

Wide Land Parabolic Styles 150WLP, 150WLP-TC (150WLPN)

Features/Benefits:

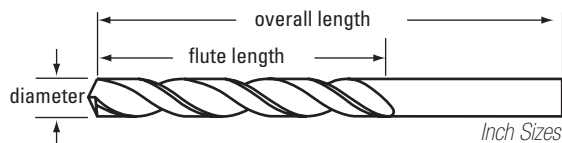
- Combination of parabolic flute form and point design produces tighter hole tolerances, heightened chip-breaking action, and improved coolant flow for deep-hole drilling.
- Wide flute spacing disperses chips away from the cutting edge more rapidly than conventional parabolic drills, resulting in tighter, more manageable chips and less chip packing.
- Manufactured from high-speed steel.
- 135° modified notch point is self-centering, provides greater stability, prevents walking, and lessens work-hardening.
- TiCN and bright finishes standard from stock; alternate coatings available as stock modifications.

Application Information:

- carbon steel (TiCN, bright)
- tool steel (TiCN, bright)
- alloy steel (TiCN, bright)
- free-machining steel (TiCN, bright)

Surface Treatment Information

- Titanium-carbonitride (TiCN) coating increases cutting surface hardness, making the tool highly resistant to abrasive wear.



INCH SIZES

Drill Diameter				Overall Length		Flute Length		Style 150WLP Bright	Style 150WLP-TC TiCN
Fraction	Wire/Let	Decimal	mm	Inch	mm	Inch	mm		
1/16		.0625	1.59	1.8750	47.63	.8750	22.23	41004	42004
	52	.0635	1.61	1.8750	47.63	.8750	22.23	41122	42122
	51	.0670	1.70	2.0000	50.80	1.0000	25.40	41121	42121
	50	.0700	1.78	2.0000	50.80	1.0000	25.40	41120	42120
	49	.0730	1.85	2.0000	50.80	1.0000	25.40	41119	42119
5/64	48	.0760	1.93	2.0000	50.80	1.0000	25.40	41118	42118
		.0781	1.98	2.0000	50.80	1.0000	25.40	41005	42005
	47	.0785	1.99	2.0000	50.80	1.0000	25.40	41117	42117
	46	.0810	2.06	2.1250	53.98	1.1250	28.58	41116	42116
	45	.0820	2.08	2.1250	53.98	1.1250	28.58	41115	42115
3/32	44	.0860	2.18	2.1250	53.98	1.1250	28.58	41114	42114
	43	.0890	2.26	2.2500	57.15	1.2500	31.75	41113	42113
	42	.0935	2.37	2.2500	57.15	1.2500	31.75	41112	42112
		.0938	2.38	2.2500	57.15	1.2500	31.75	41006	42006
	41	.0960	2.44	2.3750	60.33	1.3750	34.93	41111	42111
7/64	40	.0980	2.49	2.3750	60.33	1.3750	34.93	41110	42110
	39	.0995	2.53	2.3750	60.33	1.3750	34.93	41109	42109
	38	.1015	2.58	2.5000	63.50	1.4375	36.51	41108	42108
	37	.1040	2.64	2.5000	63.50	1.4375	36.51	41107	42107
	36	.1065	2.71	2.5000	63.50	1.4375	36.51	41106	42106
7/64		.1094	2.78	2.6250	66.68	1.5000	38.10	41007	42007
	35	.1100	2.79	2.6250	66.68	1.5000	38.10	41105	42105

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Wide Land Parabolic (continued) Styles 150WLP, 150WLP-TC (150WLPN)

INCH SIZES

Drill Diameter	Wire/Let	Decimal	mm	Overall Length		Flute Length		Style	Style
				Inch	mm	Inch	mm	150WLP Bright	150WLP-TC TiCN
1/8	34	.1110	2.82	2.6250	66.68	1.5000	38.10	41104	42104
	33	.1130	2.87	2.6250	66.68	1.5000	38.10	41103	42103
	32	.1160	2.95	2.7500	69.85	1.6250	41.28	41102	42102
	31	.1200	3.05	2.7500	69.85	1.6250	41.28	41101	42101
		.1250	3.18	2.7500	69.85	1.6250	41.28	41008	42008
9/64	30	.1285	3.26	2.7500	69.85	1.6250	41.28	41100	42100
	29	.1360	3.45	2.8750	73.03	1.7500	44.45	41099	42099
	28	.1405	3.57	2.8750	73.03	1.7500	44.45	41098	42098
		.1406	3.57	2.8750	73.03	1.7500	44.45	41009	42009
	27	.1440	3.66	3.0000	76.20	1.8750	47.63	41097	42097
5/32	26	.1470	3.73	3.0000	76.20	1.8750	47.63	41096	42096
	25	.1495	3.80	3.0000	76.20	1.8750	47.63	41095	42095
	24	.1520	3.86	3.1250	79.38	2.0000	50.80	41094	42094
	23	.1540	3.91	3.1250	79.38	2.0000	50.80	41093	42093
		.1562	3.97	3.1250	79.38	2.0000	50.80	41010	42010
11/64	22	.1570	3.99	3.1250	79.38	2.0000	50.80	41092	42092
	21	.1590	4.04	3.2500	82.55	2.1250	53.98	41091	42091
	20	.1610	4.09	3.2500	82.55	2.1250	53.98	41090	42090
	19	.1660	4.22	3.2500	82.55	2.1250	53.98	41089	42089
	18	.1695	4.31	3.2500	82.55	2.1250	53.98	41088	42088
3/16		.1719	4.37	3.2500	82.55	2.1250	53.98	41011	42011
	17	.1730	4.39	3.3750	85.73	2.1875	55.56	41087	42087
	16	.1770	4.50	3.3750	85.73	2.1875	55.56	41086	42086
	15	.1800	4.57	3.3750	85.73	2.1875	55.56	41085	42085
	14	.1820	4.62	3.3750	85.73	2.1875	55.56	41084	42084
7/32	13	.1850	4.70	3.5000	88.90	2.3125	58.74	41083	42083
		.1875	4.76	3.5000	88.90	2.3125	58.74	41012	42012
	12	.1890	4.80	3.5000	88.90	2.3125	58.74	41082	42082
	11	.1910	4.85	3.5000	88.90	2.3125	58.74	41081	42081
	10	.1935	4.91	3.6250	92.08	2.4375	61.91	41080	42080
13/64	9	.1960	4.98	3.6250	92.08	2.4375	61.91	41079	42079
	8	.1990	5.05	3.6250	92.08	2.4375	61.91	41078	42078
	7	.2010	5.11	3.6250	92.08	2.4375	61.91	41077	42077
		.2031	5.16	3.6250	92.08	2.4375	61.91	41013	42013
	6	.2040	5.18	3.7500	95.25	2.5000	63.50	41076	42076
15/64	5	.2055	5.22	3.7500	95.25	2.5000	63.50	41075	42075
	4	.2090	5.31	3.7500	95.25	2.5000	63.50	41074	42074
	3	.2130	5.41	3.7500	95.25	2.5000	63.50	41073	42073
		.2188	5.56	3.7500	95.25	2.5000	63.50	41014	42014
	2	.2210	5.61	3.8750	98.43	2.6250	66.68	41072	42072
1/4	1	.2280	5.79	3.8750	98.43	2.6250	66.68	41071	42071
	A	.2340	5.94	3.8750	98.43	2.6250	66.68	41171	42171
		.2344	5.95	3.8750	98.43	2.6250	66.68	41015	42015
	B	.2380	6.05	4.0000	101.60	2.7500	69.85	41172	42172
	C	.2420	6.15	4.0000	101.60	2.7500	69.85	41173	42173
17/64	D	.2460	6.25	4.0000	101.60	2.7500	69.85	41174	42174
	E	.2500	6.35	4.0000	101.60	2.7500	69.85	41016	42016
	F	.2570	6.53	4.1250	104.78	2.8750	73.03	41176	42176
	G	.2610	6.63	4.1250	104.78	2.8750	73.03	41177	42177
		.2656	6.75	4.1250	104.78	2.8750	73.03	41017	42017
	H	.2660	6.76	4.1250	104.78	2.8750	73.03	41178	42178

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Wide Land Parabolic (continued) Styles 150WLP, 150WLP-TC (150WLPN)

INCH SIZES

Drill Diameter				Overall Length		Flute Length		Style 150WLP	Style 150WLP-TC
Fraction	Wire/Let	Decimal	mm	Inch	mm	Inch	mm	Bright	TiCN
	I	.2720	6.91	4.1250	104.78	2.8750	73.03	41179	42179
	J	.2770	7.04	4.1250	104.78	2.8750	73.03	41180	42180
	K	.2810	7.14	4.2500	107.95	2.9375	74.61	41181	42181
9/32		.2812	7.14	4.2500	107.95	2.9375	74.61	41018	42018
	L	.2900	7.37	4.2500	107.95	2.9375	74.61	41182	42182
	M	.2950	7.49	4.3750	111.13	3.0625	77.79	41183	42183
19/64		.2969	7.54	4.3750	111.13	3.0625	77.79	41019	42019
	N	.3020	7.67	4.3750	111.13	3.0625	77.79	41184	42184
5/16		.3125	7.94	4.5000	114.30	3.1875	80.96	41020	42020
	O	.3160	8.03	4.5000	114.30	3.1875	80.96	41185	42185
	P	.3230	8.20	4.6250	117.48	3.3125	84.14	41186	42186
21/64		.3281	8.33	4.6250	117.48	3.3125	84.14	41021	42021
	Q	.3320	8.43	4.7500	120.65	3.4375	87.31	41187	42187
	R	.3390	8.61	4.7500	120.65	3.4375	87.31	41188	42188
11/32		.3438	8.73	4.7500	120.65	3.4375	87.31	41022	42022
	S	.3480	8.84	4.8750	123.83	3.5000	88.90	41189	42189
	T	.3580	9.09	4.8750	123.83	3.5000	88.90	41190	42190
23/64		.3594	9.13	4.8750	123.83	3.5000	88.90	41023	42023
	U	.3680	9.35	5.0000	127.00	3.6250	92.08	41191	42191
3/8		.3750	9.53	5.0000	127.00	3.6250	92.08	41024	42024
	V	.3770	9.58	5.0000	127.00	3.6250	92.08	41192	42192
	W	.3860	9.80	5.1250	130.18	3.7500	95.25	41193	42193
25/64		.3906	9.92	5.1250	130.18	3.7500	95.25	41025	42025
	X	.3970	10.08	5.1250	130.18	3.7500	95.25	41194	42194
	Y	.4040	10.26	5.2500	133.35	3.8750	98.43	41195	42195
13/32		.4062	10.32	5.2500	133.35	3.8750	98.43	41026	42026
	Z	.4130	10.49	5.2500	133.35	3.8750	98.43	41196	42196
27/64		.4219	10.72	5.3750	136.53	3.9375	100.01	41027	42027
7/16		.4375	11.11	5.5000	139.70	4.0625	103.19	41028	42028
29/64		.4531	11.51	5.6250	142.88	4.1875	106.36	41029	42029
15/32		.4688	11.91	5.7500	146.05	4.3125	109.54	41030	42030
31/64		.4844	12.30	5.8750	149.23	4.3750	111.13	41031	42031
1/2		.5000	12.70	6.0000	152.40	4.5000	114.30	41032	42032

Deep Hole Drilling

There are several factors to look at when drilling a deep hole. (defined as 4 or more times drill diameter). Those factors include the type of workpiece material and it's hardness. Softer materials are best drilled with a deep hole parabolic (narrow lands, wide flutes for extra chip space) design. These drills are normally used to 14 diameters without peck drilling and are available with 118 or 135° split or notched points.

Harder materials require a wide land (wider lands, narrow flutes) design. Used to 8 diameters without pecking, these drills are 135° split pointed for hard materials, are made of cobalt material and are available as standards bright or with TiAlN coatings.

Speeds and feeds can also play a big part in deep-hole drilling. The deeper the hole, the more likely the chips will pack and clog the flutes, not allowing for ample coolant. This increases the amount of heat generated and could result in early failure. Follow the manufacturers recommended operating ranges.

TECH TIP