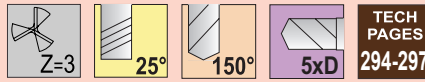


**TOLERANCES**

<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)

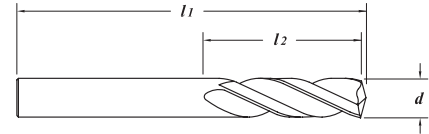


**Series 1100**

.1094" - .2040"  
(2.779mm - 5.182mm)

Recommended for cast iron, tungsten, and materials with high silicon content

- Solid submicron grain carbide drill
- Self-centering drill point
- Near reamer finishes
- Can be used as a core drill
- Tighter tolerance holes
- Improved roundness and straightness
- Live tooling recommended on lathe processes
- Hardlube Coating - page 86



DRILLS

EDP#	<i>d</i> †		<i>l1</i>	<i>l2</i>	1-11	12-24	25-49	50-100	
	Decimal	Diameter Metric							
90275	.1094	7/64"	2.779	2-1/4"	1-1/4"	12.64	12.09	11.54	10.99
90280	.1100	#35	2.794	2-1/4"	1-1/4"	12.77	12.21	11.66	11.10
90285	.1110	#34	2.819	2-1/4"	1-1/4"	12.94	12.38	11.81	11.25
90290	.1130	#33	2.870	2-1/4"	1-1/4"	13.14	12.57	12.00	11.43
90295	.1160	#32	2.946	2-1/4"	1-1/4"	13.32	12.74	12.16	11.58
90300	.1181		3.000	57	32	13.42	12.84	12.25	11.67
90305	.1200	#31	3.048	2-1/4"	1-1/4"	13.51	12.93	12.34	11.75
90310	.1250	1/8"	3.175	2-1/4"	1-1/4"	13.70	13.10	12.51	11.91
90315	.1285	#30	3.264	2-1/4"	1-1/4"	14.03	13.42	12.81	12.20
90320	.1360	#29	3.454	2-1/2"	1-3/8"	14.47	13.84	13.21	12.58
90325	.1378		3.500	63	35	14.93	14.28	13.63	12.98
90330	.1405	#28	3.569	2-1/2"	1-3/8"	15.10	14.44	13.79	13.13
90335	.1406	9/64"	3.571	2-1/2"	1-3/8"	15.27	14.61	13.94	13.28
90340	.1440	#27	3.658	2-1/2"	1-3/8"	15.88	15.19	14.50	13.81
90345	.1470	#26	3.734	2-1/2"	1-3/8"	16.10	15.40	14.70	14.00
90350	.1495	#25	3.797	2-1/2"	1-3/8"	16.24	15.53	14.83	14.12
90355	.1520	#24	3.861	2-1/2"	1-3/8"	16.27	15.57	14.86	14.15
90360	.1540	#23	3.912	2-1/2"	1-3/8"	16.42	15.71	14.99	14.28
90365	.1562	5/32"	3.967	2-1/2"	1-3/8"	16.49	15.77	15.06	14.34
90370	.1570	#22	3.988	2-1/2"	1-3/8"	17.54	16.78	16.01	15.25
90375	.1575		4.000	63	35	17.54	16.78	16.01	15.25
90380	.1590	#21	4.039	2-1/2"	1-3/8"	17.95	17.17	16.39	15.61
90385	.1610	#20	4.089	2-1/2"	1-3/8"	17.95	17.17	16.39	15.61
90390	.1660	#19	4.216	2-3/4"	1-5/8"	18.10	17.31	16.53	15.74
90395	.1695	#18	4.305	2-3/4"	1-5/8"	18.22	17.42	16.63	15.84
90400	.1719	11/64"	4.366	2-3/4"	1-5/8"	18.33	17.53	16.74	15.94
90405	.1730	#17	4.394	2-3/4"	1-5/8"	19.18	18.35	17.51	16.68
90410	.1770	#16	4.496	2-3/4"	1-5/8"	19.38	18.54	17.69	16.85
90415	.1772		4.500	70	41	19.48	18.63	17.79	16.94
90420	.1800	#15	4.572	2-3/4"	1-5/8"	19.57	18.72	17.87	17.02
90425	.1820	#14	4.623	2-3/4"	1-5/8"	20.01	19.14	18.27	17.40
90430	.1850	#13	4.700	2-3/4"	1-5/8"	20.13	19.25	18.38	17.50
90435	.1875	3/16"	4.763	2-3/4"	1-5/8"	20.13	19.25	18.38	17.50
90440	.1890	#12	4.801	2-3/4"	1-5/8"	20.27	19.39	18.51	17.63
90445	.1910	#11	4.851	2-3/4"	1-5/8"	20.50	19.61	18.72	17.83
90450	.1935	#10	4.915	2-3/4"	1-5/8"	21.46	20.53	19.59	18.66
90455	.1960	#9	4.978	3"	1-3/4"	21.99	21.03	20.08	19.12
90460	.1969		5.000	76	44	22.13	21.16	20.20	19.24
90465	.1990	#8	5.055	3"	1-3/4"	22.29	21.32	20.35	19.38
90470	.2010	#7	5.105	3"	1-3/4"	22.95	21.96	20.96	19.96
90475	.2031	13/64"	5.159	3"	1-3/4"	23.82	22.78	21.75	20.71
90480	.2040	#6	5.182	3"	1-3/4"	23.97	22.92	21.88	20.84

continued →

# Series 1100 (continued)

.2055" - .4134"  
(5.220mm - 10.500mm)

DRILLS

EDP#	$d^{\dagger}$ Diameter		$l_1$ Overall Length	$l_2$ Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
90485	.2055	#5	5.220	3"	1-3/4"	24.07	23.02	21.98	20.93
90490	.2090	#4	5.309	3"	1-3/4"	24.48	23.42	22.35	21.29
90495	.2130	#3	5.410	3"	1-3/4"	24.90	23.82	22.73	21.65
90500	.2165		5.500	76	44	25.10	24.01	22.92	21.83
90505	.2188	7/32"	5.558	3"	1-3/4"	25.31	24.21	23.11	22.01
90510	.2210	#2	5.613	3"	1-3/4"	25.92	24.79	23.67	22.54
90515	.2280	#1	5.791	3"	1-3/4"	26.06	24.93	23.79	22.66
90520	.2340	A	5.944	3-1/4"	2"	26.35	25.20	24.06	22.91
90525	.2344	15/64"	5.954	3-1/4"	2"	26.45	25.30	24.15	23.00
90530	.2362		6.000	82	50	26.53	25.38	24.22	23.07
90535	.2380	B	6.045	3-1/4"	2"	26.63	25.48	24.32	23.16
90540	.2420	C	6.147	3-1/4"	2"	26.82	25.65	24.49	23.32
90545	.2460	D	6.248	3-1/4"	2"	27.01	25.84	24.66	23.49
90550	.2500	1/4" / E	6.350	3-1/4"	2"	27.21	26.03	24.84	23.66
90555	.2559		6.500	82	50	27.88	26.66	25.45	24.24
90560	.2570	F	6.528	3-1/4"	2"	28.46	27.23	25.99	24.75
90565	.2610	G	6.629	3-1/2"	2-1/8"	29.95	28.64	27.34	26.04
90570	.2656	17/64"	6.746	3-1/2"	2-1/8"	30.53	29.21	27.88	26.55
90575	.2660	H	6.756	3-1/2"	2-1/8"	31.41	30.04	28.68	27.31
90580	.2720	I	6.909	3-1/2"	2-1/8"	31.80	30.42	29.03	27.65
90585	.2756		7.000	88	54	32.03	30.64	29.24	27.85
90590	.2770	J	7.036	3-1/2"	2-1/8"	32.30	30.90	29.49	28.09
90595	.2810	K	7.137	3-1/2"	2-1/8"	32.60	31.19	29.77	28.35
90600	.2812	9/32"	7.142	3-1/2"	2-1/8"	33.76	32.30	30.83	29.36
90605	.2900	L	7.366	3-1/2"	2-1/8"	35.02	33.50	31.97	30.45
90610	.2950	M	7.493	3-3/4"	2-3/8"	37.18	35.56	33.95	32.33
90615	.2953		7.500	95	60	37.18	35.56	33.95	32.33
90620	.2969	19/64"	7.541	3-3/4"	2-3/8"	37.18	35.56	33.95	32.33
90625	.3020	N	7.671	3-3/4"	2-3/8"	37.46	35.83	34.20	32.57
90630	.3125	5/16"	7.938	3-3/4"	2-3/8"	37.50	35.87	34.24	32.61
90635	.3150		8.000	95	60	40.24	38.49	36.74	34.99
90640	.3160	O	8.026	3-3/4"	2-3/8"	40.24	38.49	36.74	34.99
90645	.3230	P	8.204	3-3/4"	2-3/8"	40.24	38.49	36.74	34.99
90650	.3281	21/64"	8.334	4"	2-1/2"	42.09	40.26	38.43	36.60
90655	.3320	Q	8.433	4"	2-1/2"	43.09	41.22	39.34	37.47
90660	.3346		8.500	101	63	43.47	41.58	39.69	37.80
90665	.3390	R	8.611	4"	2-1/2"	44.82	42.87	40.92	38.97
90670	.3438	11/32"	8.733	4"	2-1/2"	46.69	44.66	42.63	40.60
90675	.3480	S	8.839	4"	2-1/2"	48.24	46.15	44.05	41.95
90680	.3543		9.000	101	63	48.56	46.45	44.34	42.23
90690	.3594	23/64"	9.129	4-1/4"	2-3/4"	49.36	47.21	45.07	42.92
90695	.3680	U	9.347	4-1/4"	2-3/4"	52.70	50.41	48.12	45.83
90700	.3740		9.500	107	70	53.60	51.27	48.94	46.61
90705	.3750	3/8"	9.525	4-1/4"	2-3/4"	53.60	51.27	48.94	46.61
90710	.3770	V	9.576	4-1/4"	2-3/4"	55.65	53.23	50.81	48.39
90715	.3860	W	9.804	4-1/2"	2-7/8"	59.25	56.67	54.10	51.52
90720	.3906	25/64"	9.921	4-1/2"	2-7/8"	60.12	57.51	54.89	52.28
90725	.3937		10.000	114	73	62.31	59.60	56.89	54.18
90730	.3970	X	10.084	4-1/2"	2-7/8"	64.16	61.37	58.58	55.79
90735	.4040	Y	10.262	4-1/2"	2-7/8"	64.64	61.83	59.02	56.21
90740	.4062	13/32"	10.317	4-1/2"	2-7/8"	67.00	64.09	61.17	58.26
90745	.4130	Z	10.490	4-1/2"	2-7/8"	67.69	64.75	61.80	58.86
90750	.4134		10.500	114	73	67.69	64.75	61.80	58.86

EDP#	$d^{\dagger}$ Diameter		$l_1$ Overall Length	$l_2$ Flute Length	1-11	12-24	25-49	50-100	
	Decimal	Metric							
90755	.4219	27/64"	10.716	4-1/2"	2-7/8"	68.45	65.47	62.50	59.52
90760	.4331		11.000	114	73	74.32	71.09	67.86	64.63
90765	.4375	7/16"	11.113	4-1/2"	2-7/8"	74.32	71.09	67.86	64.63
90770	.4528		11.500	120	76	80.65	77.14	73.64	70.13
90775	.4531	29/64"	11.509	4-3/4"	3"	80.65	77.14	73.64	70.13
90780	.4688	15/32"	11.908	4-3/4"	3"	85.32	81.61	77.90	74.19
90785	.4724		12.000	120	76	85.58	81.86	78.14	74.42
90790	.4844	31/64"	12.304	4-3/4"	3"	85.58	81.86	78.14	74.42
90795	.4921		12.500	120	76	87.84	84.02	80.20	76.38
90800	.5000	1/2"	12.700	4-3/4"	3"	87.84	84.02	80.20	76.38

