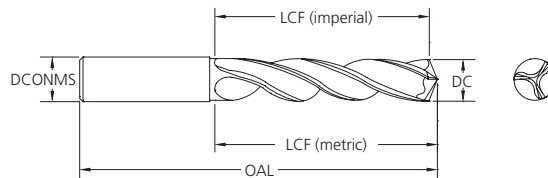
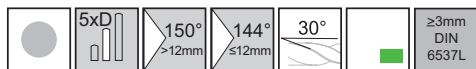


Twister® AL 5xD - Series 229

Twister® AL Series 229 recommended for increased speeds and feeds when drilling aluminum and similar materials.



- Easily re-ground point design.
- Special 3 flute parabolic flute form for increased chip evacuation.
- Metric sizes 3mm and above manufactured to DIN 6537L.
- Coolant fed style available as a special.
- Useable length (LU) = LCF - (1.5 x DC).

Uncoated		DC (m7)				DCONMS (h6)		OAL		LCF	
Tool No.	EDP	Inch	Wire	mm	Decimal	Inch	mm	Inch	mm	Inch	mm
22904690	23050	3/64			.0469	3/64		1-1/2		3/4	
22905500	23051		54		.0550	.0550		1-1/2		3/4	
22905950	23052		53		.0595	.0595		1-1/2		3/4	
22906250	22900	1/16			.0625	1/16		1-1/2		3/4	
22906700	23054		51		.0670	.0670		1-1/2		3/4	
22907000	23055		50		.0700	.0700		1-3/4		7/8	
22907300	23056		49		.0730	.0730		1-3/4		7/8	
22907870	22950			2.00	.0787		2.0		38		16.0
22908200	23057		45		.0820	.0820		1-3/4		7/8	
22908900	22901		43		.0890	.0890		2		1	
22909060	23058			2.3	.0906		2.3		43		20.5
22909380	22902	3/32			.0938	3/32		2		1	
22909600	22903		41		.0960	.0960		2		1	
22909800	22904		40		.0980	.0980		2		1	
22909840	22951			2.50	.0984		2.5		43		20.5
22909950	23059		39		.0995	.0995		2-1/4		1-1/4	
22910150	22942		38		.1015	.1015		2-1/4		1-1/4	
22910400	23060		37		.1040	.1040		2-1/4		1-1/4	
22910650	22943		36		.1065	.1065		2-1/4		1-1/4	
22911000	23061		35		.1100	.1100		2-1/4		1-1/4	
22911300	22944		33		.1130	.1130		2-1/4		1-1/4	
22911420	22952			2.90	.1142		2.9		46		25.0
22911810	22953			3.00	.1181		6.0		66		28.0

Inch		Metric (mm)	
DC	Tolerance (m7)	DC	Tolerance (m7)
.0469 - .1250	+ .0001/+ .0004	2.00 - 3.00	+ .002/+ .012
.1251 - .2500	+ .0002/+ .0006	3.01 - 6.00	+ .004/+ .016
.2501 - .3750	+ .0003/+ .0008	6.01 - 10.00	+ .006/+ .021
.3751 - .7500	+ .0003/+ .0010	10.01 - 16.00	+ .007/+ .025



Uncoated		DC (m7)				DCONMS (h6)		OAL		LCF	
Tool No.	EDP	Inch	Wire	mm	Decimal	Inch	mm	Inch	mm	Inch	mm
22912000	22905		31		.1200	.1200		2-1/4		1-1/4	
22912200	23063			3.10	.1220		6.0		66		28.0
22912500	22906	1/8			.1250	1/8		2-1/4		1-1/4	
22912600	22945			3.20	.1260		6.0		66		28.0
22912850	22935		30		.1285	.1285		2-1/4		1-1/4	
22912990	22954			3.30	.1299		6.0		66		28.0
22913390	22949			3.40	.1339		6.0		66		28.0
22913600	22907		29		.1360	.1360		2-1/2		1-3/8	
22913780	22955			3.50	.1378		6.0		66		28.0
22914060	22908	9/64			.1406	9/64		2-1/2		1-3/8	
22914170	22992			3.60	.1417		6.0		66		28.0
22914400	22946		27		.1440	.1440		2-1/2		1-3/8	
22914570	22994			3.70	.1457		6.0		66		28.0
22914950	22973		25		.1495	.1495		2-1/2		1-3/8	
22914960	22996			3.80	.1496		6.0		74		36.0
22915200	23064		24		.1520	.1520		2-1/2		1-3/8	
22915350	22997			3.90	.1535		6.0		74		36.0
22915620	22909	5/32			.1562	5/32		2-1/2		1-3/8	
22915750	22956			4.00	.1575		6.0		74		36.0
22915900	22936		21		.1590	.1590		2-1/2		1-3/8	
22916100	22937		20		.1610	.1610		2-1/2		1-3/8	
22916140	22998			4.10	.1614		6.0		74		36.0
22916540	22957			4.20	.1654		6.0		74		36.0
22916600	22947		19		.1660	.1660		2-1/2		1-3/8	
22916950	22948		18		.1695	.1695		2-3/4		1-5/8	
22917190	22939	11/64			.1719	11/64		2-3/4		1-5/8	
22917300	22972		17		.1730	.1730		2-3/4		1-5/8	
22917320	22999			4.40	.1732		6.0		74		36.0
22917700	22910		16		.1770	.1770		2-3/4		1-5/8	
22917720	22958			4.50	.1772		6.0		74		36.0
22918110	23000			4.60	.1811		6.0		74		36.0
22918500	22911		13		.1850	.1850		2-3/4		1-5/8	
22918750	22912	3/16			.1875	3/16		2-3/4		1-5/8	
22918890	23001			4.80	.1889		6.0		82		44.0
22918900	22974		12		.1890	.1890		2-3/4		1-5/8	
22919100	22976		11		.1910	.1910		2-3/4		1-5/8	
22919290	23002			4.90	.1929		6.0		82		44.0
22919350	22938		10		.1935	.1935		2-3/4		1-5/8	
22919680	22959			5.00	.1968		6.0		82		44.0
22920100	22975		7		.2010	.2010		3		1-3/4	

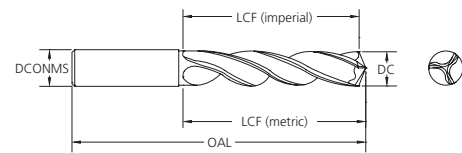


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Uncoated		DC (m7)				DCONMS (h6)		OAL		LCF	
Tool No.	EDP	Inch	Wire	mm	Decimal	Inch	mm	Inch	mm	Inch	mm
22920470	23003			5.20	.2047		6.0		82		44.0
22921300	22977		3		.2130	.2130		3		1-3/4	
22921650	22960			5.50	.2165		6.0		82		44.0
22921870	22913	7/32			.2187	7/32		3		1-3/4	
22922050	23004			5.60	.2205		6.0		82		44.0
22922800	22978		1		.2280	.2280		3		1-3/4	
22923400	23065		A		.2340	.2340		3-1/4		2	
22923620	22961			6.00	.2362		6.0		82		44.0
22924410	22980			6.20	.2441		8.0		91		53.0
22925000	22914	1/4			.2500	1/4		3-1/4		2	
22925590	22962			6.50	.2559		8.0		91		53.0
22925700	22915		F		.2570	.2570		3-1/4		2	
22926380	22979			6.70	.2638		8.0		91		53.0
22926560	22916	17/64			.2656	17/64		3-1/2		2-1/8	
22926770	22963			6.80	.2677		8.0		91		53.0
22927200	22981		I		.2720	.2720		3-1/2		2-1/8	
22927560	22964			7.00	.2756		8.0		91		53.0
22928120	22917	9/32			.2812	9/32		3-1/2		2-1/8	
22928350	23005			7.20	.2835		8.0		91		53.0
22928740	22940			7.30	.2874		8.0		91		53.0
22929130	22965			7.40	.2913		8.0		91		53.0
22929530	22966			7.50	.2953		8.0		91		53.0
22929690	22982	19/64			.2969	19/64		3-3/4		2-3/8	
22930710	23006			7.80	.3071		8.0		91		53.0
22931250	22918	5/16			.3125	5/16		3-3/4		2-3/8	
22931500	22967			8.00	.3150		8.0		91		53.0
22931890	23008			8.10	.3189		10.0		103		61.0
22932810	22919	21/64			.3281	21/64		4		2-1/2	
22933070	22985			8.40	.3307		10.0		103		61.0
22933200	22983		Q		.3320	.3320		4		2-1/2	
22933460	22968			8.50	.3346		10.0		103		61.0
22934380	22987	11/32			.3438	11/32		4		2-1/2	
22935430	22989			9.00	.3543		10.0		103		61.0
22935940	22984	23/64			.3594	23/64		4-1/4		2-3/4	
22936800	22991		U		.3680	.3680		4-1/4		2-3/4	



Uncoated		DC (m7)				DCONMS (h6)		OAL		LCF	
Tool No.	EDP	Inch	Wire	mm	Decimal	Inch	mm	Inch	mm	Inch	mm
22937400	23009			9.50	.3740		10.0		103		61.0
22937500	22920	3/8			.3750	3/8		4-1/4		2-3/4	
22938190	23011			9.70	.3819		10.0		103		61.0
22939060	22921	25/64			.3906	25/64		4-1/2		2-7/8	
22939370	22969			10.00	.3937		10.0		103		61.0
22940160	22970			10.20	.4016		12.0		118		71.0
22940620	22922	13/32			.4062	13/32		4-1/2		2-7/8	
22940940	23012			10.40	.4094		12.0		118		71.0
22941340	22986			10.50	.4134		12.0		118		71.0
22941730	23013			10.60	.4173		12.0		118		71.0
22942190	22923	27/64			.4219	27/64		4-1/2		2-7/8	
22943310	22993			11.00	.4331		12.0		118		71.0
22943750	22924	7/16			.4375	7/16		4-1/2		2-7/8	
22945280	23014			11.50	.4528		12.0		118		71.0
22945310	22941	29/64			.4531	29/64		4-3/4		3	
22946880	22995	15/32			.4688	15/32		4-3/4		3	
22947240	22971			12.00	.4724		12.0		118		71.0
22948440	22925	31/64			.4844	31/64		4-3/4		3	
22949210	22988			12.50	.4921		14.0		124		77.0
22950000	22926	1/2			.5000	1/2		4-3/4		3	
22951180	23015			13.00	.5118		14.0		124		77.0
22951560	22927	33/64			.5156	33/64		5		3-1/4	
22953120	22928	17/32			.5312	17/32		5		3-1/4	
22953150	23017			13.50	.5315		14.0		124		77.0
22954690	22929	35/64			.5469	35/64		5		3-1/4	
22955120	23018			14.00	.5512		14.0		124		77.0
22956250	22930	9/16			.5625	9/16		5		3-1/4	
22957090	23020			14.50	.5709		16.0		133		83.0
22959060	23021			15.00	.5906		16.0		133		83.0
22961020	23022			15.50	.6102		16.0		133		83.0
22962200	23023			15.80	.6220		16.0		133		83.0
22962500	22931	5/8			.6250	5/8		5-1/4		3-1/2	
22962990	23024			16.00	.6299		16.0		133		83.0
22965620	22932	21/32			.6562	21/32		5-1/2		3-5/8	
22968750	22933	11/16			.6875	11/16		5-1/2		3-5/8	
22975000	22934	3/4			.7500	3/4		5-3/4		3-7/8	



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