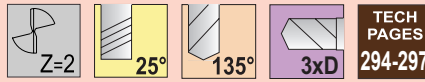


TOLERANCES

<i>d</i>	+.0000" - .0005" (+.0000 - .0127mm)	
<i>l1</i>	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)
<i>l2</i>	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)

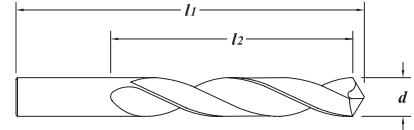


Series 1520

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

General purpose for all material groups

- Solid submicron grain carbide drill
- No spotting required in most applications
- 4-facet self-centering point
- Live tooling recommended on lathe processes
- Hardlube Coating - page 64



EDP#	<i>d</i> † Diameter		<i>l1</i> Overall Length	<i>l2</i> Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
77165	.0625	1/16"	1.588	1-3/4"	5/8"	6.79	6.49	6.20	5.90
77170	.0635	#52	1.613	1-3/4"	11/16"	6.89	6.59	6.29	5.99
77175	.0670	#51	1.702	1-3/4"	11/16"	6.99	6.69	6.38	6.08
77180	.0700	#50	1.778	1-3/4"	11/16"	7.16	6.85	6.54	6.23
77185	.0730	#49	1.854	1-3/4"	11/16"	7.35	7.03	6.71	6.39
77190	.0760	#48	1.930	1-3/4"	11/16"	7.59	7.26	6.93	6.60
77195	.0781	5/64"	1.984	1-3/4"	11/16"	7.88	7.54	7.19	6.85
77200	.0785	#47	1.994	1-3/4"	3/4"	8.14	7.79	7.43	7.08
77205	.0787		2.000	45	19	8.27	7.91	7.55	7.19
77210	.0810	#46	2.057	1-3/4"	3/4"	8.40	8.03	7.67	7.30
77215	.0820	#45	2.083	1-3/4"	3/4"	8.65	8.27	7.90	7.52
77220	.0860	#44	2.184	1-3/4"	3/4"	8.94	8.55	8.16	7.77
77225	.0890	#43	2.261	1-3/4"	3/4"	9.19	8.79	8.39	7.99
77230	.0935	#42	2.375	1-3/4"	3/4"	9.32	8.91	8.51	8.10
77235	.0938	3/32"	2.383	1-3/4"	3/4"	9.53	9.12	8.70	8.29
77240	.0960	#41	2.438	1-13/16"	13/16"	9.61	9.20	8.78	8.36
77245	.0980	#40	2.489	1-13/16"	13/16"	9.76	9.34	8.91	8.49
77250	.0984		2.500	46	21	9.81	9.38	8.96	8.53
77255	.0995	#39	2.527	1-13/16"	13/16"	9.86	9.43	9.00	8.57
77260	.1015	#38	2.578	1-13/16"	13/16"	9.95	9.52	9.08	8.65
77265	.1040	#37	2.642	1-13/16"	13/16"	10.02	9.58	9.15	8.71
77270	.1065	#36	2.705	1-13/16"	13/16"	10.09	9.65	9.21	8.77
77275	.1094	7/64"	2.779	1-13/16"	13/16"	10.15	9.71	9.27	8.83
77280	.1100	#35	2.794	1-7/8"	7/8"	10.22	9.78	9.33	8.89
77285	.1110	#34	2.819	1-7/8"	7/8"	10.34	9.89	9.44	8.99
77290	.1130	#33	2.870	1-7/8"	7/8"	10.41	9.96	9.50	9.05
77295	.1160	#32	2.946	1-7/8"	7/8"	10.48	10.02	9.57	9.11
77300	.1181		3.000	48	22	10.60	10.14	9.68	9.22
77305	.1200	#31	3.048	1-7/8"	7/8"	10.67	10.21	9.74	9.28
77310	.1250	1/8"	3.175	1-7/8"	7/8"	10.79	10.32	9.85	9.38
77315	.1285	#30	3.264	1-15/16"	15/16"	11.09	10.60	10.12	9.64
77320	.1360	#29	3.454	1-15/16"	15/16"	11.37	10.88	10.38	9.89
77325	.1378		3.500	49	24	11.74	11.23	10.72	10.21
77330	.1405	#28	3.569	1-15/16"	15/16"	11.90	11.39	10.87	10.35
77335	.1406	9/64"	3.571	1-15/16"	15/16"	12.02	11.50	10.97	10.45
77340	.1440	#27	3.658	2-1/16"	1"	13.08	12.51	11.94	11.37
77345	.1470	#26	3.734	2-1/16"	1"	13.21	12.64	12.06	11.49
77350	.1495	#25	3.797	2-1/16"	1"	13.39	12.80	12.22	11.64
77355	.1520	#24	3.861	2-1/16"	1"	13.41	12.83	12.24	11.66
77360	.1540	#23	3.912	2-1/16"	1"	13.50	12.91	12.33	11.74
77365	.1562	5/32"	3.967	2-1/16"	1"	13.59	13.00	12.41	11.82
77370	.1570	#22	3.988	2-1/8"	1-1/16"	14.44	13.82	13.19	12.56
77375	.1575		4.000	54	27	14.63	13.99	13.36	12.72

continued →

Series 1520 (continued)

.1590" - .3346"
(4.039mm - 8.500mm)

DRILLS

EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
77380	.1590	#21	4.039	2-1/8"	1-1/16"	14.80	14.16	13.51	12.87
77385	.1610	#20	4.089	2-1/8"	1-1/16"	14.90	14.26	13.61	12.96
77390	.1660	#19	4.216	2-1/8"	1-1/16"	15.51	14.84	14.16	13.49
77395	.1695	#18	4.305	2-1/8"	1-1/16"	15.71	15.03	14.34	13.66
77400	.1719	11/64"	4.366	2-1/8"	1-1/16"	16.03	15.33	14.64	13.94
77405	.1730	#17	4.394	2-3/16"	1-1/8"	16.25	15.54	14.84	14.13
77410	.1770	#16	4.496	2-3/16"	1-1/8"	16.43	15.72	15.00	14.29
77415	.1772		4.500	56	29	16.51	15.80	15.08	14.36
77420	.1800	#15	4.572	2-3/16"	1-1/8"	16.58	15.86	15.14	14.42
77425	.1820	#14	4.623	2-3/16"	1-1/8"	16.96	16.23	15.49	14.75
77430	.1850	#13	4.700	2-3/16"	1-1/8"	17.10	16.36	15.61	14.87
77435	.1875	3/16"	4.763	2-3/16"	1-1/8"	17.17	16.42	15.68	14.93
77440	.1890	#12	4.801	2-1/4"	1-3/16"	17.73	16.96	16.19	15.42
77445	.1910	#11	4.851	2-1/4"	1-3/16"	17.93	17.15	16.37	15.59
77450	.1935	#10	4.915	2-1/4"	1-3/16"	18.78	17.96	17.15	16.33
77455	.1960	#9	4.978	2-1/4"	1-3/16"	19.25	18.41	17.58	16.74
77460	.1969		5.000	57	30	19.37	18.52	17.68	16.84
77465	.1990	#8	5.055	2-1/4"	1-3/16"	19.49	18.65	17.80	16.95
77470	.2010	#7	5.105	2-1/4"	1-3/16"	20.07	19.20	18.32	17.45
77475	.2031	13/64"	5.159	2-1/4"	1-3/16"	20.22	19.34	18.46	17.58
77480	.2040	#6	5.182	2-3/8"	1-1/4"	20.63	19.73	18.84	17.94
77485	.2055	#5	5.220	2-3/8"	1-1/4"	21.06	20.14	19.23	18.31
77490	.2090	#4	5.309	2-3/8"	1-1/4"	21.42	20.49	19.56	18.63
77495	.2130	#3	5.410	2-3/8"	1-1/4"	21.79	20.85	19.90	18.95
77500	.2165		5.500	60	32	21.97	21.01	20.06	19.10
77505	.2188	7/32"	5.558	2-3/8"	1-1/4"	22.13	21.16	20.20	19.24
77510	.2210	#2	5.613	2-7/16"	1-5/16"	22.67	21.68	20.70	19.71
77515	.2280	#1	5.791	2-7/16"	1-5/16"	22.80	21.81	20.82	19.83
77520	.2340	A	5.944	2-7/16"	1-5/16"	22.85	21.86	20.86	19.87
77525	.2344	15/64"	5.954	2-7/16"	1-5/16"	22.91	21.91	20.92	19.92
77530	.2362		6.000	64	35	22.99	21.99	20.99	19.99
77535	.2380	B	6.045	2-1/2"	1-3/8"	23.07	22.07	21.06	20.06
77540	.2420	C	6.147	2-1/2"	1-3/8"	23.24	22.23	21.22	20.21
77545	.2460	D	6.248	2-1/2"	1-3/8"	23.41	22.40	21.38	20.36
77550	.2500	1/4" / E	6.350	2-1/2"	1-3/8"	23.58	22.55	21.53	20.50
77555	.2559		6.500	67	37	24.14	23.09	22.04	20.99
77560	.2570	F	6.528	2-5/8"	1-7/16"	24.66	23.58	22.51	21.44
77565	.2610	G	6.629	2-5/8"	1-7/16"	25.13	24.04	22.94	21.85
77570	.2656	17/64"	6.746	2-5/8"	1-7/16"	25.66	24.54	23.43	22.31
77575	.2660	H	6.756	2-11/16"	1-1/2"	26.38	25.23	24.09	22.94
77580	.2720	I	6.909	2-11/16"	1-1/2"	26.69	25.53	24.37	23.21
77585	.2756		7.000	68	38	26.90	25.73	24.56	23.39
77590	.2770	J	7.036	2-11/16"	1-1/2"	27.16	25.98	24.80	23.62
77595	.2810	K	7.137	2-11/16"	1-1/2"	27.40	26.21	25.02	23.83
77600	.2812	9/32"	7.142	2-11/16"	1-1/2"	27.53	26.33	25.14	23.94
77605	.2900	L	7.366	2-3/4"	1-9/16"	28.55	27.31	26.07	24.83
77610	.2950	M	7.493	2-3/4"	1-9/16"	30.56	29.23	27.90	26.57
77615	.2953		7.500	70	40	30.56	29.23	27.90	26.57
77620	.2969	19/64"	7.541	2-3/4"	1-9/16"	30.71	29.37	28.04	26.70
77625	.3020	N	7.671	2-15/16"	1-5/8"	32.36	30.95	29.55	28.14
77630	.3125	5/16"	7.938	2-15/16"	1-5/8"	32.48	31.06	29.65	28.24
77635	.3150		8.000	75	43	34.83	33.32	31.80	30.29
77640	.3160	O	8.026	2-15/16"	1-11/16"	34.83	33.32	31.80	30.29
77645	.3230	P	8.204	2-15/16"	1-11/16"	35.14	33.62	32.09	30.56
77650	.3281	21/64"	8.334	2-15/16"	1-11/16"	35.36	33.83	32.29	30.75
77655	.3320	Q	8.433	3"	1-11/16"	36.18	34.61	33.03	31.46
77660	.3346		8.500	76	43	36.51	34.93	33.34	31.75

EDP#	d^+ Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
77665	.3390	R	8.611	3"	1-11/16"	37.67	36.04	34.40	32.76
77670	.3438	11/32"	8.733	3"	1-11/16"	39.22	37.51	35.81	34.10
77675	.3480	S	8.839	3-1/16"	1-3/4"	39.74	38.02	36.29	34.56
77680	.3543		9.000	78	44	39.97	38.24	36.50	34.76
77685	.3580	T	9.093	3-1/16"	1-3/4"	40.14	38.39	36.65	34.90
77690	.3594	23/64"	9.129	3-1/16"	1-3/4"	40.41	38.65	36.90	35.14
77695	.3680	U	9.347	3-1/8"	1-13/16"	44.26	42.34	40.41	38.49
77700	.3740		9.500	79	46	44.68	42.74	40.79	38.85
77705	.3750	3/8"	9.525	3-1/8"	1-13/16"	45.02	43.07	41.11	39.15
77710	.3770	V	9.576	3-1/4"	1-7/8"	45.87	43.88	41.88	39.89
77715	.3860	W	9.804	3-1/4"	1-7/8"	46.84	44.80	42.77	40.73
77720	.3906	25/64"	9.921	3-1/4"	1-7/8"	47.54	45.47	43.41	41.34
77725	.3937		10.000	84	49	49.25	47.11	44.97	42.83
77730	.3970	X	10.084	3-5/16"	1-15/16"	50.69	48.49	46.28	44.08
77740	.4062	13/32"	10.317	3-5/16"	1-15/16"	52.96	50.66	48.35	46.05
77745	.4130	Z	10.490	3-3/8"	2"	53.53	51.21	48.88	46.55
77750	.4134		10.500	86	51	53.53	51.21	48.88	46.55
77755	.4219	27/64"	10.716	3-3/8"	2"	54.11	51.76	49.40	47.05
77760	.4331		11.000	87	52	58.75	56.20	53.64	51.09
77765	.4375	7/16"	11.113	3-7/16"	2-1/16"	58.75	56.20	53.64	51.09
77770	.4528		11.500	91	54	63.74	60.97	58.20	55.43
77775	.4531	29/64"	11.509	3-9/16"	2-1/8"	63.74	60.97	58.20	55.43
77780	.4688	15/32"	11.908	3-5/8"	2-1/8"	67.42	64.49	61.56	58.63
77785	.4724		12.000	94	56	67.68	64.74	61.79	58.85
77790	.4844	31/64"	12.304	3-11/16"	2-3/16"	68.18	65.22	62.25	59.29
77795	.4921		12.500	95	56	68.97	65.97	62.97	59.97
77800	.5000	1/2"	12.700	3-3/4"	2-1/4"	69.46	66.44	63.42	60.40

*Drill and Reamer Manufacturing*