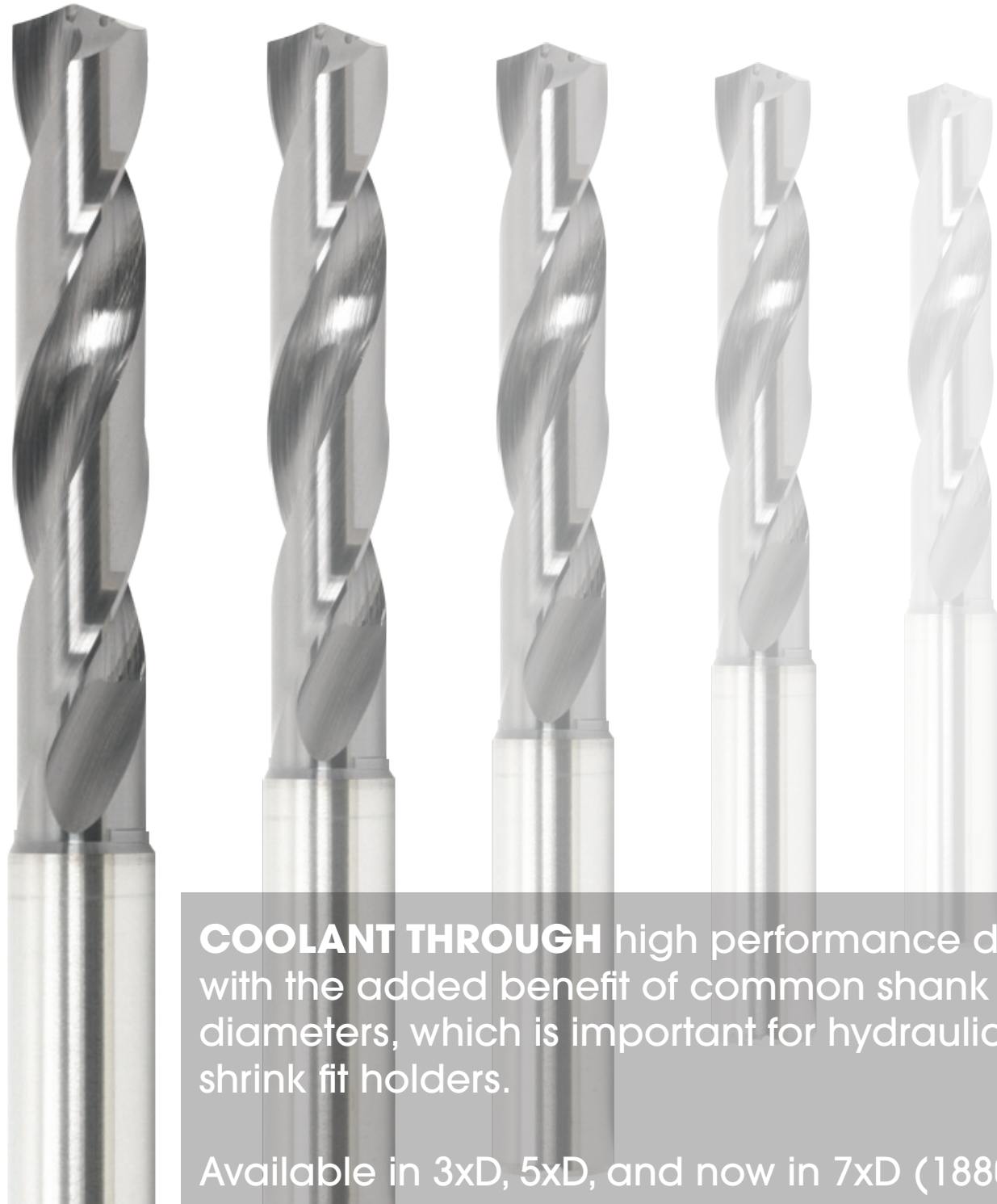


GARR TOOL[®]

High Performance Solid Carbide



COOLANT THROUGH high performance drills, with the added benefit of common shank diameters, which is important for hydraulic and shrink fit holders.

Available in 3xD, 5xD, and now in 7xD (1880KD)

1580KD 1280KD 1880KD

Series 1580KD, 1280KD, 1880KD

NEW SERIES

NEW ITEMS

.1181" - .1470"
(3.000mm - 3.734mm)

TOLERANCES

$d1^*$	3mm - 6mm	+0.016mm +.004mm (+.00063" +.00015")
	> 6mm - 10mm	+0.021mm +.006mm (+.00082" +.00023")
	> 10mm - 18mm	+0.025mm +.007mm (+.00098" +.00027")
	> 18mm - 20mm	+0.029mm +.008mm (+.00114" +.00031")
$d2$	h6	
$l1$	+3.175mm -3.175mm (+.125" -.125")	
$l2$	+3.175mm -3.175mm (+.125" -.125")	
$l4$	+1.980mm -.000mm (+.078" -.000")	

Recommended for high nickel, high temperature alloys, cobalt-based alloys, stainless steels, and tool steels >40 Rc

AlTiN-based Coating

High performance solid submicron grain carbide drill with reinforced shank

Coolant through capabilities for high pressure coolant systems

Up to 70% faster than standard carbide drills

30° helix for better chip evacuation

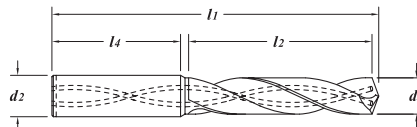
Honed cutting edge

Can be used as a pilot drill

Live tooling recommended on lathe processes



* Note - These drills are made to a plus/plus tolerance on the drill diameter.
If you are in need of a minus tolerance drill, please refer to our other high performance drills.



	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	$d1$ Diameter		$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	$l4$ Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
NEW	27995			.1181	3.000	6.0	62	20	36	58.24	55.70	53.17	50.64
		25065		.1181	3.000	6.0	66	28	36	68.75	65.76	62.77	59.78
			26942	.1181	3.000	6.0	70	30	36	82.52	78.93	75.34	71.76
	28005			.1220	3.100	6.0	62	20	36	58.24	55.70	53.17	50.64
NEW		25075		.1220	3.100	6.0	66	28	36	68.75	65.76	62.77	59.78
	28015			.1248	3.170	6.0	62	20	36	58.24	55.70	53.17	50.64
		25085		.1248	3.170	6.0	66	28	36	68.75	65.76	62.77	59.78
			26946	.1248	3.170	6.0	70	30	36	82.52	78.93	75.34	71.76
NEW	28018			.1250	1/8"	3.175	62	20	36	58.24	55.70	53.17	50.64
NEW		25088		.1250	1/8"	3.175	66	28	36	68.75	65.76	62.77	59.78
NEW			26948	.1250	1/8"	3.175	70	30	36	82.52	78.93	75.34	71.76
NEW	28025			.1260	3.200	6.0	62	20	36	58.24	55.70	53.17	50.64
		25095		.1260	3.200	6.0	66	28	36	68.75	65.76	62.77	59.78
			26950	.1260	3.200	6.0	70	30	36	82.52	78.93	75.34	71.76
	28035			.1280	3.250	6.0	62	20	36	58.24	55.70	53.17	50.64
NEW		25105		.1280	3.250	6.0	66	28	36	68.75	65.76	62.77	59.78
			26952	.1280	3.250	6.0	70	30	36	82.52	78.93	75.34	71.76
	28038			.1285	#30	3.264	62	20	36	58.24	55.70	53.17	50.64
		25108		.1285	#30	3.264	66	28	36	68.75	65.76	62.77	59.78
NEW			26954	.1285	#30	3.264	70	30	36	82.52	78.93	75.34	71.76
NEW	28045			.1299	3.300	6.0	62	20	36	58.24	55.70	53.17	50.64
		25115		.1299	3.300	6.0	66	28	36	68.75	65.76	62.77	59.78
			26956	.1299	3.300	6.0	70	30	36	82.52	78.93	75.34	71.76
	28055			.1339	3.400	6.0	62	20	36	58.24	55.70	53.17	50.64
NEW		25125		.1339	3.400	6.0	66	28	36	68.75	65.76	62.77	59.78
	28058			.1360	#29	3.454	62	20	36	58.24	55.70	53.17	50.64
		25128		.1360	#29	3.454	66	28	36	68.75	65.76	62.77	59.78
			26960	.1360	#29	3.454	70	30	36	82.52	78.93	75.34	71.76
NEW	28065			.1378	3.500	6.0	62	20	36	58.24	55.70	53.17	50.64
		25135		.1378	3.500	6.0	66	28	36	68.75	65.76	62.77	59.78
			26962	.1378	3.500	6.0	75	37	36	82.52	78.93	75.34	71.76
	28075			.1417	3.600	6.0	62	20	36	58.24	55.70	53.17	50.64
NEW		25145		.1417	3.600	6.0	66	28	36	68.75	65.76	62.77	59.78
	28085			.1457	3.700	6.0	62	20	36	58.24	55.70	53.17	50.64
		25155		.1457	3.700	6.0	66	28	36	68.75	65.76	62.77	59.78
	28088			.1470	#26	3.734	62	20	36	58.24	55.70	53.17	50.64
NEW		25158		.1470	#26	3.734	66	28	36	68.75	65.76	62.77	59.78
NEW			26968	.1470	#26	3.734	75	37	36	82.52	78.93	75.34	71.76

Series 1580KD, 1280KD, 1880KD (continued)

.1476" - .1811"
(3.750mm - 4.600mm)

HIGH PERFORMANCE
DRILLS

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
	28095			.1476	3.750	6.0	62	20	36	58.24	55.70	53.17	50.64
		25165		.1476	3.750	6.0	66	28	36	68.75	65.76	62.77	59.78
NEW			26972	.1476	3.750	6.0	75	37	36	82.52	78.93	75.34	71.76
NEW	28098			.1495	#25 3.797	6.0	62	20	36	58.24	55.70	53.17	50.64
NEW		25172		.1495	#25 3.797	6.0	66	28	36	68.75	65.76	62.77	59.78
NEW			26978	.1495	#25 3.797	6.0	75	37	36	82.52	78.93	75.34	71.76
	28105			.1496	3.800	6.0	66	24	36	58.24	55.70	53.17	50.64
		25175		.1496	3.800	6.0	74	36	36	68.75	65.76	62.77	59.78
	28115			.1535	3.900	6.0	66	24	36	58.24	55.70	53.17	50.64
		25185		.1535	3.900	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26982	.1535	3.900	6.0	75	37	36	82.52	78.93	75.34	71.76
NEW	28118			.1562	5/32" 3.967	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25192		.1562	5/32" 3.967	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26984	.1562	5/32" 3.967	6.0	75	37	36	82.52	78.93	75.34	71.76
	28125			.1563	3.970	6.0	66	24	36	58.24	55.70	53.17	50.64
		25195		.1563	3.970	6.0	74	36	36	68.75	65.76	62.77	59.78
	28135			.1575	4.000	6.0	66	24	36	58.24	55.70	53.17	50.64
		25205		.1575	4.000	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26986	.1575	4.000	6.0	75	37	36	82.52	78.93	75.34	71.76
NEW	28138			.1590	#21 4.038	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25208		.1590	#21 4.038	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26988	.1590	#21 4.038	6.0	75	37	36	82.52	78.93	75.34	71.76
NEW	28140			.1610	#20 4.089	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25212		.1610	#20 4.089	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26990	.1610	#20 4.089	6.0	75	37	36	82.52	78.93	75.34	71.76
	28145			.1614	4.100	6.0	66	24	36	58.24	55.70	53.17	50.64
		25215		.1614	4.100	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26992	.1614	4.100	6.0	75	37	36	82.52	78.93	75.34	71.76
	28155			.1654	4.200	6.0	66	24	36	58.24	55.70	53.17	50.64
		25225		.1654	4.200	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26994	.1654	4.200	6.0	75	37	36	82.52	78.93	75.34	71.76
NEW	28158			.1660	#19 4.216	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25228		.1660	#19 4.216	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26996	.1660	#19 4.216	6.0	85	45	36	82.52	78.93	75.34	71.76
	28165			.1673	4.250	6.0	66	24	36	58.24	55.70	53.17	50.64
		25235		.1673	4.250	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			26998	.1673	4.250	6.0	85	45	36	82.52	78.93	75.34	71.76
	28175			.1693	4.300	6.0	66	24	36	58.24	55.70	53.17	50.64
		25245		.1693	4.300	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW	28178			.1719	11/64" 4.366	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25248		.1719	11/64" 4.366	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27002	.1719	11/64" 4.366	6.0	85	45	36	82.52	78.93	75.34	71.76
	28185			.1732	4.400	6.0	66	24	36	58.24	55.70	53.17	50.64
		25255		.1732	4.400	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27004	.1732	4.400	6.0	85	45	36	82.52	78.93	75.34	71.76
NEW	28188			.1770	#16 4.496	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25262		.1770	#16 4.496	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27006	.1770	#16 4.496	6.0	85	45	36	82.52	78.93	75.34	71.76
	28195			.1772	4.500	6.0	66	24	36	58.24	55.70	53.17	50.64
		25265		.1772	4.500	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27008	.1772	4.500	6.0	85	45	36	82.52	78.93	75.34	71.76
	28205			.1811	4.600	6.0	66	24	36	58.24	55.70	53.17	50.64
		25275		.1811	4.600	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27011	.1811	4.600	6.0	85	45	36	82.52	78.93	75.34	71.76

continued →

800-248-9003

989-463-6171

fax 989-463-3609

Series 1580KD, 1280KD, 1880KD (continued)

.1820" - .2283"
(4.622mm - 5.800mm)

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter			<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal		Metric								
NEW	28208			.1820	#14	4.622	6.0	66	24	36	58.24	55.70	53.17	50.64
NEW		25280		.1820	#14	4.622	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27012	.1820	#14	4.622	6.0	90	50	36	82.52	78.93	75.34	71.76
		25285		.1831		4.650	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27014	.1831		4.650	6.0	90	50	36	82.52	78.93	75.34	71.76
	28225			.1850		4.700	6.0	66	24	36	58.24	55.70	53.17	50.64
		25295		.1850		4.700	6.0	74	36	36	68.75	65.76	62.77	59.78
	28235			.1870		4.750	6.0	66	24	36	58.24	55.70	53.17	50.64
		25305		.1870		4.750	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27016	.1870		4.750	6.0	90	50	36	82.52	78.93	75.34	71.76
NEW	28238			.1875	3/16"	4.762	6.0	66	28	36	58.24	55.70	53.17	50.64
NEW		25310		.1875	3/16"	4.762	6.0	74	36	36	68.75	65.76	62.77	59.78
NEW			27018	.1875	3/16"	4.762	6.0	90	50	36	82.52	78.93	75.34	71.76
	28245			.1890	#12	4.800	6.0	66	28	36	58.24	55.70	53.17	50.64
		25315		.1890	#12	4.800	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27021	.1890	#12	4.800	6.0	90	50	36	82.52	78.93	75.34	71.76
	28255			.1929		4.900	6.0	66	28	36	58.24	55.70	53.17	50.64
		25325		.1929		4.900	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27022	.1929		4.900	6.0	90	50	36	82.52	78.93	75.34	71.76
NEW	28258			.1960	#9	4.978	6.0	66	28	36	58.24	55.70	53.17	50.64
NEW		25330		.1960	#9	4.978	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27024	.1960	#9	4.978	6.0	90	50	36	82.52	78.93	75.34	71.76
	28265			.1969		5.000	6.0	66	28	36	58.24	55.70	53.17	50.64
		25335		.1969		5.000	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27026	.1969		5.000	6.0	90	50	36	82.52	78.93	75.34	71.76
	28275			.2008		5.100	6.0	66	28	36	58.24	55.70	53.17	50.64
		25345		.2008		5.100	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW	28278			.2010	#7	5.105	6.0	66	28	36	58.24	55.70	53.17	50.64
NEW		25348		.2010	#7	5.105	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27031	.2010	#7	5.105	6.0	97	57	36	82.52	78.93	75.34	71.76
	28285			.2027		5.150	6.0	66	28	36	58.24	55.70	53.17	50.64
		25355		.2027		5.150	6.0	82	44	36	68.75	65.76	62.77	59.78
	28295			.2047		5.200	6.0	66	28	36	58.24	55.70	53.17	50.64
		25365		.2047		5.200	6.0	82	44	36	68.75	65.76	62.77	59.78
	28305			.2087		5.300	6.0	66	28	36	58.24	55.70	53.17	50.64
		25375		.2087		5.300	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW	28308			.2130	#3	5.410	6.0	66	28	36	58.24	55.70	53.17	50.64
NEW		25380		.2130	#3	5.410	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27036	.2130	#3	5.410	6.0	97	57	36	82.52	78.93	75.34	71.76
	28315			.2165		5.500	6.0	66	28	36	58.24	55.70	53.17	50.64
		25385		.2165		5.500	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27038	.2165		5.500	6.0	97	57	36	82.52	78.93	75.34	71.76
	28325			.2185		5.550	6.0	66	28	36	58.24	55.70	53.17	50.64
		25395		.2185		5.550	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW	28328			.2188	7/32"	5.557	6.0	66	28	36	58.24	55.70	53.17	50.64
NEW		25398		.2188	7/32"	5.557	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27041	.2188	7/32"	5.557	6.0	97	57	36	82.52	78.93	75.34	71.76
NEW			27042	.2205		5.600	6.0	97	57	36	82.52	78.93	75.34	71.76
	28345			.2244		5.700	6.0	66	28	36	58.24	55.70	53.17	50.64
		25400		.2244		5.700	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27044	.2244		5.700	6.0	97	57	36	82.52	78.93	75.34	71.76
NEW	28348			.2280	#1	5.791	6.0	66	28	36	58.24	55.70	53.17	50.64
NEW		25403		.2280	#1	5.791	6.0	82	44	36	68.75	65.76	62.77	59.78
NEW			27046	.2280	#1	5.791	6.0	97	57	36	82.52	78.93	75.34	71.76
	28355			.2283		5.800	6.0	66	28	36	58.24	55.70	53.17	50.64
		25405		.2283		5.800	6.0	82	44	36	68.75	65.76	62.77	59.78
			27048	.2283		5.800	6.0	97	57	36	82.52	78.93	75.34	71.76

Series 1580KD, 1280KD, 1880KD (continued)

.2323" - .2812"
(5.900mm - 7.142mm)

HIGH PERFORMANCE
DRILLS

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
NEW	28365			.2323	5.900	6.0	66	28	36	58.24	55.70	53.17	50.64
		25415		.2323	5.900	6.0	82	44	36	68.75	65.76	62.77	59.78
			27051	.2323	5.900	6.0	97	57	36	82.52	78.93	75.34	71.76
NEW	28375			.2342	5.950	6.0	66	28	36	58.24	55.70	53.17	50.64
		25425		.2342	5.950	6.0	82	44	36	68.75	65.76	62.77	59.78
			27052	.2342	5.950	6.0	97	57	36	82.52	78.93	75.34	71.76
NEW	28385			.2362	6.000	6.0	66	28	36	58.24	55.70	53.17	50.64
		25435		.2362	6.000	6.0	82	44	36	68.75	65.76	62.77	59.78
			27054	.2362	6.000	6.0	97	57	36	82.52	78.93	75.34	71.76
NEW	28395			.2402	6.100	8.0	79	34	36	81.14	77.62	74.09	70.56
		25437		.2402	6.100	8.0	91	53	36	96.67	92.47	88.26	84.06
	28405			.2441	6.200	8.0	79	34	36	81.14	77.62	74.09	70.56
NEW		25440		.2441	6.200	8.0	91	53	36	96.67	92.47	88.26	84.06
	28415			.2480	6.300	8.0	79	34	36	81.14	77.62	74.09	70.56
		25443		.2480	6.300	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW	28425			.2500	1/4"	6.350	8.0	79	34	81.14	77.62	74.09	70.56
		25445		.2500	1/4"	6.350	8.0	91	53	96.67	92.47	88.26	84.06
			27056	.2500	1/4"	6.350	8.0	106	66	116.70	111.63	106.55	101.48
NEW	28435			.2520	6.400	8.0	79	34	36	81.14	77.62	74.09	70.56
		25450		.2520	6.400	8.0	91	53	36	96.67	92.47	88.26	84.06
			27058	.2520	6.400	8.0	106	66	36	116.70	111.63	106.55	101.48
NEW	28445			.2559	6.500	8.0	79	34	36	81.14	77.62	74.09	70.56
		25455		.2559	6.500	8.0	91	53	36	96.67	92.47	88.26	84.06
			27061	.2559	6.500	8.0	106	66	36	116.70	111.63	106.55	101.48
NEW	28446			.2571	6.530	8.0	79	34	36	81.14	77.62	74.09	70.56
		25457		.2571	6.530	8.0	91	53	36	96.67	92.47	88.26	84.06
			27062	.2571	6.530	8.0	106	66	36	116.70	111.63	106.55	101.48
NEW	28455			.2598	6.600	8.0	79	34	36	81.14	77.62	74.09	70.56
		25460		.2598	6.600	8.0	91	53	36	96.67	92.47	88.26	84.06
			27064	.2598	6.600	8.0	106	66	36	116.70	111.63	106.55	101.48
NEW		25463		.2638	6.700	8.0	91	53	36	96.67	92.47	88.26	84.06
			27066	.2638	6.700	8.0	106	66	36	116.70	111.63	106.55	101.48
	28463			.2656	17/64"	6.746	8.0	79	34	81.14	77.62	74.09	70.56
NEW		25464		.2656	17/64"	6.746	8.0	91	53	96.67	92.47	88.26	84.06
			27068	.2656	17/64"	6.746	8.0	106	66	116.70	111.63	106.55	101.48
	28465			.2657	6.750	8.0	79	34	36	81.14	77.62	74.09	70.56
NEW		25465		.2657	6.750	8.0	91	53	36	96.67	92.47	88.26	84.06
	28475			.2677	6.800	8.0	79	34	36	81.14	77.62	74.09	70.56
		25475		.2677	6.800	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27071	.2677	6.800	8.0	106	66	36	116.70	111.63	106.55	101.48
	28485			.2717	6.900	8.0	79	34	36	81.14	77.62	74.09	70.56
		25485		.2717	6.900	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27072	.2717	6.900	8.0	116	76	36	116.70	111.63	106.55	101.48
	28495			.2756	7.000	8.0	79	34	36	81.14	77.62	74.09	70.56
		25495		.2756	7.000	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27074	.2756	7.000	8.0	116	76	36	116.70	111.63	106.55	101.48
	28498			.2770	J	7.035	8.0	79	41	81.14	77.62	74.09	70.56
		25498		.2770	J	7.035	8.0	91	53	96.67	92.47	88.26	84.06
NEW			27076	.2770	J	7.035	8.0	116	76	116.70	111.63	106.55	101.48
	28505			.2795		7.100	8.0	79	41	81.14	77.62	74.09	70.56
		25505		.2795		7.100	8.0	91	53	96.67	92.47	88.26	84.06
NEW	28508			.2812	9/32"	7.142	8.0	79	41	81.14	77.62	74.09	70.56
		25512		.2812	9/32"	7.142	8.0	91	53	96.67	92.47	88.26	84.06
			27079	.2812	9/32"	7.142	8.0	116	76	116.70	111.63	106.55	101.48

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Series 1580KD, 1280KD, 1880KD (continued)

.2815" - .3386"
(7.150mm - 8.600mm)

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
NEW	28515	25515	27082	.2815	7.150	8.0	79	41	36	81.14	77.62	74.09	70.56
				.2815	7.150	8.0	91	53	36	96.67	92.47	88.26	84.06
				.2815	7.150	8.0	116	76	36	116.70	111.63	106.55	101.48
	28525			.2835	7.200	8.0	79	41	36	81.14	77.62	74.09	70.56
	25525			.2835	7.200	8.0	91	53	36	96.67	92.47	88.26	84.06
	28535			.2874	7.300	8.0	79	41	36	81.14	77.62	74.09	70.56
	25530			.2874	7.300	8.0	91	53	36	96.67	92.47	88.26	84.06
	28545			.2913	7.400	8.0	79	41	36	81.14	77.62	74.09	70.56
	25535			.2913	7.400	8.0	91	53	36	96.67	92.47	88.26	84.06
	28555			.2953	7.500	8.0	79	41	36	81.14	77.62	74.09	70.56
	25545			.2953	7.500	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27086	.2953	7.500	8.0	116	76	36	116.70	111.63	106.55	101.48
	28565			.2972	7.550	8.0	79	41	36	81.14	77.62	74.09	70.56
	25555			.2972	7.550	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27088	.2972	7.550	8.0	116	76	36	116.70	111.63	106.55	101.48
	28575			.2992	7.600	8.0	79	41	36	81.14	77.62	74.09	70.56
	25565			.2992	7.600	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW	28578			.3020	N 7.670	8.0	79	41	36	81.14	77.62	74.09	70.56
NEW	25570			.3020	N 7.670	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27092	.3020	N 7.670	8.0	116	76	36	116.70	111.63	106.55	101.48
	28585			.3031	7.700	8.0	79	41	36	81.14	77.62	74.09	70.56
	25575			.3031	7.700	8.0	91	53	36	96.67	92.47	88.26	84.06
	28595			.3071	7.800	8.0	79	41	36	81.14	77.62	74.09	70.56
	25585			.3071	7.800	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27096	.3071	7.800	8.0	116	76	36	116.70	111.63	106.55	101.48
NEW	28602			.3125	5/16" 7.937	8.0	79	41	36	81.14	77.62	74.09	70.56
NEW	25593			.3125	5/16" 7.937	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27101	.3125	5/16" 7.937	8.0	116	76	36	116.70	111.63	106.55	101.48
	28605			.3130	7.950	8.0	79	41	36	81.14	77.62	74.09	70.56
	25595			.3130	7.950	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27102	.3130	7.950	8.0	116	76	36	116.70	111.63	106.55	101.48
	28615			.3150	8.000	8.0	79	41	36	81.14	77.62	74.09	70.56
	25605			.3150	8.000	8.0	91	53	36	96.67	92.47	88.26	84.06
NEW			27104	.3150	8.000	8.0	116	76	36	116.70	111.63	106.55	101.48
	28625			.3189	8.100	10.0	89	47	40	109.34	104.59	99.83	95.08
	25610			.3189	8.100	10.0	103	61	40	124.55	119.13	113.72	108.30
	28635			.3228	8.200	10.0	89	47	40	109.34	104.59	99.83	95.08
	25615			.3228	8.200	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW	28638			.3230	P 8.204	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW	25618			.3230	P 8.204	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27108	.3230	P 8.204	10.0	131	87	40	159.14	152.22	145.30	138.38
	28645			.3268	8.300	10.0	89	47	40	109.34	104.59	99.83	95.08
	25625			.3268	8.300	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW	28648			.3281	21/64" 8.333	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW	25628			.3281	21/64" 8.333	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27112	.3281	21/64" 8.333	10.0	131	87	40	159.14	152.22	145.30	138.38
	28655			.3287	8.350	10.0	89	47	40	109.34	104.59	99.83	95.08
	25635			.3287	8.350	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27114	.3287	8.350	10.0	131	87	40	159.14	152.22	145.30	138.38
	28665			.3307	8.400	10.0	89	47	40	109.34	104.59	99.83	95.08
	25640			.3307	8.400	10.0	103	61	40	124.55	119.13	113.72	108.30
	28675			.3346	8.500	10.0	89	47	40	109.34	104.59	99.83	95.08
	25645			.3346	8.500	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27118	.3346	8.500	10.0	131	87	40	159.14	152.22	145.30	138.38
	28685			.3386	8.600	10.0	89	47	40	109.34	104.59	99.83	95.08
	25655			.3386	8.600	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27121	.3386	8.600	10.0	131	87	40	159.14	152.22	145.30	138.38

Series 1580KD, 1280KD, 1880KD (continued)

.3390" - .3906"
(8.610mm - 9.920mm)

HIGH PERFORMANCE
DRILLS

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
NEW	28688			.3390	R 8.610	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW		25658		.3390	R 8.610	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27122	.3390	R 8.610	10.0	131	87	40	159.14	152.22	145.30	138.38
	28695			.3425	8.700	10.0	89	47	40	109.34	104.59	99.83	95.08
		25665		.3425	8.700	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27124	.3425	8.700	10.0	131	87	40	159.14	152.22	145.30	138.38
NEW	28698			.3438	11/32" 8.732	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW		25670		.3438	11/32" 8.732	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27126	.3438	11/32" 8.732	10.0	131	87	40	159.14	152.22	145.30	138.38
	28725			.3445	8.750	10.0	89	47	40	109.34	104.59	99.83	95.08
		25675		.3445	8.750	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27128	.3445	8.750	10.0	131	87	40	159.14	152.22	145.30	138.38
	28735			.3465	8.800	10.0	89	47	40	109.34	104.59	99.83	95.08
		25685		.3465	8.800	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27130	.3465	8.800	10.0	131	87	40	159.14	152.22	145.30	138.38
	28745			.3504	8.900	10.0	89	47	40	109.34	104.59	99.83	95.08
		25695		.3504	8.900	10.0	103	61	40	124.55	119.13	113.72	108.30
	28755			.3543	9.000	10.0	89	47	40	109.34	104.59	99.83	95.08
		25705		.3543	9.000	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27134	.3543	9.000	10.0	131	87	40	159.14	152.22	145.30	138.38
	28765			.3583	9.100	10.0	89	47	40	109.34	104.59	99.83	95.08
		25715		.3583	9.100	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW	28768			.3594	23/64" 9.128	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW		25720		.3594	23/64" 9.128	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27138	.3594	23/64" 9.128	10.0	139	95	40	159.14	152.22	145.30	138.38
		25725		.3602	9.150	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27140	.3602	9.150	10.0	139	95	40	159.14	152.22	145.30	138.38
	28815			.3622	9.200	10.0	89	47	40	109.34	104.59	99.83	95.08
		25735		.3622	9.200	10.0	103	61	40	124.55	119.13	113.72	108.30
	28825			.3661	9.300	10.0	89	47	40	109.34	104.59	99.83	95.08
		25745		.3661	9.300	10.0	103	61	40	124.55	119.13	113.72	108.30
	28845			.3701	9.400	10.0	89	47	40	109.34	104.59	99.83	95.08
		25750		.3701	9.400	10.0	103	61	40	124.55	119.13	113.72	108.30
	28855			.3740	9.500	10.0	89	47	40	109.34	104.59	99.83	95.08
		25755		.3740	9.500	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27146	.3740	9.500	10.0	139	95	40	159.14	152.22	145.30	138.38
NEW	28858			.3750	3/8" 9.525	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW		25760		.3750	3/8" 9.525	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27148	.3750	3/8" 9.525	10.0	139	95	40	159.14	152.22	145.30	138.38
	28875			.3760	9.550	10.0	89	47	40	109.34	104.59	99.83	95.08
		25765		.3760	9.550	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27150	.3760	9.550	10.0	139	95	40	159.14	152.22	145.30	138.38
	28878			.3780	9.600	10.0	89	47	40	109.34	104.59	99.83	95.08
		25767		.3780	9.600	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27152	.3780	9.600	10.0	139	95	40	159.14	152.22	145.30	138.38
	28882			.3819	9.700	10.0	89	47	40	109.34	104.59	99.83	95.08
		25770		.3819	9.700	10.0	103	61	40	124.55	119.13	113.72	108.30
	28885			.3858	9.800	10.0	89	47	40	109.34	104.59	99.83	95.08
		25775		.3858	9.800	10.0	103	61	40	124.55	119.13	113.72	108.30
	28895			.3898	9.900	10.0	89	47	40	109.34	104.59	99.83	95.08
		25785		.3898	9.900	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27160	.3898	9.900	10.0	139	95	40	159.14	152.22	145.30	138.38
NEW	28898			.3906	25/64" 9.920	10.0	89	47	40	109.34	104.59	99.83	95.08
NEW		25787		.3906	25/64" 9.920	10.0	103	61	40	124.55	119.13	113.72	108.30
NEW			27162	.3906	25/64" 9.920	10.0	139	95	40	159.14	152.22	145.30	138.38

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Series 1580KD, 1280KD, 1880KD (continued)

.3937" - .4688"
(10.000mm - 11.907mm)

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
NEW	28905			.3937	10.000	10.0	89	47	40	109.34	104.59	99.83	95.08
		25795		.3937	10.000	10.0	103	61	40	124.55	119.13	113.72	108.30
			27164	.3937	10.000	10.0	139	95	40	159.14	152.22	145.30	138.38
	28925			.3976	10.100	12.0	102	55	45	141.58	135.42	129.27	123.11
		25800		.3976	10.100	12.0	118	71	45	160.62	153.64	146.65	139.67
	28935			.4016	10.200	12.0	102	55	45	141.58	135.42	129.27	123.11
		25805		.4016	10.200	12.0	118	71	45	160.62	153.64	146.65	139.67
	28945			.4055	10.300	12.0	102	55	45	141.58	135.42	129.27	123.11
NEW		25815		.4055	10.300	12.0	118	71	45	160.62	153.64	146.65	139.67
			27170	.4055	10.300	12.0	155	106	45	206.84	197.85	188.85	179.86
	28948			.4062	13/32"	10.317	12.0	102	55	141.58	135.42	129.27	123.11
		25817		.4062	13/32"	10.317	12.0	118	71	160.62	153.64	146.65	139.67
			27172	.4062	13/32"	10.317	12.0	155	106	206.84	197.85	188.85	179.86
	28953			.4130	Z	10.490	12.0	102	55	141.58	135.42	129.27	123.11
		25823		.4130	Z	10.490	12.0	118	71	160.62	153.64	146.65	139.67
			27178	.4130	Z	10.490	12.0	155	106	206.84	197.85	188.85	179.86
NEW	28955			.4134		10.500	12.0	102	55	141.58	135.42	129.27	123.11
		25825		.4134		10.500	12.0	118	71	160.62	153.64	146.65	139.67
			27180	.4134		10.500	12.0	155	106	206.84	197.85	188.85	179.86
	28965			.4173		10.600	12.0	102	55	141.58	135.42	129.27	123.11
		25830		.4173		10.600	12.0	118	71	160.62	153.64	146.65	139.67
			27182	.4173		10.600	12.0	155	106	206.84	197.85	188.85	179.86
	28975			.4213		10.700	12.0	102	55	141.58	135.42	129.27	123.11
		25835		.4213		10.700	12.0	118	71	160.62	153.64	146.65	139.67
NEW			27184	.4213		10.700	12.0	155	106	206.84	197.85	188.85	179.86
	28978			.4219	27/64"	10.716	12.0	102	55	141.58	135.42	129.27	123.11
		25838		.4219	27/64"	10.716	12.0	118	71	160.62	153.64	146.65	139.67
			27186	.4219	27/64"	10.716	12.0	155	106	206.84	197.85	188.85	179.86
	28985			.4252		10.800	12.0	102	55	141.58	135.42	129.27	123.11
		25845		.4252		10.800	12.0	118	71	160.62	153.64	146.65	139.67
	28995			.4331		11.000	12.0	102	55	141.58	135.42	129.27	123.11
		25855		.4331		11.000	12.0	118	71	160.62	153.64	146.65	139.67
NEW			27190	.4331		11.000	12.0	163	114	206.84	197.85	188.85	179.86
	29005			.4370		11.100	12.0	102	55	141.58	135.42	129.27	123.11
		25865		.4370		11.100	12.0	118	71	160.62	153.64	146.65	139.67
	29008			.4375	7/16"	11.112	12.0	102	55	141.58	135.42	129.27	123.11
		25868		.4375	7/16"	11.112	12.0	118	71	160.62	153.64	146.65	139.67
			27194	.4375	7/16"	11.112	12.0	163	114	206.84	197.85	188.85	179.86
	29015			.4409		11.200	12.0	102	55	141.58	135.42	129.27	123.11
		25875		.4409		11.200	12.0	118	71	160.62	153.64	146.65	139.67
NEW	29025			.4488		11.400	12.0	102	55	141.58	135.42	129.27	123.11
		25880		.4488		11.400	12.0	118	71	160.62	153.64	146.65	139.67
	29035			.4528		11.500	12.0	102	55	141.58	135.42	129.27	123.11
		25885		.4528		11.500	12.0	118	71	160.62	153.64	146.65	139.67
	29038			.4531	29/64"	11.508	12.0	102	55	141.58	135.42	129.27	123.11
		25888		.4531	29/64"	11.508	12.0	118	71	160.62	153.64	146.65	139.67
			27200	.4531	29/64"	11.508	12.0	163	114	206.84	197.85	188.85	179.86
	29045			.4606		11.700	12.0	102	55	141.58	135.42	129.27	123.11
NEW		25895		.4606		11.700	12.0	118	71	160.62	153.64	146.65	139.67
	29055			.4685		11.900	12.0	102	55	141.58	135.42	129.27	123.11
	29058			.4688	15/32"	11.907	12.0	102	55	141.58	135.42	129.27	123.11
		25910		.4688	15/32"	11.907	12.0	118	71	160.62	153.64	146.65	139.67
			27208	.4688	15/32"	11.907	12.0	163	114	206.84	197.85	188.85	179.86

Series 1580KD, 1280KD, 1880KD (continued)

.4724" - .5610"
(12.000mm - 14.250mm)

HIGH PERFORMANCE
DRILLS

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric								
NEW	29065			.4724	12.000	12.0	102	55	45	141.58	135.42	129.27	123.11
		25915		.4724	12.000	12.0	118	71	45	160.62	153.64	146.65	139.67
			27210	.4724	12.000	12.0	163	114	45	206.84	197.85	188.85	179.86
	29075			.4764	12.100	14.0	107	60	45	197.75	189.16	180.56	171.96
		25925		.4764	12.100	14.0	124	77	45	236.99	226.69	216.38	206.08
NEW	29085			.4803	12.200	14.0	107	60	45	197.75	189.16	180.56	171.96
		25930		.4803	12.200	14.0	124	77	45	236.99	226.69	216.38	206.08
	29095			.4842	12.300	14.0	107	60	45	197.75	189.16	180.56	171.96
		25935		.4842	12.300	14.0	124	77	45	236.99	226.69	216.38	206.08
	29098			.4844	31/64"	12.303	14.0	107	60	197.75	189.16	180.56	171.96
NEW		25937		.4844	31/64"	12.303	14.0	124	77	236.99	226.69	216.38	206.08
NEW			27214	.4844	31/64"	12.303	14.0	182	133	276.15	264.14	252.14	240.13
NEW	29115			.4921	12.500	14.0	107	60	45	197.75	189.16	180.56	171.96
		25945		.4921	12.500	14.0	124	77	45	236.99	226.69	216.38	206.08
			27218	.4921	12.500	14.0	182	133	45	276.15	264.14	252.14	240.13
	29125			.4961	12.600	14.0	107	60	45	197.75	189.16	180.56	171.96
		25950		.4961	12.600	14.0	124	77	45	236.99	226.69	216.38	206.08
NEW	29135			.5000	1/2"	12.700	14.0	107	60	197.75	189.16	180.56	171.96
		25955		.5000	1/2"	12.700	14.0	124	77	236.99	226.69	216.38	206.08
			27220	.5000	1/2"	12.700	14.0	182	133	276.15	264.14	252.14	240.13
	29145			.5039	12.800	14.0	107	60	45	197.75	189.16	180.56	171.96
		25960		.5039	12.800	14.0	124	77	45	236.99	226.69	216.38	206.08
NEW	29148			.5051	12.830	14.0	107	60	45	197.75	189.16	180.56	171.96
		25961		.5051	12.830	14.0	124	77	45	236.99	226.69	216.38	206.08
			27224	.5051	12.830	14.0	182	133	45	276.15	264.14	252.14	240.13
	29155			.5079	12.900	14.0	107	60	45	197.75	189.16	180.56	171.96
		27226		.5079	12.900	14.0	182	133	45	276.15	264.14	252.14	240.13
NEW	29161			.5098	12.950	14.0	107	60	45	197.75	189.16	180.56	171.96
			27228	.5098	12.950	14.0	182	133	45	276.15	264.14	252.14	240.13
	29165			.5118	13.000	14.0	107	60	45	197.75	189.16	180.56	171.96
		25965		.5118	13.000	14.0	124	77	45	236.99	226.69	216.38	206.08
			27230	.5118	13.000	14.0	182	133	45	276.15	264.14	252.14	240.13
NEW	29175			.5157	13.100	14.0	107	60	45	197.75	189.16	180.56	171.96
		25975		.5157	13.100	14.0	124	77	45	236.99	226.69	216.38	206.08
	29181			.5236	13.300	14.0	107	60	45	197.75	189.16	180.56	171.96
	29184			.5312	17/32"	13.492	14.0	107	60	197.75	189.16	180.56	171.96
		25983		.5312	17/32"	13.492	14.0	124	77	236.99	226.69	216.38	206.08
NEW			27238	.5312	17/32"	13.492	14.0	182	133	276.15	264.14	252.14	240.13
	29185			.5315	13.500	14.0	107	60	45	197.75	189.16	180.56	171.96
		25985		.5315	13.500	14.0	124	77	45	236.99	226.69	216.38	206.08
			27240	.5315	13.500	14.0	182	133	45	276.15	264.14	252.14	240.13
	29195			.5394	13.700	14.0	107	60	45	197.75	189.16	180.56	171.96
NEW		25995		.5394	13.700	14.0	124	77	45	236.99	226.69	216.38	206.08
	29205			.5433	13.800	14.0	107	60	45	197.75	189.16	180.56	171.96
		26005		.5433	13.800	14.0	124	77	45	236.99	226.69	216.38	206.08
	29215			.5512	14.000	14.0	107	60	45	197.75	189.16	180.56	171.96
		26015		.5512	14.000	14.0	124	77	45	236.99	226.69	216.38	206.08
NEW			27250	.5512	14.000	14.0	182	133	45	276.15	264.14	252.14	240.13
	29225			.5551	14.100	16.0	115	65	48	241.72	231.21	220.70	210.19
		26025		.5551	14.100	16.0	133	83	48	315.12	301.42	287.72	274.02
	29235			.5591	14.200	16.0	115	65	48	241.72	231.21	220.70	210.19
		26027		.5591	14.200	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW	29245			.5610	14.250	16.0	115	65	48	241.72	231.21	220.70	210.19

continued →

800-248-9003

989-463-6171

fax 989-463-3609

Series 1580KD, 1280KD, 1880KD (continued)

.5625" - .7283"
(14.287mm - 18.500mm)

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter			<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal		Metric								
NEW	29250			.5625	9/16"	14.287	16.0	115	65	48	241.72	231.21	220.70	210.19
NEW		26042		.5625	9/16"	14.287	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27254	.5625	9/16"	14.287	16.0	204	152	48	365.30	349.42	333.53	317.65
	29255			.5630		14.300	16.0	115	65	48	241.72	231.21	220.70	210.19
		26045		.5630		14.300	16.0	133	83	48	315.12	301.42	287.72	274.02
	29265			.5709		14.500	16.0	115	65	48	241.72	231.21	220.70	210.19
		26055		.5709		14.500	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27258	.5709		14.500	16.0	204	152	48	365.30	349.42	333.53	317.65
	29275			.5787		14.700	16.0	115	65	48	241.72	231.21	220.70	210.19
		26065		.5787		14.700	16.0	133	83	48	315.12	301.42	287.72	274.02
	29285			.5827		14.800	16.0	115	65	48	241.72	231.21	220.70	210.19
		26067		.5827		14.800	16.0	133	83	48	315.12	301.42	287.72	274.02
	29305			.5906		15.000	16.0	115	65	48	241.72	231.21	220.70	210.19
		26075		.5906		15.000	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27264	.5906		15.000	16.0	204	152	48	365.30	349.42	333.53	317.65
NEW	29308			.5938	19/32"	15.082	16.0	115	65	48	241.72	231.21	220.70	210.19
NEW		26083		.5938	19/32"	15.082	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27266	.5938	19/32"	15.082	16.0	204	152	48	365.30	349.42	333.53	317.65
	29315			.5945		15.100	16.0	115	65	48	241.72	231.21	220.70	210.19
		26085		.5945		15.100	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27268	.5945		15.100	16.0	204	152	48	365.30	349.42	333.53	317.65
	29325			.6102		15.500	16.0	115	65	48	241.72	231.21	220.70	210.19
		26095		.6102		15.500	16.0	133	83	48	315.12	301.42	287.72	274.02
		26105		.6181		15.700	16.0	133	83	48	315.12	301.42	287.72	274.02
	29345			.6220		15.800	16.0	115	65	48	241.72	231.21	220.70	210.19
		26107		.6220		15.800	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27276	.6220		15.800	16.0	204	152	48	365.30	349.42	333.53	317.65
NEW	29348			.6250	5/8"	15.875	16.0	115	65	48	241.72	231.21	220.70	210.19
NEW		26108		.6250	5/8"	15.875	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27278	.6250	5/8"	15.875	16.0	204	152	48	365.30	349.42	333.53	317.65
		26115		.6299		16.000	16.0	133	83	48	315.12	301.42	287.72	274.02
NEW			27282	.6299		16.000	16.0	204	152	48	365.30	349.42	333.53	317.65
	29363			.6331		16.080	18.0	123	73	48	305.62	292.34	279.05	265.76
		26118		.6331		16.080	18.0	143	93	48	374.64	358.35	342.06	325.77
	29365			.6339		16.100	18.0	123	73	48	305.62	292.34	279.05	265.76
		26119		.6339		16.100	18.0	143	93	48	374.64	358.35	342.06	325.77
		26123		.6378		16.200	18.0	143	93	48	374.64	358.35	342.06	325.77
	29375			.6398		16.250	18.0	123	73	48	305.62	292.34	279.05	265.76
		26125		.6398		16.250	18.0	143	93	48	374.64	358.35	342.06	325.77
	29385			.6496		16.500	18.0	123	73	48	305.62	292.34	279.05	265.76
		26135		.6496		16.500	18.0	143	93	48	374.64	358.35	342.06	325.77
	29395			.6555		16.650	18.0	123	73	48	305.62	292.34	279.05	265.76
		26145		.6555		16.650	18.0	143	93	48	374.64	358.35	342.06	325.77
	29405			.6693		17.000	18.0	123	73	48	305.62	292.34	279.05	265.76
		26155		.6693		17.000	18.0	143	93	48	374.64	358.35	342.06	325.77
	29415			.6713		17.050	18.0	123	73	48	305.62	292.34	279.05	265.76
		26165		.6713		17.050	18.0	143	93	48	374.64	358.35	342.06	325.77
	29425			.6870		17.450	18.0	123	73	48	305.62	292.34	279.05	265.76
		26175		.6870		17.450	18.0	143	93	48	374.64	358.35	342.06	325.77
	29435			.6890		17.500	18.0	123	73	48	305.62	292.34	279.05	265.76
		26185		.6890		17.500	18.0	143	93	48	374.64	358.35	342.06	325.77
	29445			.7027		17.850	18.0	123	73	48	305.62	292.34	279.05	265.76
		26195		.7027		17.850	18.0	143	93	48	374.64	358.35	342.06	325.77
	29455			.7087		18.000	18.0	123	73	48	305.62	292.34	279.05	265.76
		26205		.7087		18.000	18.0	143	93	48	374.64	358.35	342.06	325.77
		26215		.7185		18.250	20.0	153	101	50	454.73	434.96	415.19	395.42
		26225		.7283		18.500	20.0	153	101	50	454.73	434.96	415.19	395.42

Series 1580KD, 1280KD, 1880KD (continued)

.7342" - .7874"
(18.650mm - 20.000mm)

HIGH PERFORMANCE
DRILLS

3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
			Decimal	Metric								
	26235		.7342	18.650	20.0	153	101	50	454.73	434.96	415.19	395.42
	26245		.7480	19.000	20.0	153	101	50	454.73	434.96	415.19	395.42
29505			.7500	19.050	20.0	131	79	50	403.77	386.21	368.66	351.10
	26255		.7500	19.050	20.0	153	101	50	454.73	434.96	415.19	395.42
29545			.7579	19.250	20.0	131	79	50	403.77	386.21	368.66	351.10
29546			.7590	19.280	20.0	131	79	50	403.77	386.21	368.66	351.10
	26260		.7590	19.280	20.0	153	101	50	454.73	434.96	415.19	395.42
29551			.7598	19.300	20.0	131	79	50	403.77	386.21	368.66	351.10
	26261		.7598	19.300	20.0	153	101	50	454.73	434.96	415.19	395.42
29565			.7677	19.500	20.0	131	79	50	403.77	386.21	368.66	351.10
	26281		.7795	19.800	20.0	153	101	50	454.73	434.96	415.19	395.42
29595			.7815	19.850	20.0	131	79	50	403.77	386.21	368.66	351.10
29605			.7874	20.000	20.0	131	79	50	403.77	386.21	368.66	351.10

GARR TOOL High Performance Drilling Guide

Fractional

Type	Rc Hardness	Recommended SFM		CHIPLOAD PER FLUTE (Fz)				
		NON-COOLANT	COOLANT FED	1/8" - 1/4"	1/4" - 3/8"	3/8" - 1/2"	1/2" - 5/8"	5/8" - 3/4"
		1580H 1280H 1580HD	1580KH 1280KH 1880KH 1580KD 1280KD					
COBALT BASE ALLOYS								
Powdered Metal, Stellite, Hs-21, Haynes 25/188, X-40, L-605	< 35	185	225	.0010" - .0020"	.0020" - .0030"	.0025" - .0035"	.0030" - .0040"	.0035" - .0055"
	> 35	125	180	.0005" - .0015"	.0015" - .0025"	.0020" - .0030"	.0025" - .0035"	.0030" - .0045"
NICKEL BASE ALLOYS								
Invar, Kovar, Inconel-625/718, Waspaloy, Rene, Hastelloy, A286	< 35	125	200	.0010" - .0020"	.0020" - .0030"	.0025" - .0035"	.0030" - .0040"	.0035" - .0055"
	> 35	90	160	.0005" - .0015"	.0015" - .0025"	.0020" - .0030"	.0025" - .0035"	.0030" - .0045"
IRON BASE ALLOYS								
Incoloy 800-802, Multimet N-155, Timkin 16-25-6, Carpenter 22-b3	< 35	175	250	.0015" - .0025"	.0025" - .0030"	.0025" - .0035"	.0035" - .0045"	.0035" - .0055"
	> 35	125	200	.0005" - .0015"	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0030" - .0045"
MONEL								
Monel - 65% Nickel		150	225	.0010" - .0020"	.0015" - .0025"	.0020" - .0030"	.0025" - .0035"	.0035" - .0055"
TITANIUM ALLOYS								
Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si		225	300	.0010" - .0020"	.0020" - .0030"	.0025" - .0035"	.0030" - .0040"	.0035" - .0055"
STAINLESS STEELS								
(Precipitation) 13/8, 15/5, 17-4, pH Types	< 35	225	300	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"	.0040" - .0055"
	> 35	175	240	.0005" - .0015"	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"
(Austenitic) Inox, 200 Series, 300 Series	< 35	225	300	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"	.0040" - .0055"
	> 35	175	225	.0010" - .0015"	.0015" - .0020"	.0020" - .0025"	.0025" - .0035"	.0035" - .0045"
(Austenitic) 304L, 316L, Nitronic 50, Inox	< 35	125	175	.0010" - .0015"	.0015" - .0020"	.0020" - .0030"	.0030" - .0040"	.0025" - .0040"
	> 35	80	100	.0003" - .0010"	.0010" - .0015"	.0015" - .0025"	.0025" - .0035"	.0020" - .0040"
(Martensitic) 400 Series	< 35	225	300	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"	.0040" - .0055"
	> 35	175	240	.0005" - .0015"	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"
HIGH STRENGTH TOOL STEELS								
4140, 4340, 6150, 5210, A2, D2, P20, H11, H13, S2, O1	< 35	200	300	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"	.0045" - .0055"
	> 35	175	240	.0005" - .0015"	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"
MEDIUM ALLOY TOOL STEELS								
200, 250, 300, 8620	< 35	200	300	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"	.0045" - .0065"
	> 35	175	240	.0005" - .0015"	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"
CARBON STEELS								
Platinum, A36, 12L14, 1000's, 1100's, 1300's	< 35	200	300	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"	.0045" - .0065"
	> 35	175	240	.0005" - .0015"	.0015" - .0025"	.0025" - .0030"	.0030" - .0035"	.0035" - .0045"
CAST MATERIAL								
Steel		200	300	.0025" - .0035"	.0035" - .0045"	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"
Ductile Iron		250	350	.0025" - .0035"	.0035" - .0045"	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"
Gray Iron		250	400	.0025" - .0035"	.0035" - .0045"	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"
ALUMINUM								
2014, 2024, 6061-(T1-T6), 7075		300 - 400	300 - 500	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"	.0085" - .0095"	.0085" - .0095"
Die Cast, Extruded		250 - 300	300 - 400	.0025" - .0035"	.0035" - .0045"	.0055" - .0065"	.0075" - .0085"	.0075" - .0085"
MAGNESIUM								
		300	400	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"	.0085" - .0095"	.0085" - .0095"
COPPER								
Copper Alloys		300	400	.0025" - .0035"	.0035" - .0045"	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"
BRASS								
Short Chips Long Chips		300	400	.0035" - .0045"	.0045" - .0055"	.0065" - .0075"	.0085" - .0095"	.0085" - .0095"
		200	300	.0025" - .0035"	.0035" - .0045"	.0055" - .0065"	.0075" - .0085"	.0075" - .0085"
BRONZE								
Short Chips Long Chips		200	300	.0025" - .0035"	.0035" - .0045"	.0035" - .0045"	.0055" - .0065"	.0075" - .0085"
		150	250	.0015" - .0025"	.0025" - .0035"	.0025" - .0035"	.0045" - .0055"	.0065" - .0075"

NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.

GARR TOOL High Performance Drilling Guide

Metric

Type	Rc Hardness	Recommended M/Min.		CHIPLOAD PER FLUTE (Fz)				
		NON-COOLANT	COOLANT FED	3.0 - 6.0	6.0 - 10.0	10.0 - 13.0	13.0 - 16.0	16.0 - 20.0
		1580H 1280H 1580HD	1580KH 1280KH 1880KH 1580KD 1280KD					
COBALT BASE ALLOYS								
Powdered Metal, Stellite, Hs-21, Haynes 25/188, X-40, L-605	< 35	60	70	.035 - .060	.060 - .085	.075 - .100	.085 - .110	.095 - .130
	> 35	40	55	.025 - .050	.050 - .075	.060 - .085	.075 - .100	.095 - .110
NICKEL BASE ALLOYS								
Invar, Kovar, Inconel-625/718, Waspaloy, Rene, Hastelloy, A286	< 35	40	60	.035 - .060	.060 - .085	.075 - .100	.085 - .125	.085 - .110
	> 35	20	45	.025 - .050	.050 - .075	.060 - .085	.075 - .100	.085 - .100
IRON BASE ALLOYS								
Incoloy 800-802, Multimet N-155, Timkin 16-25-6, Carpenter 22-b3	< 35	50	75	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.110 - .140
	> 35	40	60	.025 - .050	.050 - .075	.075 - .085	.085 - .100	.095 - .110
MONEL								
Monel - 65% Nickel		45	70	.035 - .060	.050 - .075	.060 - .085	.075 - .100	.085 - .120
TITANIUM ALLOYS								
Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si		70	90	.035 - .060	.060 - .085	.075 - .100	.085 - .110	.095 - .130
STAINLESS STEELS								
(Precipitation)	< 35	70	90	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.100 - .140
13/8, 15/5, 17-4, pH Types	> 35	50	70	.025 - .050	.050 - .075	.075 - .085	.085 - .100	.085 - .110
(Austenitic)	< 35	70	90	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.100 - .140
Inox, 200 Series, 300 Series	> 35	50	70	.035 - .050	.050 - .060	.060 - .075	.075 - .100	.075 - .110
(Austenitic)	< 35	40	55	.035 - .050	.050 - .060	.060 - .085	.085 - .110	.075 - .110
304L, 316L, Nitronic 50, Inox	> 35	20	30	.025 - .035	.035 - .050	.050 - .075	.075 - .100	.075 - .110
(Martensitic)	< 35	70	90	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.100 - .130
400 Series	> 35	50	70	.025 - .050	.050 - .075	.075 - .085	.085 - .100	.085 - .110
HIGH STRENGTH TOOL STEELS								
4140, 4340, 6150, 5210, A2, D2, P20, H11, H13, S2, O1	< 35	60	90	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.100 - .130
	> 35	50	70	.025 - .050	.050 - .075	.075 - .085	.085 - .100	.085 - .100
MEDIUM ALLOY TOOL STEELS								
200, 250, 300, 8620	< 35	60	90	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.100 - .140
	> 35	50	70	.025 - .050	.050 - .075	.075 - .085	.085 - .100	.085 - .110
CARBON STEELS								
Platinum, A36, 12L14, 1000's, 1100's, 1300's	< 35	60	90	.050 - .075	.075 - .085	.085 - .100	.100 - .125	.100 - .140
	> 35	50	70	.025 - .050	.050 - .075	.075 - .085	.085 - .100	.085 - .120
CAST MATERIAL								
Steel		60	90	.060 - .090	.100 - .125	.100 - .125	.125 - .150	.175 - .200
Ductile Iron		75	100	.060 - .090	.100 - .125	.100 - .125	.125 - .150	.175 - .200
Gray Iron		75	120	.060 - .090	.100 - .125	.100 - .125	.125 - .150	.175 - .200
ALUMINUM								
2014, 2024, 6061-(T1-T6), 7075		90 - 120	90 - 150	.090 - .120	.125 - .150	.175 - .200	.225 - .250	.225 - .250
Die Cast, Extruded		75 - 90	90 - 120	.060 - .100	.100 - .120	.150 - .175	.200 - .225	.200 - .225
MAGNESIUM								
		90	120	.080 - .120	.125 - .150	.175 - .200	.225 - .250	.225 - .250
COPPER								
Copper Alloys		90	120	.060 - .100	.100 - .125	.100 - .125	.125 - .150	.175 - .200
BRASS								
Short Chips Long Chips		90	120	.080 - .120	.125 - .150	.175 - .200	.225 - .250	.225 - .250
		60	90	.060 - .090	.100 - .125	.150 - .175	.200 - .225	.200 - .225
BRONZE								
Short Chips Long Chips		60	90	.060 - .100	.100 - .125	.100 - .125	.150 - .175	.200 - .225
		45	70	.040 - .060	.060 - .085	.075 - .100	.125 - .150	.175 - .200

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GARR TOOL[®]

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