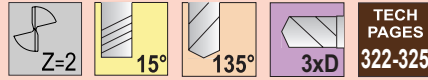


Series 1510H

NEW ITEMS

.0625" - .1575"
(1.588mm - 4.000mm)

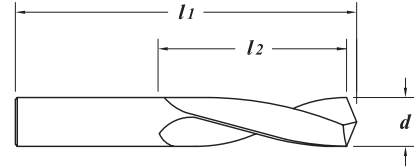


TOLERANCES		
d	+.0000" - .0005" (+.0000 - .0127mm)	
l_1	$\leq 1/8"$	+.125" - .062" (+3.175 - 1.588mm)
	$> 1/8"$	+.125" - .125" (+3.175 - 3.175mm)
l_2	$\leq 1/8"$	+.125" - .062" (+3.175 - 1.588mm)
	$> 1/8"$	+.125" - .125" (+3.175 - 3.175mm)

Recommended for titanium, inconel, hastelloy, waspaloy, and stainless steel

Slow Helix Hardlube Coating

- Solid submicron grain carbide drill
- Excellent heat resistance and lubricity
- Heavy web for extra rigidity and added strength
- Thinned point
- Live tooling recommended on lathe processes
- Uncoated - page 61



EDP#	d [†] Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
19071	.0625	1/16"	1.588	1-3/4"	5/8"	9.89	9.46	9.03	8.60
19076	.0635	#52	1.613	1-3/4"	11/16"	10.03	9.59	9.16	8.72
19081	.0670	#51	1.702	1-3/4"	11/16"	10.13	9.69	9.25	8.81
19086	.0700	#50	1.778	1-3/4"	11/16"	10.34	9.89	9.44	8.99
19091	.0730	#49	1.854	1-3/4"	11/16"	10.55	10.09	9.63	9.17
19096	.0760	#48	1.930	1-3/4"	11/16"	10.81	10.34	9.87	9.40
19101	.0781	5/64"	1.984	1-3/4"	11/16"	11.14	10.66	10.17	9.69
19106	.0785	#47	1.994	1-3/4"	3/4"	11.44	10.95	10.45	9.95
19116	.0787	#46	2.000	45	19	11.59	11.09	10.58	10.08
19121	.0810	#46	2.057	1-3/4"	3/4"	11.74	11.23	10.72	10.21
19126	.0820	#45	2.083	1-3/4"	3/4"	12.04	11.52	10.99	10.47
NEW 19128	.0827	#44	2.100	45	19	12.13	11.61	11.08	10.55
19131	.0860	#44	2.184	1-3/4"	3/4"	12.35	11.81	11.28	10.74
19136	.0890	#43	2.261	1-3/4"	3/4"	12.66	12.11	11.56	11.01
NEW 19138	.0906	#42	2.300	45	19	12.70	12.14	11.59	11.04
19141	.0935	#42	2.375	1-3/4"	3/4"	12.80	12.24	11.69	11.13
19146	.0938	3/32"	2.383	1-3/4"	3/4"	13.06	12.50	11.93	11.36
NEW 19148	.0945	#41	2.400	46	21	13.11	12.54	11.97	11.40
19151	.0960	#41	2.438	1-13/16"	13/16"	13.14	12.57	12.00	11.43
19156	.0980	#40	2.489	1-13/16"	13/16"	13.29	12.72	12.14	11.56
19161	.0984	#39	2.500	46	21	13.37	12.79	12.21	11.63
19166	.0995	#39	2.527	1-13/16"	13/16"	13.44	12.86	12.27	11.69
19171	.1015	#38	2.578	1-13/16"	13/16"	13.51	12.93	12.34	11.75
19176	.1040	#37	2.642	1-13/16"	13/16"	13.59	13.00	12.41	11.82
19181	.1065	#36	2.705	1-13/16"	13/16"	13.70	13.10	12.51	11.91
19186	.1094	7/64"	2.779	1-13/16"	13/16"	13.78	13.18	12.58	11.98
19191	.1100	#35	2.794	1-7/8"	7/8"	13.83	13.23	12.63	12.03
19196	.1110	#34	2.819	1-7/8"	7/8"	13.97	13.37	12.76	12.15
19201	.1130	#33	2.870	1-7/8"	7/8"	14.05	13.44	12.83	12.22
19206	.1160	#32	2.946	1-7/8"	7/8"	14.15	13.53	12.92	12.30
19211	.1181	#31	3.000	48	22	14.27	13.65	13.03	12.41
19216	.1200	#31	3.048	1-7/8"	7/8"	14.36	13.74	13.11	12.49
NEW 19218	.1220	#30	3.100	48	22	14.43	13.81	13.18	12.55
19221	.1250	1/8"	3.175	1-7/8"	7/8"	14.52	13.89	13.26	12.63
19226	.1285	#30	3.264	1-15/16"	15/16"	14.85	14.20	13.56	12.91
19231	.1360	#29	3.454	1-15/16"	15/16"	15.17	14.51	13.85	13.19
19236	.1378	#28	3.500	49	24	15.59	14.92	14.24	13.56
19241	.1405	#28	3.569	1-15/16"	15/16"	15.78	15.09	14.41	13.72
19246	.1406	9/64"	3.571	1-15/16"	15/16"	15.89	15.20	14.51	13.82
19251	.1440	#27	3.658	2-1/16"	1"	17.14	16.39	15.65	14.90
19256	.1470	#26	3.734	2-1/16"	1"	17.30	16.54	15.79	15.04
19261	.1495	#25	3.797	2-1/16"	1"	17.50	16.74	15.98	15.22
19266	.1520	#24	3.861	2-1/16"	1"	17.53	16.76	16.00	15.24
19271	.1540	#23	3.912	2-1/16"	1"	17.62	16.85	16.09	15.32
19276	.1562	5/32"	3.967	2-1/16"	1"	17.71	16.94	16.17	15.40
19281	.1570	#22	3.988	2-1/8"	1-1/16"	18.68	17.86	17.05	16.24
19286	.1575	#21	4.000	54	27	18.88	18.06	17.24	16.42

EDP#	d^+ Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
19291	.1590	#21	4.039	2-1/8"	1-1/16"	19.10	18.27	17.44	16.61
19296	.1610	#20	4.089	2-1/8"	1-1/16"	19.24	18.40	17.57	16.73
19301	.1660	#19	4.216	2-1/8"	1-1/16"	19.93	19.06	18.20	17.33
19306	.1695	#18	4.305	2-1/8"	1-1/16"	20.14	19.26	18.39	17.51
19311	.1719	11/64"	4.366	2-1/8"	1-1/16"	20.52	19.62	18.73	17.84
19316	.1730	#17	4.394	2-3/16"	1-1/8"	20.77	19.87	18.96	18.06
19321	.1770	#16	4.496	2-3/16"	1-1/8"	20.99	20.08	19.16	18.25
19326	.1772		4.500	56	29	21.07	20.15	19.24	18.32
19331	.1800	#15	4.572	2-3/16"	1-1/8"	21.16	20.24	19.32	18.40
19336	.1820	#14	4.623	2-3/16"	1-1/8"	21.60	20.66	19.72	18.78
19341	.1850	#13	4.700	2-3/16"	1-1/8"	21.76	20.81	19.87	18.92
19346	.1875	3/16"	4.763	2-3/16"	1-1/8"	21.82	20.87	19.92	18.97
19351	.1890	#12	4.801	2-1/4"	1-3/16"	23.99	22.95	21.90	20.86
19356	.1910	#11	4.851	2-1/4"	1-3/16"	24.24	23.19	22.13	21.08
19361	.1935	#10	4.915	2-1/4"	1-3/16"	25.19	24.09	23.00	21.90
19366	.1960	#9	4.978	2-1/4"	1-3/16"	25.75	24.63	23.51	22.39
19371	.1969		5.000	57	30	25.88	24.75	23.63	22.50
19376	.1990	#8	5.055	2-1/4"	1-3/16"	26.01	24.88	23.75	22.62
19381	.2010	#7	5.105	2-1/4"	1-3/16"	26.68	25.52	24.36	23.20
19386	.2031	13/64"	5.159	2-1/4"	1-3/16"	26.84	25.67	24.51	23.34
19391	.2040	#6	5.182	2-3/8"	1-1/4"	27.32	26.14	24.95	23.76
19396	.2055	#5	5.220	2-3/8"	1-1/4"	27.82	26.61	25.40	24.19
19401	.2090	#4	5.309	2-3/8"	1-1/4"	28.22	26.99	25.77	24.54
19406	.2130	#3	5.410	2-3/8"	1-1/4"	28.67	27.42	26.18	24.93
19411	.2165		5.500	60	32	28.88	27.62	26.37	25.11
19416	.2188	7/32"	5.558	2-3/8"	1-1/4"	29.05	27.79	26.52	25.26
19421	.2210	#2	5.613	2-7/16"	1-5/16"	29.66	28.37	27.08	25.79
19426	.2280	#1	5.791	2-7/16"	1-5/16"	29.83	28.53	27.24	25.94
19431	.2340	A	5.944	2-7/16"	1-5/16"	29.90	28.60	27.30	26.00
19436	.2344	15/64"	5.954	2-7/16"	1-5/16"	29.93	28.63	27.33	26.03
19441	.2362		6.000	64	35	30.03	28.72	27.42	26.11
19446	.2380	B	6.045	2-1/2"	1-3/8"	30.13	28.82	27.51	26.20
19451	.2420	C	6.147	2-1/2"	1-3/8"	30.31	29.00	27.68	26.36
19456	.2460	D	6.248	2-1/2"	1-3/8"	30.52	29.19	27.87	26.54
19461	.2500	1/4" / E	6.350	2-1/2"	1-3/8"	30.71	29.37	28.04	26.70
19466	.2559		6.500	67	37	34.16	32.67	31.19	29.70
19471	.2570	F	6.528	2-5/8"	1-7/16"	34.74	33.23	31.72	30.21
19476	.2610	G	6.629	2-5/8"	1-7/16"	35.32	33.78	32.25	30.71
19481	.2656	17/64"	6.746	2-5/8"	1-7/16"	35.90	34.34	32.78	31.22
19486	.2660	H	6.756	2-11/16"	1-1/2"	36.74	35.15	33.55	31.95
19491	.2720	I	6.909	2-11/16"	1-1/2"	37.09	35.48	33.86	32.25
19496	.2756		7.000	68	38	37.34	35.72	34.09	32.47
19501	.2770	J	7.036	2-11/16"	1-1/2"	37.63	35.99	34.36	32.72
19506	.2810	K	7.137	2-11/16"	1-1/2"	37.90	36.26	34.61	32.96
19511	.2812	9/32"	7.142	2-11/16"	1-1/2"	38.03	36.38	34.72	33.07
19516	.2900	L	7.366	2-3/4"	1-9/16"	39.22	37.51	35.81	34.10
19521	.2950	M	7.493	2-3/4"	1-9/16"	41.53	39.72	37.92	36.11
19526	.2953		7.500	70	40	41.53	39.72	37.92	36.11
19531	.2969	19/64"	7.541	2-3/4"	1-9/16"	41.70	39.89	38.07	36.26
19536	.3020	N	7.671	2-15/16"	1-5/8"	43.62	41.72	39.83	37.93
19541	.3125	5/16"	7.938	2-15/16"	1-5/8"	43.76	41.86	39.95	38.05
19546	.3150		8.000	75	43	46.47	44.45	42.43	40.41
19551	.3160	O	8.026	2-15/16"	1-11/16"	46.47	44.45	42.43	40.41
19556	.3230	P	8.204	2-15/16"	1-11/16"	46.82	44.78	42.75	40.71
19561	.3281	21/64"	8.334	2-15/16"	1-11/16"	47.06	45.01	42.97	40.92
19566	.3320	Q	8.433	3"	1-11/16"	48.01	45.93	43.84	41.75
19571	.3346		8.500	76	43	48.40	46.30	44.19	42.09

continued →

Series 1510H (continued)

.3390" - .6299"
(8.611mm - 16.000mm)

EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
19576	.3390	R	8.611	3"	1-11/16"	49.70	47.54	45.38	43.22
19581	.3438	11/32"	8.733	3"	1-11/16"	51.47	49.24	47.00	44.76
19586	.3480	S	8.839	3-1/16"	1-3/4"	54.36	52.00	49.63	47.27
19591	.3543		9.000	78	44	54.67	52.29	49.92	47.54
19596	.3580	T	9.093	3-1/16"	1-3/4"	54.80	52.42	50.03	47.65
19601	.3594	23/64"	9.129	3-1/16"	1-3/4"	55.14	52.75	50.35	47.95
19606	.3680	U	9.347	3-1/8"	1-13/16"	59.56	56.97	54.38	51.79
19611	.3740		9.500	79	46	60.04	57.43	54.82	52.21
19616	.3750	3/8"	9.525	3-1/8"	1-13/16"	60.44	57.82	55.19	52.56
19621	.3770	V	9.576	3-1/4"	1-7/8"	62.71	59.98	57.26	54.53
19626	.3860	W	9.804	3-1/4"	1-7/8"	63.80	61.03	58.25	55.48
19631	.3906	25/64"	9.921	3-1/4"	1-7/8"	64.60	61.79	58.98	56.17
19636	.3937		10.000	84	49	66.56	63.67	60.77	57.88
19641	.3970	X	10.084	3-5/16"	1-15/16"	68.24	65.27	62.31	59.34
19646	.4040	Y	10.262	3-5/16"	1-15/16"	68.71	65.73	62.74	59.75
19651	.4062	13/32"	10.317	3-5/16"	1-15/16"	70.81	67.73	64.65	61.57
19656	.4130	Z	10.490	3-3/8"	2"	71.47	68.37	65.26	62.15
19661	.4134		10.500	86	51	71.47	68.37	65.26	62.15
19666	.4219	27/64"	10.716	3-3/8"	2"	72.14	69.00	65.87	62.73
19671	.4331		11.000	87	52	77.50	74.13	70.76	67.39
19676	.4375	7/16"	11.113	3-7/16"	2-1/16"	77.50	74.13	70.76	67.39
19681	.4528		11.500	91	54	83.21	79.60	75.98	72.36
19686	.4531	29/64"	11.509	3-9/16"	2-1/8"	83.21	79.60	75.98	72.36
19691	.4688	15/32"	11.908	3-5/8"	2-1/8"	87.43	83.63	79.83	76.03
19696	.4724		12.000	94	56	87.72	83.91	80.09	76.28
19701	.4844	31/64"	12.304	3-11/16"	2-3/16"	88.32	84.48	80.64	76.80
19706	.4921		12.500	95	56	89.22	85.34	81.46	77.58
19711	.5000	1/2"	12.700	3-3/4"	2-1/4"	89.79	85.89	81.98	78.08
19716	.5118		13.000	107	60	118.91	113.74	108.57	103.40
19721	.5156	33/64"	13.096	4-1/4"	2-3/8"	121.70	116.41	111.12	105.83
19726	.5312	17/32"	13.492	4-1/4"	2-3/8"	124.50	119.09	113.67	108.26
19731	.5315		13.500	107	60	127.31	121.77	116.24	110.70
19736	.5469	35/64"	13.891	4-1/4"	2-3/8"	130.09	124.43	118.78	113.12
19741	.5512		14.000	107	60	132.93	127.15	121.37	115.59
19746	.5625	9/16"	14.287	4-1/2"	2-1/2"	143.65	137.40	131.16	124.91
19751	.5709		14.500	115	65	146.34	139.98	133.61	127.25
19756	.5781	37/64"	14.683	4-1/2"	2-1/2"	149.03	142.55	136.07	129.59
19761	.5906		15.000	115	65	151.77	145.17	138.57	131.97
19766	.5938	19/32"	15.082	4-1/2"	2-1/2"	152.56	145.93	139.29	132.66
19771	.6094	39/64"	15.478	4-1/2"	2-1/2"	153.34	146.67	140.01	133.34
19776	.6102		15.500	115	65	154.12	147.42	140.72	134.02
19781	.6250	5/8"	15.875	4-1/2"	2-1/2"	154.92	148.18	141.45	134.71
19786	.6299		16.000	115	65	158.67	151.77	144.87	137.97