM	34162	1/32			0.0312	1/8		1-1/2		0.400		0.30	
305M0080	34053	305M0080AM	34216			0.80	0.0315		3.0		38		10.16		7.62
305M0081	33956					0.81	0.0319		3.0		38		10.16		7.62

*Do not drill beyond specified flute length. Peck cycles may be utilized to achieve best tool performance.



Series 305 Continued



Uncoated		ALtima® Micro		Diameter			Shank		OAL		Flute Length max.*		Drill Length		
				D1			D2		L1		L2		L3 Ref.		
Tool No.	EDP	Tool No.	EDP	Inch	Letter/ Wire	mm	Deci- mal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
30503200	34054	30503200AM	34163		67		0.0320	1/8		1-1/2		0.400		0.30	
305M0082	33957					0.82	0.0323		3.0		38		10.16		7.62
305M0083	33958					0.83	0.0327		3.0		38		10.16		7.62
30503300	34055	30503300AM	34164		66		0.0330	1/8		1-1/2		0.400		0.30	
305M0084	33959					0.84	0.0331		3.0		38		10.16		7.62
305M0085	34056	305M0085AM	34217			0.85	0.0335		3.0		38		10.16		7.62
305M0086	33960					0.86	0.0339		3.0		38		10.16		7.62
305M0087	33961					0.87	0.0343		3.0		38		10.16		7.62
305M0088	33962					0.88	0.0346		3.0		38		10.16		7.62
30503500	34057	30503500AM	34165		65		0.0350	1/8		1-1/2		0.400		0.30	
305M0089	33963					0.89	0.0350		3.0		38		10.16		7.62
305M0090	34058	305M0090AM	34218			0.90	0.0354		3.0		38		10.16		7.62
305M0091	33964					0.91	0.0358		3.0		38		10.16		7.62
30503600	34059	30503600AM	34166		64		0.0360	1/8		1-1/2		0.400		0.30	
305M0092	33965					0.92	0.0362		3.0		38		10.16		7.62
305M0093	33966					0.93	0.0366		3.0		38		10.16		7.62
30503700	34060	30503700AM	34167		63		0.0370	1/8		1-1/2		0.400		0.30	
305M0094	33967					0.94	0.0370		3.0		38		10.16		7.62
305M0095	34061	305M0095AM	34219			0.95	0.0374		3.0		38		10.16		7.62
305M0096	33968					0.96	0.0378		3.0		38		10.16		7.62
30503800	34062	30503800AM	34168		62		0.0380	1/8		1-1/2		0.400		0.30	
305M0097	33969					0.97	0.0382		3.0		38		10.16		7.62
305M0098	33970					0.98	0.0386		3.0		38		10.16		7.62
305M0099	33971					0.99	0.0390		3.0		38		10.16		7.62
30503900	34063	30503900AM	34169		61		0.0390	1/8		1-1/2		0.400		0.30	
305M0100	34064	305M0100AM	34220			1.00	0.0394		3.0		38		10.16		7.62
30504000	34065	30504000AM	34170		60		0.0400	1/8		1-1/2		0.400		0.30	
30504100	34066	30504100AM	34171		59		0.0410	1/8		1-1/2		0.400		0.30	
305M0105	34067	305M0105AM	34221			1.05	0.0413		3.0		38		10.16		7.62
30504200	34068	30504200AM	34172		58		0.0420	1/8		1-1/2		0.400		0.30	
30504300	34069	30504300AM	34173		57		0.0430	1/8		1-1/2		0.400		0.30	
305M0110	34070	305M0110AM	34222			1.10	0.0433		3.0		38		10.16		7.62
305M0115	34071	305M0115AM	34223			1.15	0.0452		3.0		38		10.16		7.62
30504650	34072	30504650AM	34174		56		0.0465	1/8		1-1/2		0.400		0.30	
30504690	34073	30504690AM	34175	3/64			0.0469	1/8		1-1/2		0.400		0.30	
305M0120	34074	305M0120AM	34224			1.20	0.0472		3.0		38		10.16		7.62
305M0125	34075	305M0125AM	34225			1.25	0.0492		3.0		38		10.16		7.62
305M0130	34076	305M0130AM	34226			1.30	0.0511		3.0		38		10.16		7.62

*Do not drill beyond specified flute length. Peck cycles may be utilized to achieve best tool performance.



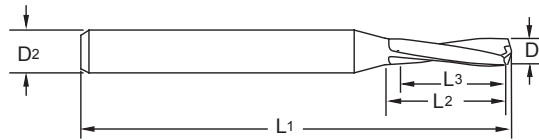
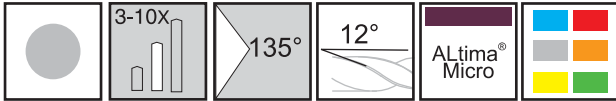
Series 305 Continued

Uncoated		ALtima® Micro		Diameter				Shank		OAL		Flute Length max.*		Drill Length	
Tool No.	EDP	Tool No.	EDP	D1				D2		L1		L2		L3 Ref.	
				Inch	Letter/ Wire	mm	Deci- mal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
30505200	34077	30505200AM	34176		55		0.0520	1/8		1-1/2		0.400		0.30	
305M0135	34078	305M0135AM	34227			1.35	0.0531		3.0		38		10.16		7.62
30505500	34079	30505500AM	34177		54		0.0550	1/8		1-1/2		0.400		0.30	
305M0140	34080	305M0140AM	34228			1.40	0.0551		3.0		38		10.16		7.62
305M0145	34081	305M0145AM	34229			1.45	0.0571		3.0		38		10.16		7.62
305M0150	34082	305M0150AM	34230			1.50	0.0590		3.0		38		10.16		7.62
30505950	34083	30505950AM	34178		53		0.0595	1/8		1-1/2		0.400		0.30	
305M0155	34084	305M0155AM	34231			1.55	0.0610		3.0		38		10.16		7.62
30506250	34085	30506250AM	34179	1/16			0.0625	1/8		1-1/2		0.480		0.36	
305M0160	34086	305M0160AM	34232			1.60	0.0630		3.0		38		12.19		9.14
30506350	34087	30506350AM	34180		52		0.0635	1/8		1-1/2		0.480		0.36	
305M0165	34088	305M0165AM	34233			1.65	0.0649		3.0		38		12.19		9.14
305M0170	34089	305M0170AM	34234			1.70	0.0669		3.0		38		12.19		9.14
30506700	34090	30506700AM	34181		51		0.0670	1/8		1-1/2		0.480		0.36	
305M0175	34091	305M0175AM	34235			1.75	0.0689		3.0		38		12.19		9.14
30507000	34092	30507000AM	34182		50		0.0700	1/8		1-1/2		0.480		0.36	
305M0180	34093	305M0180AM	34236			1.80	0.0708		3.0		38		12.19		9.14
305M0185	34094	305M0185AM	34237			1.85	0.0728		3.0		38		12.19		9.14
30507300	34095	30507300AM	34183		49		0.0730	1/8		1-1/2		0.480		0.36	
305M0190	34096	305M0190AM	34238			1.90	0.0748		3.0		38		12.19		9.14
30507600	34097	30507600AM	34184		48		0.0760	1/8		1-1/2		0.480		0.36	
305M0195	34098	305M0195AM	34239			1.95	0.0767		3.0		38		12.19		9.14
30507810	34099	30507810AM	34185	5/64			0.0781	1/8		1-1/2		0.480		0.36	
30507850	34100	30507850AM	34186		47		0.0785	1/8		1-1/2		0.480		0.36	
305M0200	34101	305M0200AM	34240			2.00	0.0787		3.0		38		12.19		9.14
305M0205	34102	305M0205AM	34241			2.05	0.0807		3.0		38		12.19		9.14
30508100	34103	30508100AM	34187		46		0.0810	1/8		1-1/2		0.480		0.36	
30508200	34104	30508200AM	34188		45		0.0820	1/8		1-1/2		0.480		0.36	
305M0210	34105	305M0210AM	34242			2.10	0.0827		3.0		38		12.19		9.14
305M0215	34106	305M0215AM	34243			2.15	0.0846		3.0		38		12.19		9.14
30508600	34107	30508600AM	34189		44		0.0860	1/8		1-1/2		0.480		0.36	
305M0220	34108	305M0220AM	34244			2.20	0.0866		3.0		38		12.19		9.14
305M0225	34109	305M0225AM	34245			2.25	0.0886		3.0		38		12.19		9.14
30508900	34110	30508900AM	34190		43		0.0890	1/8		1-1/2		0.480		0.36	
305M0230	34111	305M0230AM	34246			2.30	0.0906		3.0		38		12.19		9.14
305M0235	34112	305M0235AM	34247			2.35	0.0925		3.0		38		12.19		9.14
30509350	34113	30509350AM	34191		42		0.0935	1/8		1-1/2		0.480		0.36	
30509380	34114	30509380AM	34192	3/32			0.0938	1/8		1-1/2		0.480		0.36	
305M0240	34115	305M0240AM	34248			2.40	0.0945		3.0		38		12.19		9.14
30509600	34116	30509600AM	34193		41		0.0960	1/8		1-1/2		0.480		0.36	
305M0245	34117	305M0245AM	34249			2.45	0.0965		3.0		38		12.19		9.14
30509800	34118	30509800AM	34194		40		0.0980	1/8		1-1/2		0.480		0.36	
305M0250	34119	305M0250AM	34250			2.50	0.0984		3.0		38		12.19		9.14
30509950	34120	30509950AM	34195		39		0.0995	1/8		1-1/2		0.480		0.36	

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Series 305 Continued



Uncoated		ALtima® Micro		Diameter				Shank		OAL		Flute Length max.*		Drill Length	
				D1				D2		L1		L2		L3 Ref.	
Tool No.	EDP	Tool No.	EDP	Inch	Letter/ Wire	mm	Deci- mal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
305M0255	34121	305M0255AM	34251			2.55	0.1004		3.0		38		12.19		9.14
30510150	34122	30510150AM	34196		38		0.1015	1/8		1-1/2		0.480		0.36	
305M0260	34123	305M0260AM	34252			2.60	0.1024		3.0		38		12.19		9.14
30510400	34124	30510400AM	34197		37		0.1040	1/8		1-1/2		0.480		0.36	
305M0265	34125	305M0265AM	34253			2.65	0.1043		3.0		38		12.19		9.14
305M0270	34126	305M0270AM	34254			2.70	0.1063		3.0		38		12.19		9.14
30510650	34127	30510650AM	34198		36		0.1065	1/8		1-1/2		0.480		0.36	
305M0275	34128	305M0275AM	34255			2.75	0.1083		3.0		38		12.19		9.14
30510940	34129	30510940AM	34199	7/64			0.1094	1/8		1-1/2		0.480		0.36	
30511000	34130	30511000AM	34200		35		0.1100	1/8		1-1/2		0.480		0.36	
305M0280	34131	305M0280AM	34256			2.80	0.1102		3.0		38		12.19		9.14
30511100	34132	30511100AM	34201		34		0.1110	1/8		1-1/2		0.480		0.36	
305M0285	34133	305M0285AM	34257			2.85	0.1122		3.0		38		12.19		9.14
30511300	34134	30511300AM	34202		33		0.1130	1/8		1-1/2		0.480		0.36	
305M0290	34135	305M0290AM	34258			2.90	0.1142		3.0		38		12.19		9.14
30511600	34136	30511600AM	34203		32		0.1160	1/8		1-1/2		0.480		0.36	
305M0295	34137	305M0295AM	34259			2.95	0.1161		3.0		38		12.19		9.14
305M0300	34138	305M0300AM	34260			3.00	0.1181		3.0		38		12.19		9.14
30512000	34139	30512000AM	34204		31		0.1200	1/8		1-1/2		0.480		0.36	
30512500	34143	30512500AM	34205	1/8			0.1250	1/8		1-1/2		0.480		0.36	

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