

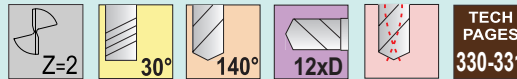
TOLERANCES

$d1$	h7
$d2$	h6
$l1$	$+0.1181" - .1181" (+3.00 - 3.00mm)$
$l2$	$+0.1181" - .1181" (+3.00 - 3.00mm)$
$l4$	$+0.0787" - .0000" (+2.00 - 0.00mm)$

**NEW
SERIES**

Series HTD 12

.1181" - .2188"
(3.000mm - 5.557mm)



Recommended for high nickel, high temperature alloys, cobalt-based alloys, stainless steels, and tool steels <52 Rc

BALIQ® ALTINOS Coating (AlTiN-based)

High performance solid submicron grain carbide drill with reinforced (HA) shank

h7 drill diameter tolerance

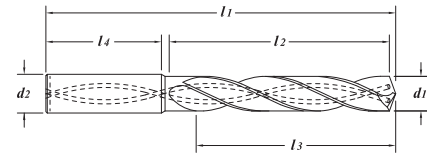
Double margin for true and cleaner holes

Coolant through

Polished flutes

140° Facet point

Pilot drill not required for most applications



EDP#	$d1$ Diameter		$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	$l3$ Max Drill Depth	$l4$ Shank Length	1-11	12-24	25-49	50-100
	Decimal	Metric									
69064	.1181	3.000	6.0	80	40	35	36	122.30	116.98	111.66	106.35
69066	.1220	3.100	6.0	80	40	35	36	122.30	116.98	111.66	106.35
69068	.1250	1/8"	3.175	6.0	82	42	37	122.30	116.98	111.66	106.35
69070	.1260	3.200	6.0	82	42	37	36	122.30	116.98	111.66	106.35
69072	.1285	#30	3.264	6.0	82	42	37	122.30	116.98	111.66	106.35
69074	.1299	3.300	6.0	82	42	37	36	122.30	116.98	111.66	106.35
69076	.1360	#29	3.454	6.0	85	45	40	122.30	116.98	111.66	106.35
69078	.1378	3.500	6.0	85	45	40	36	122.30	116.98	111.66	106.35
69080	.1417	3.600	6.0	85	45	40	36	122.30	116.98	111.66	106.35
69082	.1457	3.700	6.0	90	50	44	36	122.30	116.98	111.66	106.35
69084	.1476	3.750	6.0	90	50	44	36	122.30	116.98	111.66	106.35
69086	.1496	3.800	6.0	90	50	44	36	122.30	116.98	111.66	106.35
69088	.1535	3.900	6.0	90	50	44	36	122.30	116.98	111.66	106.35
69090	.1562	5/32"	3.967	6.0	90	50	44	122.30	116.98	111.66	106.35
69092	.1575	4.000	6.0	95	55	48	36	122.30	116.98	111.66	106.35
69094	.1614	4.100	6.0	95	55	48	36	122.30	116.98	111.66	106.35
69096	.1654	4.200	6.0	95	55	48	36	122.30	116.98	111.66	106.35
69098	.1673	4.250	6.0	95	55	48	36	122.30	116.98	111.66	106.35
69100	.1693	4.300	6.0	95	55	48	36	122.30	116.98	111.66	106.35
69102	.1719	11/64"	4.366	6.0	95	55	48	122.30	116.98	111.66	106.35
69104	.1732	4.400	6.0	95	55	48	36	122.30	116.98	111.66	106.35
69106	.1772	4.500	6.0	100	60	54	36	122.30	116.98	111.66	106.35
69108	.1811	4.600	6.0	100	60	54	36	122.30	116.98	111.66	106.35
69110	.1831	4.650	6.0	100	60	54	36	122.30	116.98	111.66	106.35
69112	.1850	4.700	6.0	100	60	54	36	122.30	116.98	111.66	106.35
69114	.1875	3/16"	4.762	6.0	100	60	54	122.30	116.98	111.66	106.35
69116	.1890	#12	4.800	6.0	100	60	54	122.30	116.98	111.66	106.35
69118	.1929	4.900	6.0	100	60	54	36	122.30	116.98	111.66	106.35
69120	.1969	5.000	6.0	105	65	58	36	122.30	116.98	111.66	106.35
69122	.2010	#7	5.105	6.0	105	65	58	122.30	116.98	111.66	106.35
69124	.2028	5.150	6.0	105	65	58	36	122.30	116.98	111.66	106.35
69126	.2031	13/64"	5.159	6.0	105	65	58	122.30	116.98	111.66	106.35
69128	.2047	5.200	6.0	110	70	63	36	122.30	116.98	111.66	106.35
69130	.2087	5.300	6.0	110	70	63	36	122.30	116.98	111.66	106.35
69132	.2165	5.500	6.0	110	70	63	36	122.30	116.98	111.66	106.35
69134	.2188	7/32"	5.557	6.0	110	70	63	122.30	116.98	111.66	106.35

continued →

Series HTD 12 (continued)

.2205" - .3937"
(5.600mm - 10.000mm)

EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l3</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100	
	Decimal	Metric										
69136	.2205	5.600	6.0	115	75	67	36	122.30	116.98	111.66	106.35	
69138	.2244	5.700	6.0	115	75	67	36	122.30	116.98	111.66	106.35	
69140	.2283	5.800	6.0	115	75	67	36	122.30	116.98	111.66	106.35	
69142	.2323	5.900	6.0	115	75	67	36	122.30	116.98	111.66	106.35	
69144	.2344	15/64"	5.954	6.0	120	80	72	122.30	116.98	111.66	106.35	
69146	.2362	6.000	6.0	120	80	72	36	122.30	116.98	111.66	106.35	
69148	.2370	6.020	8.0	120	80	72	36	167.44	160.16	152.88	145.60	
69150	.2402	6.100	8.0	120	80	72	36	167.44	160.16	152.88	145.60	
69152	.2441	6.200	8.0	120	80	72	36	167.44	160.16	152.88	145.60	
69154	.2480	6.300	8.0	120	80	72	36	167.44	160.16	152.88	145.60	
69156	.2500	1/4"	6.350	8.0	125	85	77	167.44	160.16	152.88	145.60	
69158	.2520	6.400	8.0	125	85	77	36	167.44	160.16	152.88	145.60	
69160	.2559	6.500	8.0	125	85	77	36	167.44	160.16	152.88	145.60	
69162	.2598	6.600	8.0	125	85	77	36	167.44	160.16	152.88	145.60	
69164	.2638	6.700	8.0	125	85	77	36	167.44	160.16	152.88	145.60	
69166	.2656	17/64"	6.746	8.0	130	90	81	167.44	160.16	152.88	145.60	
69168	.2677	6.800	8.0	130	90	81	36	167.44	160.16	152.88	145.60	
69170	.2717	6.900	8.0	130	90	81	36	167.44	160.16	152.88	145.60	
69172	.2756	7.000	8.0	130	90	81	36	167.44	160.16	152.88	145.60	
69174	.2795	7.100	8.0	130	90	81	36	167.44	160.16	152.88	145.60	
69176	.2812	9/32"	7.142	8.0	135	95	87	167.44	160.16	152.88	145.60	
69178	.2835	7.200	8.0	135	95	87	36	167.44	160.16	152.88	145.60	
69180	.2874	7.300	8.0	135	95	87	36	167.44	160.16	152.88	145.60	
69182	.2913	7.400	8.0	135	95	87	36	167.44	160.16	152.88	145.60	
69184	.2953	7.500	8.0	135	95	87	36	167.44	160.16	152.88	145.60	
69186	.2969	19/64"	7.541	8.0	141	101	92	167.44	160.16	152.88	145.60	
69188	.2992	7.600	8.0	141	101	92	36	167.44	160.16	152.88	145.60	
69190	.3031	7.700	8.0	141	101	92	36	167.44	160.16	152.88	145.60	
69192	.3071	7.800	8.0	141	101	92	36	167.44	160.16	152.88	145.60	
69194	.3125	5/16"	7.937	8.0	141	101	92	167.44	160.16	152.88	145.60	
69196	.3150	8.000	8.0	141	101	92	36	167.44	160.16	152.88	145.60	
69198	.3189	8.100	10.0	152	108	97	40	254.45	243.39	232.32	221.26	
69200	.3228	8.200	10.0	152	108	97	40	254.45	243.39	232.32	221.26	
69202	.3268	8.300	10.0	152	108	97	40	254.45	243.39	232.32	221.26	
69204	.3287	8.350	10.0	152	108	97	40	254.45	243.39	232.32	221.26	
69206	.3307	8.400	10.0	152	108	97	40	254.45	243.39	232.32	221.26	
69208	.3346	8.500	10.0	152	108	97	40	254.45	243.39	232.32	221.26	
69210	.3386	8.600	10.0	158	114	104	40	254.45	243.39	232.32	221.26	
69212	.3425	8.700	10.0	158	114	104	40	254.45	243.39	232.32	221.26	
69214	.3438	11/32"	8.732	10.0	158	114	104	254.45	243.39	232.32	221.26	
69216	.3445	8.750	10.0	158	114	104	40	254.45	243.39	232.32	221.26	
69218	.3465	8.800	10.0	158	114	104	40	254.45	243.39	232.32	221.26	
69220	.3504	8.900	10.0	158	114	104	40	254.45	243.39	232.32	221.26	
69222	.3543	9.000	10.0	158	114	104	40	254.45	243.39	232.32	221.26	
69224	.3583	9.100	10.0	163	119	108	40	254.45	243.39	232.32	221.26	
69226	.3602	9.150	10.0	163	119	108	40	254.45	243.39	232.32	221.26	
69228	.3622	9.200	10.0	163	119	108	40	254.45	243.39	232.32	221.26	
69230	.3661	9.300	10.0	163	119	108	40	254.45	243.39	232.32	221.26	
69232	.3701	9.400	10.0	163	119	108	40	254.45	243.39	232.32	221.26	
69234	.3740	9.500	10.0	163	119	108	40	254.45	243.39	232.32	221.26	
69236	.3750	3/8"	9.525	10.0	172	128	114	40	254.45	243.39	232.32	221.26
69238	.3780	9.600	10.0	172	128	114	40	254.45	243.39	232.32	221.26	
69240	.3819	9.700	10.0	172	128	114	40	254.45	243.39	232.32	221.26	
69242	.3858	9.800	10.0	172	128	114	40	254.45	243.39	232.32	221.26	
69244	.3898	9.900	10.0	172	128	114	40	254.45	243.39	232.32	221.26	
69246	.3937	10.000	10.0	172	128	114	40	254.45	243.39	232.32	221.26	

EDP#	<i>d1</i> Diameter		<i>d2</i> Shank Diameter	<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l3</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
	Decimal	Metric									
69248	.3976	10.100	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69250	.4016	10.200	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69252	.4062 13/32"	10.317	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69254	.4134	10.500	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69256	.4213	10.700	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69258	.4252	10.800	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69260	.4331	11.000	12.0	185	136	124	45	333.76	319.25	304.74	290.23
69262	.4375 7/16"	11.112	12.0	196	147	135	45	333.76	319.25	304.74	290.23
69264	.4409	11.200	12.0	196	147	135	45	333.76	319.25	304.74	290.23
69266	.4488	11.400	12.0	196	147	135	45	333.76	319.25	304.74	290.23
69268	.4528	11.500	12.0	196	147	135	45	333.76	319.25	304.74	290.23
69270	.4688 15/32"	11.907	12.0	202	153	140	45	333.76	319.25	304.74	290.23
69272	.4724	12.000	12.0	202	153	140	45	333.76	319.25	304.74	290.23



Series 1160, 1180

**NEW
ITEM**

.1562" - .1910"
(3.967mm - 4.851mm)



**TECH
PAGES
334**

TOLERANCES

d	+0.000" -0.005" (+0.000 -0.127mm)
l_1	+0.125" -0.125" (+3.175 -3.175mm)
l_2	+0.125" -0.125" (+3.175 -3.175mm)

Recommended for aluminum and other soft materials <40 Rc

BALINIT® MAYURA Coated

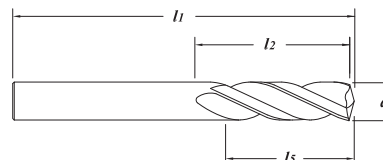
High performance solid submicron grain carbide drill

No spot drilling required

Unique point geometry and coating for higher speeds and feeds

High performance drill point

Live tooling recommended on lathe processes



3xD (1160) EDP#	5xD (1180) EDP#	d †			l_1	l_2	l_5				
		Decimal	Diameter	Metric	Overall Length	Flute Length	Max Drill Depth	1-11	12-24	25-49	50-100
70631		.1562	5/32"	3.967	2-1/16"	9/16"	.497"	42.99	41.12	39.25	37.38
	70161	.1562	5/32"	3.967	2-1/2"	1"	.809"	44.26	42.34	40.41	38.49
70633		.1570	#22	3.988	2-1/8"	5/8"	.500"	43.39	41.50	39.62	37.73
	70163	.1570	#22	3.988	2-1/2"	1"	.814"	44.59	42.65	40.71	38.77
70635		.1575		4.000	54	16	13	43.73	41.83	39.93	38.03
	70166	.1575		4.000	65	24	21	44.92	42.97	41.01	39.06
70637		.1590	#21	4.039	2-1/8"	5/8"	.506"	44.11	42.20	40.28	38.36
	70177	.1590	#21	4.039	2-1/2"	1"	.824"	45.23	43.26	41.30	39.33
70639		.1610	#20	4.089	2-1/8"	5/8"	.512"	44.49	42.56	40.62	38.69
	70179	.1610	#20	4.089	2-1/2"	1"	.834"	45.61	43.63	41.64	39.66
70641		.1660	#19	4.216	2-1/8"	5/8"	.528"	44.87	42.92	40.97	39.02
	70181	.1660	#19	4.216	2-3/4"	1-1/8"	.860"	45.93	43.93	41.94	39.94
70643		.1695	#18	4.305	2-1/8"	5/8"	.539"	45.22	43.25	41.29	39.32
	70183	.1695	#18	4.305	2-3/4"	1-1/8"	.878"	46.23	44.22	42.21	40.20
70645		.1719	11/64"	4.366	2-1/8"	5/8"	.547"	45.61	43.63	41.64	39.66
	70185	.1719	11/64"	4.366	2-3/4"	1-1/8"	.891"	46.56	44.54	42.51	40.49
70647		.1730	#17	4.394	2-3/16"	11/16"	.551"	45.98	43.98	41.98	39.98
	70187	.1730	#17	4.394	2-3/4"	1-1/8"	.897"	46.89	44.85	42.81	40.77
70649		.1770	#16	4.496	2-3/16"	11/16"	.563"	46.30	44.29	42.27	40.26
	70189	.1770	#16	4.496	2-3/4"	1-1/8"	.917"	47.24	45.19	43.13	41.08
70651		.1772		4.500	55	18	14	46.69	44.66	42.63	40.60
	70191	.1772		4.500	65	25	23	47.46	45.40	43.33	41.27
70653		.1800	#15	4.572	2-3/16"	11/16"	.573"	47.00	44.96	42.91	40.87
	70196	.1800	#15	4.572	2-3/4"	1-1/4"	.933"	47.86	45.78	43.70	41.62
70655		.1820	#14	4.623	2-3/16"	11/16"	.579"	47.44	45.38	43.31	41.25
	70201	.1820	#14	4.623	2-3/4"	1-1/4"	.943"	48.19	46.09	44.00	41.90
70657		.1850	#13	4.700	2-3/16"	11/16"	.589"	47.78	45.71	43.63	41.55
	70206	.1850	#13	4.700	2-3/4"	1-1/4"	.959"	48.54	46.43	44.32	42.21
70659		.1875	3/16"	4.763	2-3/16"	11/16"	.597"	48.16	46.07	43.97	41.88
	70211	.1875	3/16"	4.763	2-3/4"	1-1/4"	.972"	48.70	46.59	44.47	42.35
70661		.1890	#12	4.801	2-1/4"	3/4"	.601"	49.74	47.58	45.41	43.25
	70216	.1890	#12	4.801	2-3/4"	1-1/4"	.979"	50.51	48.31	46.12	43.92
70663		.1910	#11	4.851	2-1/4"	3/4"	.608"	50.20	48.02	45.83	43.65
	70221	.1910	#11	4.851	2-3/4"	1-1/4"	.990"	50.82	48.61	46.40	44.19

3xD (1160) EDP#	5xD (1180) EDP#	d †			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal	Diameter	Metric							
70665		.1935	#10	4.914	2-1/4"	3/4"	.616"	50.50	48.30	46.11	43.91
	70226	.1935	#10	4.914	2-3/4"	1-1/4"	1.003"	51.14	48.92	46.69	44.47
70667		.1960	#9	4.978	2-1/4"	3/4"	.624"	50.85	48.64	46.43	44.22
	70229	.1960	#9	4.978	3"	1-5/16"	1.016"	51.44	49.20	46.97	44.73
70669		.1969		5.000	57	19	16	51.13	48.91	46.68	44.46
	70231	.1969		5.000	75	32	26	51.77	49.52	47.27	45.02
70671		.1990	#8	5.055	2-1/4"	3/4"	.633"	51.61	49.37	47.12	44.88
	70236	.1990	#8	5.055	3"	1-5/16"	1.031"	52.03	49.76	47.50	45.24
70673		.2010	#7	5.105	2-1/4"	3/4"	.640"	51.76	49.51	47.26	45.01
	70241	.2010	#7	5.105	3"	1-5/16"	1.042"	52.23	49.96	47.69	45.42
70675		.2031	13/64"	5.159	2-1/4"	3/4"	.646"	52.11	49.84	47.58	45.31
	70246	.2031	13/64"	5.159	3"	1-5/16"	1.053"	52.60	50.31	48.03	45.74
70677		.2040	#6	5.182	2-3/8"	7/8"	.649"	52.46	50.18	47.90	45.62
	70251	.2040	#6	5.182	3"	1-3/8"	1.057"	52.96	50.66	48.35	46.05
70679		.2055	#5	5.220	2-3/8"	7/8"	.654"	52.85	50.56	48.26	45.96
	70256	.2055	#5	5.220	3"	1-3/8"	1.065"	53.30	50.99	48.67	46.35
70681		.2090	#4	5.309	2-3/8"	7/8"	.665"	53.16	50.85	48.54	46.23
	70261	.2090	#4	5.309	3"	1-3/8"	1.083"	53.60	51.27	48.94	46.61
70683		.2130	#3	5.410	2-3/8"	7/8"	.678"	53.52	51.19	48.87	46.54
	70266	.2130	#3	5.410	3"	1-3/8"	1.104"	53.96	51.61	49.27	46.92
70685		.2165		5.500	60	22	18	53.85	51.51	49.17	46.83
	70271	.2165		5.500	75	35	29	54.28	51.92	49.56	47.20
70687		.2188	7/32"	5.558	2-3/8"	7/8"	.696"	54.30	51.94	49.58	47.22
	70276	.2188	7/32"	5.558	3"	1-3/8"	1.134"	54.60	52.23	49.85	47.48
70689		.2210	#2	5.613	2-7/16"	15/16"	.703"	54.69	52.32	49.94	47.56
	70281	.2210	#2	5.613	3"	1-3/8"	1.145"	55.69	53.27	50.85	48.43
70691		.2280	#1	5.791	2-7/16"	15/16"	.726"	55.11	52.71	50.32	47.92
	70286	.2280	#1	5.791	3"	1-3/8"	1.182"	55.96	53.53	51.09	48.66
70693		.2340	A	5.944	2-7/16"	15/16"	.745"	55.49	53.08	50.66	48.25
	70294	.2340	A	5.944	3-1/4"	1-1/2"	1.213"	56.52	54.07	51.61	49.15
70695		.2344	15/64"	5.954	2-7/16"	15/16"	.746"	55.91	53.48	51.05	48.62
	70296	.2344	15/64"	5.954	3-1/4"	1-1/2"	1.215"	57.09	54.60	52.12	49.64
70697		.2362		6.000	64	26	19	56.29	53.85	51.40	48.95
	70301	.2362		6.000	82	38	31	57.25	54.76	52.27	49.78
70699		.2380	B	6.045	2-1/2"	1"	.757"	56.68	54.22	51.75	49.29
	70306	.2380	B	6.045	3-1/4"	1-5/8"	1.233"	57.41	54.91	52.42	49.92
70701		.2420	C	6.147	2-1/2"	1"	.770"	57.14	54.66	52.17	49.69
	70311	.2420	C	6.147	3-1/4"	1-5/8"	1.254"	57.78	55.26	52.75	50.24
70703		.2460	D	6.248	2-1/2"	1"	.783"	57.45	54.96	52.46	49.96
	70316	.2460	D	6.248	3-1/4"	1-5/8"	1.275"	58.12	55.59	53.07	50.54
70705		.2500	1/4" / E	6.350	2-1/2"	1"	.796"	57.95	55.43	52.91	50.39
	70321	.2500	1/4" / E	6.350	3-1/4"	1-5/8"	1.296"	58.43	55.89	53.35	50.81
70707		.2510		6.375	2-1/2"	1"	.799"	58.70	56.14	53.59	51.04
	70911	.2510		6.375	3-1/4"	1-5/8"	1.300"	59.33	56.75	54.17	51.59
70709		.2559		6.500	66	28	21	60.97	58.32	55.67	53.02
	70326	.2559		6.500	82	41	34	61.99	59.29	56.60	53.90
70711		.2570	F	6.528	2-5/8"	1-1/8"	.818"	61.94	59.25	56.55	53.86
	70331	.2570	F	6.528	3-1/4"	1-11/16"	1.332"	62.92	60.18	57.45	54.71

continued →

Series 1160, 1180 (continued)

.2610" - .3594"
(6.629mm - 9.129mm)

3xD (1160) EDP#	5xD (1180) EDP#	$d^{\dagger}$ Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal		Metric							
70713		.2610	G	6.629	2-5/8"	1-1/8"	.831"	62.88	60.15	57.41	54.68
	70336	.2610	G	6.629	3-1/2"	1-11/16"	1.353"	63.88	61.11	58.33	55.55
70715		.2656	17/64"	6.746	2-5/8"	1-1/8"	.845"	63.83	61.05	58.28	55.50
	70341	.2656	17/64"	6.746	3-1/2"	1-11/16"	1.376"	64.83	62.01	59.19	56.37
70717		.2660	H	6.756	2-11/16"	1-3/16"	.846"	64.78	61.96	59.15	56.33
	70346	.2660	H	6.756	3-1/2"	1-11/16"	1.378"	65.81	62.95	60.09	57.23
70719		.2720	I	6.909	2-11/16"	1-3/16"	.866"	64.93	62.11	59.28	56.46
	70351	.2720	I	6.909	3-1/2"	1-11/16"	1.410"	66.76	63.86	60.95	58.05
70721		.2756		7.000	68	30	22	65.87	63.01	60.14	57.28
	70356	.2756		7.000	88	43	36	67.70	64.76	61.81	58.87
70723		.2770	J	7.036	2-11/16"	1-3/16"	.881"	66.79	63.89	60.98	58.08
	70361	.2770	J	7.036	3-1/2"	1-11/16"	1.435"	68.67	65.68	62.70	59.71
70725		.2812	9/32"	7.142	2-11/16"	1-3/16"	.895"	68.70	65.71	62.73	59.74
	70371	.2812	9/32"	7.142	3-1/2"	1-3/4"	1.457"	70.60	67.53	64.46	61.39
70727		.2900	L	7.366	2-3/4"	1-1/4"	.923"	69.63	66.61	63.58	60.55
	70376	.2900	L	7.366	3-1/2"	1-3/4"	1.503"	71.48	68.38	65.27	62.16
70728		.2950	M	7.493	2-3/4"	1-1/4"	.939"	70.98	67.89	64.81	61.72
	70378	.2950	M	7.493	3-3/4"	1-7/8"	1.529"	72.42	69.27	66.12	62.97
70729		.2953		7.500	70	32	24	70.98	67.89	64.81	61.72
	70381	.2953		7.500	95	44	39	72.42	69.27	66.12	62.97
70731		.2969	19/64"	7.541	2-3/4"	1-1/4"	.945"	71.62	68.51	65.39	62.28
	70386	.2969	19/64"	7.541	3-3/4"	1-7/8"	1.539"	73.05	69.87	66.70	63.52
70733		.3020	N	7.671	2-15/16"	1-7/16"	.961"	73.91	70.70	67.48	64.27
	70391	.3020	N	7.671	3-3/4"	1-7/8"	1.565"	75.70	72.41	69.12	65.83
70735		.3125	5/16"	7.938	2-15/16"	1-7/16"	.994"	74.18	70.95	67.73	64.50
	70396	.3125	5/16"	7.938	3-3/4"	1-7/8"	1.619"	75.90	72.60	69.30	66.00
70737		.3150		8.000	76	36	25	78.29	74.89	71.48	68.08
	70401	.3150		8.000	95	48	41	80.10	76.62	73.13	69.65
70739		.3160	O	8.026	2-15/16"	1-7/16"	1.006"	78.29	74.89	71.48	68.08
	70406	.3160	O	8.026	3-3/4"	1-7/8"	1.638"	80.10	76.62	73.13	69.65
70741		.3230	P	8.204	2-15/16"	1-7/16"	1.028"	78.86	75.43	72.00	68.57
	70411	.3230	P	8.204	3-3/4"	2-3/32"	1.674"	80.36	76.87	73.37	69.88
70743		.3281	21/64"	8.334	2-15/16"	1-7/16"	1.044"	80.30	76.81	73.32	69.83
	70416	.3281	21/64"	8.334	4"	2-3/32"	1.700"	81.05	77.53	74.00	70.48
70745		.3320	Q	8.433	3"	1-7/16"	1.056"	81.74	78.19	74.63	71.08
	70421	.3320	Q	8.433	4"	2-3/32"	1.720"	82.54	78.95	75.36	71.77
70747		.3346		8.500	76	36	27	82.10	78.53	74.96	71.39
	70426	.3346		8.500	100	53	44	83.10	79.49	75.87	72.26
70749		.3390	R	8.611	3"	1-7/16"	1.079"	84.31	80.64	76.98	73.31
	70431	.3390	R	8.611	4"	2-3/32"	1.757"	85.17	81.47	77.76	74.06
70751		.3438	11/32"	8.733	3"	1-7/16"	1.094"	86.15	82.40	78.66	74.91
	70436	.3438	11/32"	8.733	4"	2-3/16"	1.782"	87.95	84.13	80.30	76.48
70753		.3480	S	8.839	3-1/16"	1-1/2"	1.107"	90.09	86.17	82.26	78.34
	70441	.3480	S	8.839	4"	2-3/16"	1.803"	93.01	88.97	84.92	80.88
70755		.3543		9.000	78	38	29	92.38	88.36	84.35	80.33
	70446	.3543		9.000	100	55	47	93.52	89.45	85.39	81.32
70757		.3580	T	9.093	3-1/16"	1-1/2"	1.139"	97.18	92.95	88.73	84.50
	70451	.3580	T	9.093	4-1/4"	2-9/32"	1.855"	98.54	94.26	89.97	85.69
70759		.3594	23/64"	9.129	3-1/16"	1-1/2"	1.144"	97.78	93.53	89.28	85.03
	70456	.3594	23/64"	9.129	4-1/4"	2-9/32"	1.862"	99.06	94.75	90.45	86.14

3xD (1160) EDP#	5xD (1180) EDP#	d †		l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100	
		Decimal	Diameter Metric								
70761		.3680	U	9.347	3-1/8"	1-9/16"	1.171"	98.61	94.33	90.04	85.75
	70461	.3680	U	9.347	4-1/4"	2-9/32"	1.907"	103.72	99.21	94.70	90.19
70763		.3740		9.500	79	39	30	99.43	95.11	90.78	86.46
	70466	.3740		9.500	108	58	49	104.64	100.09	95.54	90.99
70765		.3750	3/8"	9.525	3-1/8"	1-9/16"	1.193"	100.03	95.68	91.33	86.98
	70471	.3750	3/8"	9.525	4-1/4"	2-3/8"	1.943"	105.57	100.98	96.39	91.80
70767		.3760		9.550	3-1/8"	1-9/16"	1.196"	101.94	97.50	93.07	88.64
	70913	.3760		9.550	4-1/4"	2-3/8"	1.948"	106.98	102.33	97.68	93.03
70769		.3770	V	9.576	3-1/4"	1-5/8"	1.200"	103.86	99.34	94.83	90.31
	70476	.3770	V	9.576	4-1/4"	2-3/8"	1.954"	108.38	103.66	98.95	94.24
70771		.3860	W	9.804	3-1/4"	1-5/8"	1.228"	105.67	101.08	96.48	91.89
	70481	.3860	W	9.804	4-1/2"	2-3/8"	2.000"	110.10	105.31	100.53	95.74
70773		.3906	25/64"	9.921	3-1/4"	1-5/8"	1.243"	107.01	102.36	97.70	93.05
	70486	.3906	25/64"	9.921	4-1/2"	2-3/8"	2.024"	111.33	106.49	101.65	96.81
70775		.3937		10.000	84	43	32	110.25	105.46	100.66	95.87
	70491	.3937		10.000	114	60	52	114.34	109.37	104.40	99.43
70777		.3970	X	10.084	3-5/16"	1-11/16"	1.263"	111.76	106.90	102.04	97.18
	70496	.3970	X	10.084	4-1/2"	2-1/2"	2.057"	115.52	110.50	105.47	100.45
70779		.4040	Y	10.262	3-5/16"	1-11/16"	1.286"	112.48	107.59	102.70	97.81
	70501	.4040	Y	10.262	4-1/2"	2-9/16"	2.094"	118.71	113.55	108.39	103.23
70781		.4062	13/32"	10.317	3-5/16"	1-11/16"	1.293"	115.95	110.91	105.87	100.83
	70506	.4062	13/32"	10.317	4-1/2"	2-9/16"	2.105"	119.63	114.43	109.23	104.03
70783		.4134		10.500	85	43	33	117.02	111.94	106.85	101.76
	70511	.4134		10.500	114	67	54	120.64	115.39	110.15	104.90
70785		.4219	27/64"	10.716	3-3/8"	1-11/16"	1.343"	118.14	113.00	107.87	102.73
	70516	.4219	27/64"	10.716	4-1/2"	2-11/16"	2.186"	121.65	116.36	111.07	105.78
70787		.4331		11.000	87	45	35	126.45	120.96	115.46	109.96
	70521	.4331		11.000	114	68	57	129.79	124.15	118.50	112.86
70789		.4375	7/16"	11.113	3-7/16"	1-3/4"	1.392"	126.80	121.29	115.77	110.26
	70526	.4375	7/16"	11.113	4-3/4"	2-13/16"	2.267"	130.27	124.61	118.94	113.28
70791		.4528		11.500	90	47	37	134.47	128.62	122.78	116.93
	70531	.4528		11.500	120	70	60	138.53	132.51	126.48	120.46
70793		.4531	29/64"	11.509	3-9/16"	1-13/16"	1.442"	134.47	128.62	122.78	116.93
	70536	.4531	29/64"	11.509	4-3/4"	2-7/8"	2.348"	138.53	132.51	126.48	120.46
70795		.4688	15/32"	11.909	3-11/16"	2-1/16"	1.491"	141.29	135.15	129.00	122.86
	70541	.4688	15/32"	11.909	4-3/4"	2-7/8"	2.429"	144.99	138.69	132.38	126.08
70797		.4724		12.000	93	53	38	141.70	135.54	129.38	123.22
	70546	.4724		12.000	120	73	62	145.37	139.05	132.73	126.41
70799		.4844	31/64"	12.304	3-11/16"	2-1/16"	1.541"	142.68	136.48	130.27	124.07
	70551	.4844	31/64"	12.304	5-5/16"	3"	2.510"	147.95	141.52	135.08	128.65
70801		.4921		12.500	95	53	40	144.10	137.83	131.57	125.30
	70556	.4921		12.500	135	75	65	149.59	143.09	136.58	130.08
70803		.5000	1/2"	12.700	3-3/4"	2-1/16"	1.591"	145.02	138.71	132.41	126.10
	70561	.5000	1/2"	12.700	5-3/8"	3-1/16"	2.591"	149.88	143.36	136.85	130.33
70805		.5010		12.725	3-3/4"	2-1/16"	1.594"	146.56	140.18	133.81	127.44
	70915	.5010		12.725	5-3/8"	3-1/16"	2.596"	151.56	144.97	138.38	131.79
70807		.5118		13.000	107	55	41	158.95	152.04	145.13	138.22
	70566	.5118		13.000	136	78	67	164.91	157.74	150.57	143.40

continued →

Series 1160, 1180 (continued)

.5156" - .6299"
(13.096mm - 16.000mm)

3xD (1160) EDP#	5xD (1180) EDP#	$d^{\dagger}$ Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal		Metric							
70809		.5156	33/64"	13.096	4-1/4"	2-3/16"	1.641"	162.71	155.64	148.56	141.49
	70571	.5156	33/64"	13.096	5-3/8"	3-1/8"	2.672"	168.43	161.11	153.78	146.46
70811		.5312	17/32"	13.492	4-1/4"	2-1/4"	1.690"	166.46	159.23	151.99	144.75
	70576	.5312	17/32"	13.492	5-11/16"	3-5/16"	2.753"	172.06	164.58	157.10	149.62
70813		.5469	35/64"	13.891	4-1/4"	2-1/4"	1.740"	173.95	166.39	158.82	151.26
	70581	.5469	35/64"	13.891	5-13/16"	3-3/8"	2.834"	179.07	171.28	163.50	155.71
70815		.5512		14.000	107	59	45	177.71	169.98	162.26	154.53
	70586	.5512		14.000	148	86	73	182.62	174.68	166.74	158.80
70817		.5625	9/16"	14.287	4-1/2"	2-3/8"	1.790"	189.03	180.81	172.59	164.37
	70591	.5625	9/16"	14.287	5-15/16"	3-1/2"	2.915"	195.16	186.67	178.19	169.70
70819		.5781	37/64"	14.683	4-1/2"	2-1/2"	1.840"	196.03	187.51	178.98	170.46
	70596	.5781	37/64"	14.683	6"	3-1/2"	2.996"	201.78	193.01	184.23	175.46
70821		.5906		15.000	115	64	48	199.64	190.96	182.28	173.60
	70601	.5906		15.000	152	90	78	205.30	196.37	187.45	178.52
NEW 70823		.5938	19/32"	15.082	4-1/2"	2-1/2"	1.890"	200.71	191.98	183.26	174.53
	70606	.5938	19/32"	15.082	6"	3-9/16"	3.077"	206.28	197.31	188.34	179.37
70825		.6094	39/64"	15.478	4-1/2"	2-9/16"	1.939"	201.74	192.97	184.20	175.43
	70611	.6094	39/64"	15.478	6-3/16"	3-11/16"	3.158"	223.62	213.90	204.17	194.45
70827		.6250	5/8"	15.875	4-1/2"	2-5/8"	1.989"	203.81	194.95	186.09	177.23
	70616	.6250	5/8"	15.875	6-5/16"	3-3/4"	3.239"	225.56	215.75	205.95	196.14
70829		.6299		16.000	115	66	51	208.73	199.65	190.58	181.50
	70621	.6299		16.000	160	95	83	230.29	220.28	210.26	200.25



*1180 Series
High Performance Drill in aluminum*

TOLERANCES

d_1	+0.000" - .0004" (+.000 - .010mm)
d_2	h6
l_1	+.125" -.125" (+3.175 - 3.175mm)
l_2	+.125" -.125" (+3.175 - 3.175mm)


Series 1550H, 1250H, 1850H

.0312" - .0354"
(0.792mm - 0.900mm)

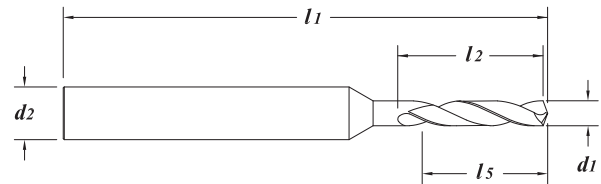
Recommended for high nickel, high temperature alloys, cobalt-based alloys, stainless steels, and tool steels >40 Rc

BALIQ® ALTINOS Coating (AlTiN-based)

High performance solid submicron grain carbide drill on 3mm or 1/8" diameter shank

30° helix for better chip evacuation

Live tooling recommended on lathe processes



HIGH PERFORMANCE
DRILLS

3xD (1550H) EDP#	5xD (1250H) EDP#	12xD (1850H) EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100	
			Decimal	Metric									
00100			.0312	1/32"	0.792	1/8"	2"	5/32"	.099"	38.17	36.51	34.85	33.19
	00304		.0312	1/32"	0.792	1/8"	2"	15/64"	.162"	39.56	37.84	36.12	34.40
		00510	.0312	1/32"	0.792	1/8"	2"	7/16"	.380"	43.75	41.84	39.94	38.04
	00306		.0315		0.800	3.0	50	6.0	4	39.01	37.31	35.62	33.92
		00512	.0315		0.800	3.0	50	12.0	10	43.14	41.26	39.39	37.51
	00308		.0319		0.810	3.0	50	6.0	4	39.01	37.31	35.62	33.92
00106			.0320	#67	0.812	1/8"	2"	11/64"	.102"	38.17	36.51	34.85	33.19
	00310		.0320	#67	0.812	1/8"	2"	15/64"	.166"	39.56	37.84	36.12	34.40
		00516	.0320	#67	0.812	1/8"	2"	7/16"	.390"	43.75	41.84	39.94	38.04
		00518	.0323		0.820	3.0	50	12.0	10	43.14	41.26	39.39	37.51
00112			.0330	#66	0.838	1/8"	2"	11/64"	.105"	38.17	36.51	34.85	33.19
	00316		.0330	#66	0.838	1/8"	2"	15/64"	.171"	39.56	37.84	36.12	34.40
		00522	.0330	#66	0.838	1/8"	2"	7/16"	.402"	43.75	41.84	39.94	38.04
	00318		.0331		0.840	3.0	50	6.0	4	39.01	37.31	35.62	33.92
		00524	.0331		0.840	3.0	50	12.0	10	43.14	41.26	39.39	37.51
00116			.0335		0.850	3.0	50	4.5	3	37.54	35.90	34.27	32.64
		00526	.0335		0.850	3.0	50	12.0	10	43.14	41.26	39.39	37.51
	00322		.0339		0.860	3.0	50	6.5	4	39.01	37.31	35.62	33.92
		00528	.0339		0.860	3.0	50	13.0	10	43.14	41.26	39.39	37.51
00120			.0343		0.870	3.0	50	4.5	3	37.54	35.90	34.27	32.64
		00530	.0343		0.870	3.0	50	13.0	11	43.14	41.26	39.39	37.51
00122			.0346		0.880	3.0	50	4.5	3	37.54	35.90	34.27	32.64
00124			.0350	#65	0.890	3.0	50	4.5	3	37.54	35.90	34.27	32.64
	00328		.0350	#65	0.890	3.0	50	6.5	5	39.01	37.31	35.62	33.92
		00534	.0350	#65	0.890	3.0	50	13.0	11	43.14	41.26	39.39	37.51
	00330		.0354		0.900	3.0	50	6.5	5	39.01	37.31	35.62	33.92
		00536	.0354		0.900	3.0	50	13.0	11	43.14	41.26	39.39	37.51

continued →

Series 1550H,1250H,1850H (continued)

.0358" - .0465"
(0.910mm - 1.181mm)

3xD (1550H) EDP#	5xD (1250H) EDP#	12xD (1850H) EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100	
			Decimal	Metric									
	00332		.0358	0.910	3.0	50	6.5	5	39.01	37.31	35.62	33.92	
00130			.0360	#64	0.914	1/8"	2"	3/16"	.115"	38.17	36.51	34.85	33.19
	00334		.0360	#64	0.914	1/8"	2"	1/4"	.187"	39.56	37.84	36.12	34.40
		00540	.0360	#64	0.914	1/8"	2"	1/2"	.439"	43.75	41.84	39.94	38.04
00134			.0366	0.930	3.0	50	5.0	3	37.54	35.90	34.27	32.64	
00136			.0370	#63	0.940	3.0	50	5.0	3	37.54	35.90	34.27	32.64
	00340		.0370	#63	0.940	3.0	50	7.0	5	39.01	37.31	35.62	33.92
		00546	.0370	#63	0.940	3.0	50	14.0	11	41.48	39.68	37.87	36.07
00138			.0374	0.950	3.0	50	5.0	3	37.54	35.90	34.27	32.64	
00142			.0380	#62	0.965	1/8"	2"	3/16"	.120"	38.17	36.51	34.85	33.19
	00346		.0380	#62	0.965	1/8"	2"	17/64"	.197"	39.56	37.84	36.12	34.40
		00552	.0380	#62	0.965	1/8"	2"	9/16"	.463"	43.75	41.84	39.94	38.04
		00556	.0386	0.980	3.0	50	14.0	12	43.14	41.26	39.39	37.51	
00148			.0390	#61	0.990	3.0	50	5.0	3	37.54	35.90	34.27	32.64
		00558	.0390	#61	0.990	3.0	50	14.0	12	43.14	41.26	39.39	37.51
00150			.0394	1.000	3.0	50	5.0	3	37.54	35.90	34.27	32.64	
	00354		.0394	1.000	3.0	50	7.0	5	39.01	37.31	35.62	33.92	
		00560	.0394	1.000	3.0	50	14.0	12	43.14	41.26	39.39	37.51	
00152			.0400	#60	1.016	1/8"	2"	13/64"	.127"	37.80	36.16	34.51	32.87
	00356		.0400	#60	1.016	1/8"	2"	9/32"	.207"	39.20	37.50	35.79	34.09
		00562	.0400	#60	1.016	1/8"	2"	9/16"	.487"	43.34	41.46	39.57	37.69
00154			.0410	#59	1.041	1/8"	2"	13/64"	.131"	37.80	36.16	34.51	32.87
	00358		.0410	#59	1.041	1/8"	2"	9/32"	.213"	39.20	37.50	35.79	34.09
		00564	.0410	#59	1.041	1/8"	2"	9/16"	.500"	43.34	41.46	39.57	37.69
00156			.0413	1.050	3.0	50	5.5	3	37.17	35.55	33.94	32.32	
	00360		.0413	1.050	3.0	50	7.5	5	37.20	35.59	33.97	32.35	
		00566	.0413	1.050	3.0	50	15.0	13	42.78	40.92	39.06	37.20	
00158			.0420	#58	1.066	1/8"	2"	7/32"	.134"	37.80	36.16	34.51	32.87
	00362		.0420	#58	1.066	1/8"	2"	5/16"	.218"	39.20	37.50	35.79	34.09
00160			.0430	#57	1.092	1/8"	2"	7/32"	.137"	37.80	36.16	34.51	32.87
	00364		.0430	#57	1.092	1/8"	2"	5/16"	.223"	39.20	37.50	35.79	34.09
		00570	.0430	#57	1.092	1/8"	2"	9/16"	.524"	43.34	41.46	39.57	37.69
00162			.0433	1.100	3.0	50	5.5	4	37.17	35.55	33.94	32.32	
	00366		.0433	1.100	3.0	50	8.0	6	38.69	37.00	35.32	33.64	
		00572	.0433	1.100	3.0	50	16.0	13	42.78	40.92	39.06	37.20	
00164			.0453	1.150	3.0	50	6.0	4	37.17	35.55	33.94	32.32	
	00368		.0453	1.150	3.0	50	8.0	6	38.69	37.00	35.32	33.64	
		00574	.0453	1.150	3.0	50	16.0	14	42.78	40.92	39.06	37.20	
00166			.0465	#56	1.181	1/8"	2"	15/64"	.148"	37.80	36.16	34.51	32.87
	00370		.0465	#56	1.181	1/8"	2"	11/32"	.241"	39.20	37.50	35.79	34.09
		00576	.0465	#56	1.181	1/8"	2"	5/8"	.567"	43.34	41.46	39.57	37.69

3xD (1550H) EDP#	5xD (1250H) EDP#	12xD (1850H) EDP#	d_1 † Diameter			d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal	3/64"	Metric								
00168			.0469	3/64"	1.191	1/8"	2"	15/64"	.149"	37.80	36.16	34.51	32.87
	00372		.0469	3/64"	1.191	1/8"	2"	11/32"	.243"	39.20	37.50	35.79	34.09
		00578	.0469	3/64"	1.191	1/8"	2"	5/8"	.571"	43.34	41.46	39.57	37.69
00170			.0472		1.200	3.0	50	6.0	4	37.17	35.55	33.94	32.32
	00374		.0472		1.200	3.0	50	9.0	6	38.69	37.00	35.32	33.64
		00580	.0472		1.200	3.0	50	18.0	15	42.78	40.92	39.06	37.20
00172			.0492		1.250	3.0	50	6.5	4	37.17	35.55	33.94	32.32
	00376		.0492		1.250	3.0	50	9.0	6	38.69	37.00	35.32	33.64
		00582	.0492		1.250	3.0	50	18.0	15	42.78	40.92	39.06	37.20
00174			.0512		1.300	3.0	50	6.5	4	36.81	35.21	33.61	32.01
	00378		.0512		1.300	3.0	50	9.0	7	38.28	36.62	34.95	33.29
		00584	.0512		1.300	3.0	50	18.0	16	42.33	40.49	38.65	36.81
00176			.0520	#55	1.320	1/8"	2"	17/64"	.166"	37.09	35.48	33.86	32.25
	00380		.0520	#55	1.320	1/8"	2"	3/8"	.270"	38.85	37.16	35.47	33.78
		00586	.0520	#55	1.320	1/8"	2"	3/4"	.634"	42.94	41.07	39.21	37.34
00178			.0531		1.350	3.0	50	6.5	4	36.81	35.21	33.61	32.01
	00382		.0531		1.350	3.0	50	9.5	7	38.28	36.62	34.95	33.29
		00588	.0531		1.350	3.0	50	19.0	16	42.33	40.49	38.65	36.81
00180			.0550	#54	1.397	1/8"	2"	9/32"	.175"	37.09	35.48	33.86	32.25
	00384		.0550	#54	1.397	1/8"	2"	3/8"	.285"	38.85	37.16	35.47	33.78
		00590	.0550	#54	1.397	1/8"	2"	3/4"	.670"	42.94	41.07	39.21	37.34
00182			.0551		1.400	3.0	50	7.0	4	36.81	35.21	33.61	32.01
	00386		.0551		1.400	3.0	50	10.0	7	38.28	36.62	34.95	33.29
		00592	.0551		1.400	3.0	65	20.0	17	44.26	42.34	40.41	38.49
00184			.0571		1.450	3.0	50	7.0	5	36.81	35.21	33.61	32.01
	00388		.0571		1.450	3.0	50	10.5	8	38.28	36.62	34.95	33.29
		00594	.0571		1.450	3.0	65	21.0	18	44.26	42.34	40.41	38.49
00186			.0591		1.500	3.0	50	7.5	5	36.81	35.21	33.61	32.01
	00390		.0591		1.500	3.0	50	10.5	8	38.28	36.62	34.95	33.29
		00596	.0591		1.500	3.0	65	21.0	18	44.26	42.34	40.41	38.49
00188			.0595	#53	1.511	1/8"	2"	19/64"	.189"	37.09	35.48	33.86	32.25
	00392		.0595	#53	1.511	1/8"	2"	7/16"	.308"	38.85	37.16	35.47	33.78
		00598	.0595	#53	1.511	1/8"	2-1/2"	13/16"	.725"	44.91	42.96	41.00	39.05
00190			.0610		1.550	3.0	50	7.5	5	36.43	34.85	33.26	31.68
	00394		.0610		1.550	3.0	50	11.0	8	37.93	36.28	34.63	32.98
		00600	.0610		1.550	3.0	65	22.0	19	43.90	41.99	40.08	38.17
00192			.0625	1/16"	1.587	1/8"	2"	5/16"	.199"	37.09	35.48	33.86	32.25
	00396		.0625	1/16"	1.587	1/8"	2"	7/16"	.324"	38.48	36.81	35.13	33.46
		00602	.0625	1/16"	1.587	1/8"	2-1/2"	13/16"	.761"	44.51	42.57	40.64	38.70
00194			.0630		1.600	3.0	50	7.5	6	36.43	34.85	33.26	31.68
	00398		.0630		1.600	3.0	50	11.0	8	37.93	36.28	34.63	32.98
		00604	.0630		1.600	3.0	65	22.0	19	43.90	41.99	40.08	38.17
00196			.0635	#52	1.613	1/8"	2"	5/16"	.202"	37.09	35.48	33.86	32.25
	00400		.0635	#52	1.613	1/8"	2"	15/32"	.329"	38.48	36.81	35.13	33.46
		00606	.0635	#52	1.613	1/8"	2-1/2"	7/8"	.774"	44.51	42.57	40.64	38.70
00198			.0650		1.650	3.0	50	8.5	5	36.43	34.85	33.26	31.68
	00402		.0650		1.650	3.0	50	11.5	9	37.93	36.28	34.63	32.98
		00608	.0650		1.650	3.0	65	23.0	20	43.90	41.99	40.08	38.17
00200			.0669		1.700	3.0	50	8.5	5	36.43	34.85	33.26	31.68
	00404		.0669		1.700	3.0	50	11.5	9	37.93	36.28	34.63	32.98
		00610	.0669		1.700	3.0	65	23.0	21	43.90	41.99	40.08	38.17
00202			.0670	#51	1.702	1/8"	2"	11/32"	.213"	37.09	35.48	33.86	32.25
	00406		.0670	#51	1.702	1/8"	2"	15/32"	.347"	38.48	36.81	35.13	33.46
		00612	.0670	#51	1.702	1/8"	2-1/2"	7/8"	.816"	44.51	42.57	40.64	38.70
00204			.0689		1.750	3.0	50	9.0	6	36.43	34.85	33.26	31.68
	00408		.0689		1.750	3.0	50	12.0	9	37.93	36.28	34.63	32.98
		00614	.0689		1.750	3.0	65	24.0	21	43.90	41.99	40.08	38.17

continued →

Series 1550H,1250H,1850H (continued)

.0700" - .0846"
(1.778mm - 2.150mm)



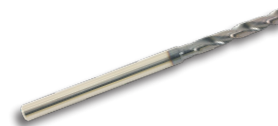
TOLERANCES

d_1	+0.000" - .0004" (+.000 - .010mm)
d_2	h6
l_1	+0.125" - .125" (+3.175 - 3.175mm)
l_2	+0.125" - .125" (+3.175 - 3.175mm)

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

BALIQ® ALTINOS Coating (AlTiN-based)

High performance solid submicron grain carbide drill on
3mm or 1/8" diameter shank



3xD (1550H) EDP#	5xD (1250H) EDP#	12xD (1850H) EDP#	d_1 † Diameter			d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal		Metric								
00206			.0700	#50	1.778	1/8"	2"	23/64"	.223"	36.72	35.12	33.53	31.93
	00410		.0700	#50	1.778	1/8"	2"	1/2"	.363"	38.10	36.44	34.79	33.13
		00616	.0700	#50	1.778	1/8"	2-1/2"	1"	.853"	44.06	42.14	40.23	38.31
00208			.0709		1.800	3.0	50	9.0	6	36.09	34.52	32.95	31.38
	00412		.0709		1.800	3.0	50	13.0	9	37.57	35.94	34.30	32.67
		00618	.0709		1.800	3.0	65	26.0	22	43.46	41.57	39.68	37.79
00210			.0728		1.850	3.0	50	9.5	6	36.09	34.52	32.95	31.38
		00620	.0728		1.850	3.0	65	26.0	23	43.46	41.57	39.68	37.79
00212			.0730	#49	1.854	1/8"	2"	3/8"	.232"	36.72	35.12	33.53	31.93
	00416		.0730	#49	1.854	1/8"	2"	1/2"	.378"	38.10	36.44	34.79	33.13
		00622	.0730	#49	1.854	1/8"	2-1/2"	1"	.889"	44.06	42.14	40.23	38.31
00214			.0748		1.900	3.0	50	9.5	6	36.09	34.52	32.95	31.38
	00418		.0748		1.900	3.0	50	13.5	10	37.57	35.94	34.30	32.67
		00624	.0748		1.900	3.0	65	27.0	23	43.46	41.57	39.68	37.79
00216			.0760	#48	1.930	1/8"	2"	3/8"	.242"	36.72	35.12	33.53	31.93
	00420		.0760	#48	1.930	1/8"	2"	17/32"	.394"	38.10	36.44	34.79	33.13
		00626	.0760	#48	1.930	1/8"	2-1/2"	1-1/8"	.926"	46.43	44.41	42.39	40.37
00218			.0768		1.950	3.0	50	10.0	6	36.09	34.52	32.95	31.38
	00422		.0768		1.950	3.0	50	14.0	10	37.57	35.94	34.30	32.67
		00628	.0768		1.950	3.0	65	28.0	24	45.79	43.80	41.81	39.82
00220			.0781	5/64"	1.983	1/8"	2"	13/32"	.249"	36.72	35.12	33.53	31.93
	00424		.0781	5/64"	1.983	1/8"	2"	9/16"	.405"	38.10	36.44	34.79	33.13
		00630	.0781	5/64"	1.983	1/8"	2-1/2"	1-1/8"	.951"	46.43	44.41	42.39	40.37
00222			.0785	#47	1.994	1/8"	2"	13/32"	.250"	36.72	35.12	33.53	31.93
	00426		.0785	#47	1.994	1/8"	2"	9/16"	.407"	38.10	36.44	34.79	33.13
		00632	.0785	#47	1.994	1/8"	2-1/2"	1-1/8"	.956"	46.43	44.41	42.39	40.37
00224			.0787		2.000	3.0	50	10.0	6	36.09	34.52	32.95	31.38
	00428		.0787		2.000	3.0	50	14.0	10	37.57	35.94	34.30	32.67
		00634	.0787		2.000	3.0	65	28.0	24	45.79	43.80	41.81	39.82
00226			.0807		2.050	3.0	50	10.5	7	35.71	34.16	32.60	31.05
	00430		.0807		2.050	3.0	50	14.0	11	37.19	35.57	33.96	32.34
		00636	.0807		2.050	3.0	65	28.0	25	45.38	43.41	41.43	39.46
00228			.0810	#46	2.057	1/8"	2"	27/64"	.258"	36.35	34.77	33.19	31.61
	00432		.0810	#46	2.057	1/8"	2"	9/16"	.420"	37.75	36.11	34.47	32.83
		00638	.0810	#46	2.057	1/8"	2-1/2"	1-1/8"	.987"	46.05	44.04	42.04	40.04
00230			.0820	#45	2.083	1/8"	2"	27/64"	.261"	36.35	34.77	33.19	31.61
	00434		.0820	#45	2.083	1/8"	2"	9/16"	.425"	37.75	36.11	34.47	32.83
		00640	.0820	#45	2.083	1/8"	2-1/2"	1-1/8"	.999"	46.05	44.04	42.04	40.04
00232			.0827		2.100	3.0	50	10.5	7	35.71	34.16	32.60	31.05
	00436		.0827		2.100	3.0	50	14.5	11	37.19	35.57	33.96	32.34
		00642	.0827		2.100	3.0	65	29.0	26	45.38	43.41	41.43	39.46
00234			.0846		2.150	3.0	50	11.0	7	35.71	34.16	32.60	31.05
	00438		.0846		2.150	3.0	50	14.5	11	37.19	35.57	33.96	32.34
		00644	.0846		2.150	3.0	65	29.0	26	45.38	43.41	41.43	39.46

3xD (1550H) EDP#	5xD (1250H) EDP#	12xD (1850H) EDP#	d_1 † Diameter			d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal		Metric								
00236			.0860	#44	2.184	1/8"	2"	7/16"	.274"	36.35	34.77	33.19	31.61
	00440		.0860	#44	2.184	1/8"	2"	19/32"	.446"	37.75	36.11	34.47	32.83
		00646	.0860	#44	2.184	1/8"	2-1/2"	1-3/16"	1.048"	46.05	44.04	42.04	40.04
00238			.0866		2.200	3.0	50	11.0	7	35.71	34.16	32.60	31.05
	00442		.0866		2.200	3.0	50	15.5	11	37.19	35.57	33.96	32.34
		00648	.0866		2.200	3.0	65	31.0	27	45.38	43.41	41.43	39.46
00240			.0886		2.250	3.0	50	11.5	7	35.71	34.16	32.60	31.05
00242			.0890	#43	2.260	1/8"	2"	29/64"	.283"	36.35	34.77	33.19	31.61
	00446		.0890	#43	2.260	1/8"	2"	5/8"	.461"	37.75	36.11	34.47	32.83
		00652	.0890	#43	2.260	1/8"	2-1/2"	1-1/4"	1.084"	46.05	44.04	42.04	40.04
00244			.0906		2.300	3.0	50	11.5	7	35.35	33.81	32.28	30.74
	00448		.0906		2.300	3.0	50	16.0	12	36.83	35.23	33.63	32.03
		00654	.0906		2.300	3.0	65	32.0	28	44.94	42.99	41.03	39.08
00246			.0925		2.350	3.0	50	12.0	7	35.35	33.81	32.28	30.74
	00450		.0925		2.350	3.0	50	16.0	12	35.42	33.88	32.34	30.80
		00656	.0925		2.350	3.0	65	32.0	29	44.94	42.99	41.03	39.08
00248			.0935	#42	2.375	1/8"	2"	31/64"	.298"	35.97	34.41	32.84	31.28
	00452		.0935	#42	2.375	1/8"	2"	21/32"	.485"	37.38	35.75	34.13	32.50
		00658	.0935	#42	2.375	1/8"	3"	1-5/16"	1.139"	45.61	43.63	41.64	39.66
00250			.0938	3/32"	2.382	1/8"	2"	31/64"	.299"	35.97	34.41	32.84	31.28
	00454		.0938	3/32"	2.382	1/8"	2"	21/32"	.486"	37.38	35.75	34.13	32.50
		00660	.0938	3/32"	2.382	1/8"	3"	1-5/16"	1.143"	45.61	43.63	41.64	39.66
00252			.0945		2.400	3.0	50	12.0	8	35.35	33.81	32.28	30.74
	00456		.0945		2.400	3.0	50	17.0	12	36.83	35.23	33.63	32.03
		00662	.0945		2.400	3.0	75	34.0	29	44.94	42.99	41.03	39.08
00254			.0960	#41	2.438	1/8"	2"	31/64"	.306"	35.97	34.41	32.84	31.28
	00458		.0960	#41	2.438	1/8"	2"	43/64"	.498"	37.38	35.75	34.13	32.50
		00664	.0960	#41	2.438	1/8"	3"	1-11/32"	1.170"	45.61	43.63	41.64	39.66
00256			.0965		2.450	3.0	50	12.5	8	35.35	33.81	32.28	30.74
00258			.0980	#40	2.489	1/8"	2"	1/2"	.312"	35.97	34.41	32.84	31.28
	00462		.0980	#40	2.489	1/8"	2"	11/16"	.508"	37.38	35.75	34.13	32.50
		00668	.0980	#40	2.489	1/8"	3"	1-3/8"	1.194"	45.61	43.63	41.64	39.66
00260			.0984		2.500	3.0	50	12.5	8	35.35	33.81	32.28	30.74
	00464		.0984		2.500	3.0	50	17.5	13	36.83	35.23	33.63	32.03
		00670	.0984		2.500	3.0	75	35.0	30	44.94	42.99	41.03	39.08
00262			.0995	#39	2.527	1/8"	2"	1/2"	.317"	35.97	34.41	32.84	31.28
	00466		.0995	#39	2.527	1/8"	2"	11/16"	.516"	37.38	35.75	34.13	32.50
		00672	.0995	#39	2.527	1/8"	3"	1-3/8"	1.212"	45.61	43.63	41.64	39.66
00264			.1004		2.550	3.0	50	13.0	8	35.02	33.50	31.97	30.45
	00468		.1004		2.550	3.0	50	17.5	13	36.50	34.91	33.33	31.74
		00674	.1004		2.550	3.0	75	35.0	31	44.56	42.63	40.69	38.75
00266			.1015	#38	2.578	1/8"	2"	17/32"	.323"	35.65	34.10	32.55	31.00
	00470		.1015	#38	2.578	1/8"	2"	45/64"	.526"	37.05	35.44	33.83	32.22
		00676	.1015	#38	2.578	1/8"	3"	1-13/32"	1.237"	45.21	43.24	41.28	39.31
00268			.1024		2.600	3.0	50	13.0	8	35.02	33.50	31.97	30.45
	00472		.1024		2.600	3.0	50	18.0	13	36.50	34.91	33.33	31.74
		00678	.1024		2.600	3.0	75	36.0	32	44.56	42.63	40.69	38.75
00270			.1040	#37	2.641	1/8"	2"	17/32"	.331"	35.65	34.10	32.55	31.00
	00474		.1040	#37	2.641	1/8"	2"	23/32"	.539"	37.05	35.44	33.83	32.22
		00680	.1040	#37	2.641	1/8"	3"	1-7/16"	1.267"	45.21	43.24	41.28	39.31
00272			.1043		2.650	3.0	50	13.5	8	35.02	33.50	31.97	30.45
	00476		.1043		2.650	3.0	50	18.5	14	36.50	34.91	33.33	31.74
		00682	.1043		2.650	3.0	75	37.0	32	44.56	42.63	40.69	38.75

continued →

Series 1550H,1250H,1850H (continued)

.1063" - .1250"
(2.700mm - 3.175mm)

3xD (1550H) EDP#	5xD (1250H) EDP#	12xD (1850H) EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal	Metric								
00274			.1063	2.700	3.0	50	13.5	9	35.02	33.50	31.97	30.45
	00478		.1063	2.700	3.0	50	19.0	14	36.50	34.91	33.33	31.74
		00684	.1063	2.700	3.0	75	38.0	33	44.56	42.63	40.69	38.75
00276			.1065	#36 2.705	1/8"	2"	17/32"	.339"	35.65	34.10	32.55	31.00
	00480		.1065	#36 2.705	1/8"	2"	3/4"	.552"	37.05	35.44	33.83	32.22
		00686	.1065	#36 2.705	1/8"	3"	1-1/2"	1.297"	45.21	43.24	41.28	39.31
00278			.1083	2.750	3.0	50	14.0	9	35.02	33.50	31.97	30.45
	00482		.1083	2.750	3.0	50	19.5	14	36.50	34.91	33.33	31.74
		00688	.1083	2.750	3.0	75	39.0	34	44.56	42.63	40.69	38.75
00280			.1094	7/64" 2.778	1/8"	2"	9/16"	.348"	35.65	34.10	32.55	31.00
	00484		.1094	7/64" 2.778	1/8"	2"	49/64"	.567"	37.05	35.44	33.83	32.22
		00690	.1094	7/64" 2.778	1/8"	3"	1-9/16"	1.333"	45.21	43.24	41.28	39.31
00282			.1100	#35 2.794	1/8"	2"	9/16"	.350"	35.65	34.10	32.55	31.00
	00486		.1100	#35 2.794	1/8"	2"	49/64"	.570"	37.05	35.44	33.83	32.22
		00692	.1100	#35 2.794	1/8"	3"	1-9/16"	1.340"	45.21	43.24	41.28	39.31
00284			.1102	2.800	3.0	50	14.0	9	35.02	33.50	31.97	30.45
	00488		.1102	2.800	3.0	50	19.5	15	36.50	34.91	33.33	31.74
		00694	.1102	2.800	3.0	75	39.0	34	44.56	42.63	40.69	38.75
00286			.1110	#34 2.819	1/8"	2"	9/16"	.353"	35.65	34.10	32.55	31.00
	00490		.1110	#34 2.819	1/8"	2"	25/32"	.575"	37.05	35.44	33.83	32.22
		00696	.1110	#34 2.819	1/8"	3"	1-5/8"	1.352"	45.21	43.24	41.28	39.31
00288			.1122	2.850	3.0	50	14.5	9	35.02	33.50	31.97	30.45
		00698	.1122	2.850	3.0	75	40.0	35	44.56	42.63	40.69	38.75
00290			.1130	#33 2.870	1/8"	2"	19/32"	.356"	35.65	34.10	32.55	31.00
	00494		.1130	#33 2.870	1/8"	2"	51/64"	.586"	37.05	35.44	33.83	32.22
		00700	.1130	#33 2.870	1/8"	3"	1-5/8"	1.377"	45.21	43.24	41.28	39.31
00292			.1142	2.900	3.0	50	14.5	9	35.02	33.50	31.97	30.45
	00496		.1142	2.900	3.0	50	20.0	15	36.50	34.91	33.33	31.74
		00702	.1142	2.900	3.0	75	40.0	35	44.56	42.63	40.69	38.75
00294			.1160	#32 2.946	1/8"	2"	19/32"	.369"	35.65	34.10	32.55	31.00
	00498		.1160	#32 2.946	1/8"	2"	13/16"	.601"	37.05	35.44	33.83	32.22
		00704	.1160	#32 2.946	1/8"	3"	1-5/8"	1.413"	45.21	43.24	41.28	39.31
00296			.1161	2.950	3.0	50	15.0	9	35.02	33.50	31.97	30.45
		00706	.1161	2.950	3.0	75	42.0	36	44.56	42.63	40.69	38.75
00298			.1181	3.000	3.0	50	15.0	10	32.90	31.47	30.04	28.61
	00502		.1181	3.000	3.0	50	21.0	16	34.37	32.88	31.38	29.89
		00708	.1181	3.000	3.0	75	42.0	37	42.04	40.22	38.39	36.56
00300			.1200	#31 3.048	1/8"	2"	5/8"	.382"	35.65	34.10	32.55	31.00
	00504		.1200	#31 3.048	1/8"	2"	7/8"	.622"	37.05	35.44	33.83	32.22
		00710	.1200	#31 3.048	1/8"	3"	1-3/4"	1.462"	45.21	43.24	41.28	39.31
00302			.1250	1/8" 3.175	1/8"	2"	5/8"	.398"	33.53	32.08	30.62	29.16
	00506		.1250	1/8" 3.175	1/8"	2"	7/8"	.648"	34.93	33.41	31.89	30.37
		00712	.1250	1/8" 3.175	1/8"	3"	1-3/4"	1.523"	42.70	40.84	38.99	37.13

TOLERANCES

$d1^*$	3mm - 6mm	+0.016mm +0.04mm (+0.0063" +0.0015")
	> 6mm - 10mm	+0.021mm +0.06mm (+0.0082" +0.0023")
	> 10mm - 18mm	+0.025mm +0.07mm (+0.0098" +0.0027")
	> 18mm - 20mm	+0.029mm +0.08mm (+0.0114" +0.0031")
$d2$	h6	
$l1$	+3.175mm -3.175mm (+.125" -.125")	
$l2$	+3.175mm -3.175mm (+.125" -.125")	
$l4$	+1.980mm -.000mm (+.078" -.000")	



Series 1580HD

.1181" - .2342"
(3.000mm - 5.950mm)

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

BALIQ® ALTINOS Coating (AlTiN-based)

High performance solid submicron grain carbide drill with reinforced shank

Up to 50% faster than standard carbide drills

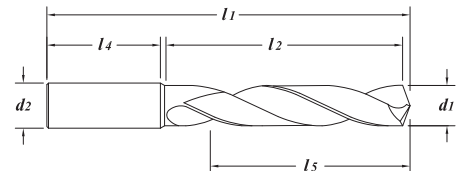
30° helix for better chip evacuation

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.*



EDP#	$d1^+$		$d2$	$l1$	$l2$	$l5$	$l4$	1-11	12-24	25-49	50-100
	Decimal	Metric									
20085	.1181	3.000	6.0	62	20	16	36	47.23	45.18	43.12	41.07
20095	.1220	3.100	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20105	.1248	3.170	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20115	.1260	3.200	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20125	.1280	3.250	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20135	.1299	3.300	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20145	.1339	3.400	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20155	.1378	3.500	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20165	.1417	3.600	6.0	62	20	15	36	47.23	45.18	43.12	41.07
20175	.1457	3.700	6.0	62	20	14	36	47.23	45.18	43.12	41.07
20185	.1476	3.750	6.0	62	20	14	36	47.23	45.18	43.12	41.07
20195	.1496	3.800	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20205	.1535	3.900	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20215	.1575	4.000	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20225	.1614	4.100	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20235	.1654	4.200	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20245	.1673	4.250	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20255	.1693	4.300	6.0	66	24	18	36	47.23	45.18	43.12	41.07
20265	.1732	4.400	6.0	66	24	17	36	47.23	45.18	43.12	41.07
20275	.1772	4.500	6.0	66	24	17	36	47.23	45.18	43.12	41.07
20285	.1811	4.600	6.0	66	24	17	36	47.23	45.18	43.12	41.07
20295	.1831	4.650	6.0	66	24	17	36	47.23	45.18	43.12	41.07
20305	.1850	4.700	6.0	66	24	17	36	47.23	45.18	43.12	41.07
20315	.1870	4.750	6.0	66	24	17	36	47.23	45.18	43.12	41.07
20325	.1890	4.800	6.0	66	28	21	36	47.23	45.18	43.12	41.07
20335	.1929	4.900	6.0	66	28	21	36	47.23	45.18	43.12	41.07
20345	.1969	5.000	6.0	66	28	21	36	47.23	45.18	43.12	41.07
20355	.2008	5.100	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20365	.2027	5.150	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20375	.2047	5.200	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20385	.2087	5.300	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20395	.2165	5.500	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20405	.2185	5.550	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20408	.2205	5.600	6.0	66	28	20	36	47.23	45.18	43.12	41.07
20412	.2244	5.700	6.0	66	28	19	36	47.23	45.18	43.12	41.07
20415	.2283	5.800	6.0	66	28	19	36	47.23	45.18	43.12	41.07
20425	.2323	5.900	6.0	66	28	19	36	47.23	45.18	43.12	41.07
20435	.2342	5.950	6.0	66	28	19	36	47.23	45.18	43.12	41.07

continued →

Series 1580HD (continued)

.2362" - .4252"
(6.000mm - 10.800mm)

EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	l_4 Shank Length	1-11	12-24	25-49	50-100
	Decimal	Metric									
20445	.2362	6.000	6.0	66	28	19	36	47.23	45.18	43.12	41.07
20448	.2402	6.100	8.0	79	34	25	36	64.98	62.15	59.33	56.50
20452	.2441	6.200	8.0	79	34	25	36	64.98	62.15	59.33	56.50
20454	.2480	6.300	8.0	79	34	25	36	64.98	62.15	59.33	56.50
20455	.2500	6.350	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20462	.2520	6.400	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20465	.2559	6.500	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20468	.2571	6.530	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20472	.2598	6.600	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20473	.2638	6.700	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20475	.2657	6.750	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20485	.2677	6.800	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20495	.2717	6.900	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20505	.2756	7.000	8.0	79	34	24	36	64.98	62.15	59.33	56.50
20515	.2795	7.100	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20525	.2815	7.150	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20535	.2835	7.200	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20542	.2874	7.300	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20545	.2913	7.400	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20555	.2953	7.500	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20565	.2972	7.550	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20575	.2992	7.600	8.0	79	41	30	36	64.98	62.15	59.33	56.50
20585	.3031	7.700	8.0	79	41	29	36	64.98	62.15	59.33	56.50
20595	.3071	7.800	8.0	79	41	29	36	64.98	62.15	59.33	56.50
20605	.3130	7.950	8.0	79	41	29	36	64.98	62.15	59.33	56.50
20615	.3150	8.000	8.0	79	41	29	36	64.98	62.15	59.33	56.50
20622	.3189	8.100	10.0	89	47	35	40	90.40	86.47	82.54	78.61
20625	.3228	8.200	10.0	89	47	35	40	90.40	86.47	82.54	78.61
20635	.3268	8.300	10.0	89	47	35	40	90.40	86.47	82.54	78.61
20645	.3287	8.350	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20652	.3307	8.400	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20655	.3346	8.500	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20665	.3386	8.600	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20675	.3425	8.700	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20685	.3445	8.750	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20695	.3465	8.800	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20705	.3504	8.900	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20715	.3543	9.000	10.0	89	47	34	40	90.40	86.47	82.54	78.61
20725	.3583	9.100	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20735	.3602	9.150	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20745	.3622	9.200	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20755	.3661	9.300	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20762	.3701	9.400	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20765	.3740	9.500	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20775	.3760	9.550	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20778	.3780	9.600	10.0	89	47	33	40	90.40	86.47	82.54	78.61
20782	.3819	9.700	10.0	89	47	32	40	90.40	86.47	82.54	78.61
20785	.3858	9.800	10.0	89	47	32	40	90.40	86.47	82.54	78.61
20795	.3898	9.900	10.0	89	47	32	40	90.40	86.47	82.54	78.61
20805	.3937	10.000	10.0	89	47	32	40	90.40	86.47	82.54	78.61
20812	.3976	10.100	12.0	102	55	40	45	117.61	112.50	107.38	102.27
20815	.4016	10.200	12.0	102	55	40	45	117.61	112.50	107.38	102.27
20825	.4055	10.300	12.0	102	55	40	45	117.61	112.50	107.38	102.27
20835	.4134	10.500	12.0	102	55	39	45	117.61	112.50	107.38	102.27
20842	.4173	10.600	12.0	102	55	39	45	117.61	112.50	107.38	102.27
20845	.4213	10.700	12.0	102	55	39	45	117.61	112.50	107.38	102.27
20855	.4252	10.800	12.0	102	55	39	45	117.61	112.50	107.38	102.27

EDP#	d_1 † Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	l_4 Shank Length	1-11	12-24	25-49	50-100
	Decimal	Metric									
20865	.4331	11.000	12.0	102	55	38	45	117.61	112.50	107.38	102.27
20875	.4370	11.100	12.0	102	55	38	45	117.61	112.50	107.38	102.27
20885	.4409	11.200	12.0	102	55	38	45	117.61	112.50	107.38	102.27
20892	.4488	11.400	12.0	102	55	38	45	117.61	112.50	107.38	102.27
20895	.4528	11.500	12.0	102	55	38	45	117.61	112.50	107.38	102.27
20905	.4606	11.700	12.0	102	55	37	45	117.61	112.50	107.38	102.27
20915	.4685	11.900	12.0	102	55	37	45	117.61	112.50	107.38	102.27
20925	.4724	12.000	12.0	102	55	37	45	117.61	112.50	107.38	102.27
20935	.4764	12.100	14.0	107	60	42	45	147.50	141.09	134.67	128.26
20941	.4803	12.200	14.0	107	60	42	45	147.50	141.09	134.67	128.26
20945	.4842	12.300	14.0	107	60	42	45	147.50	141.09	134.67	128.26
20955	.4921	12.500	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20961	.4961	12.600	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20965	.5000	12.700	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20975	.5039	12.800	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20978	.5051	12.830	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20981	.5079	12.900	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20982	.5098	12.950	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20985	.5118	13.000	14.0	107	60	41	45	147.50	141.09	134.67	128.26
20995	.5157	13.100	14.0	107	60	40	45	147.50	141.09	134.67	128.26
20998	.5236	13.300	14.0	107	60	40	45	147.50	141.09	134.67	128.26
21005	.5315	13.500	14.0	107	60	40	45	147.50	141.09	134.67	128.26
21015	.5394	13.700	14.0	107	60	39	45	147.50	141.09	134.67	128.26
21025	.5433	13.800	14.0	107	60	39	45	147.50	141.09	134.67	128.26
21035	.5512	14.000	14.0	107	60	39	45	147.50	141.09	134.67	128.26
21045	.5551	14.100	16.0	115	65	44	48	175.32	167.70	160.07	152.45
21053	.5591	14.200	16.0	115	65	44	48	175.32	167.70	160.07	152.45
21055	.5610	14.250	16.0	115	65	44	48	175.32	167.70	160.07	152.45
21065	.5630	14.300	16.0	115	65	44	48	175.32	167.70	160.07	152.45
21075	.5709	14.500	16.0	115	65	43	48	175.32	167.70	160.07	152.45
21085	.5787	14.700	16.0	115	65	43	48	175.32	167.70	160.07	152.45
21105	.5906	15.000	16.0	115	65	43	48	175.32	167.70	160.07	152.45
21115	.5945	15.100	16.0	115	65	42	48	175.32	167.70	160.07	152.45
21125	.6102	15.500	16.0	115	65	42	48	175.32	167.70	160.07	152.45
21135	.6181	15.700	16.0	115	65	41	48	175.32	167.70	160.07	152.45
21145	.6220	15.800	16.0	115	65	41	48	175.32	167.70	160.07	152.45
21155	.6299	16.000	16.0	115	65	41	48	175.32	167.70	160.07	152.45
21159	.6331	16.080	18.0	123	73	49	48	232.70	222.59	212.47	202.35
21175	.6496	16.500	18.0	123	73	48	48	232.70	222.59	212.47	202.35
21185	.6555	16.650	18.0	123	73	48	48	232.70	222.59	212.47	202.35
21195	.6693	17.000	18.0	123	73	48	48	232.70	222.59	212.47	202.35
21215	.6870	17.450	18.0	123	73	47	48	232.70	222.59	212.47	202.35
21225	.6890	17.500	18.0	123	73	47	48	232.70	222.59	212.47	202.35
21235	.7027	17.850	18.0	123	73	46	48	232.70	222.59	212.47	202.35
21245	.7087	18.000	18.0	123	73	46	48	232.70	222.59	212.47	202.35
21255	.7185	18.250	20.0	131	79	52	50	318.68	304.82	290.97	277.11
21265	.7283	18.500	20.0	131	79	51	50	318.68	304.82	290.97	277.11
21275	.7342	18.650	20.0	131	79	51	50	318.68	304.82	290.97	277.11
21295	.7500	19.050	20.0	131	79	50	50	318.68	304.82	290.97	277.11
21304	.7598	19.300	20.0	131	79	50	50	318.68	304.82	290.97	277.11
21315	.7677	19.500	20.0	131	79	50	50	318.68	304.82	290.97	277.11
21325	.7815	19.850	20.0	131	79	49	50	318.68	304.82	290.97	277.11
21335	.7874	20.000	20.0	131	79	49	50	318.68	304.82	290.97	277.11

Series 1580H, 1280H

.1181" - .1719"
(3.000mm - 4.366mm)



TECH
PAGES
332-333

TOLERANCES

d	+.0000" - .0005" (+.0000 - .0127mm)	
l ₁	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)
l ₂	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)

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

BALIQ® ALTINOS Coating (AlTiN-based)

High performance - high penetration solid submicron grain carbide drill

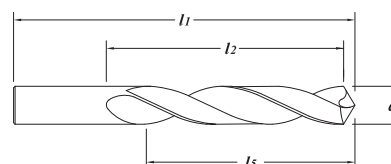
Extended tool life and greater surface finish through faster SFM rates

Up to 50% faster than standard carbide drills

30° helix for better chip evacuation

Honed cutting edge

Live tooling recommended on lathe processes



3xD (1580H) EDP#	5xD (1280H) EDP#	d † Diameter		l ₁ Overall Length	l ₂ Flute Length	l ₅ Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal	Metric							
20301		.1181	3.000	46	16	10	32.90	31.47	30.04	28.61
	21301	.1181	3.000	50	19	16	34.39	32.89	31.40	29.90
20306		.1200	#31	1-13/16"	5/8"	.382"	33.24	31.79	30.35	28.90
	21306	.1200	#31	2"	3/4"	.622"	34.66	33.15	31.65	30.14
20311		.1250	1/8"	1-15/16"	11/16"	.398"	33.53	32.08	30.62	29.16
	21311	.1250	1/8"	2"	3/4"	.648"	34.94	33.42	31.90	30.38
20316		.1285	#30	1-15/16"	11/16"	.409"	33.83	32.36	30.89	29.42
	21316	.1285	#30	2-1/4"	3/4"	.666"	35.25	33.72	32.18	30.65
20321		.1360	#29	2-1/16"	3/4"	.433"	34.16	32.67	31.19	29.70
	21321	.1360	#29	2-1/4"	7/8"	.705"	35.51	33.97	32.42	30.88
20326		.1378	3.500	52	19	11	34.49	32.99	31.49	29.99
	21326	.1378	3.500	57	22	18	35.80	34.24	32.69	31.13
20331		.1405	#28	2-1/16"	3/4"	.447"	34.81	33.30	31.78	30.27
	21331	.1405	#28	2-1/4"	7/8"	.728"	36.09	34.52	32.95	31.38
20336		.1406	9/64"	2-1/16"	3/4"	.447"	35.11	33.58	32.06	30.53
	21336	.1406	9/64"	2-1/4"	7/8"	.729"	36.40	34.82	33.23	31.65
20341		.1440	#27	2-1/16"	3/4"	.458"	35.42	33.88	32.34	30.80
	21341	.1440	#27	2-1/4"	7/8"	.746"	36.64	35.05	33.45	31.86
20346		.1470	#26	2-3/16"	13/16"	.468"	35.70	34.14	32.59	31.04
	21346	.1470	#26	2-1/4"	7/8"	.762"	36.94	35.33	33.73	32.12
20351		.1495	#25	2-3/16"	13/16"	.476"	36.08	34.51	32.94	31.37
	21351	.1495	#25	2-1/4"	15/16"	.775"	37.21	35.60	33.98	32.36
20356		.1520	#24	2-3/16"	13/16"	.484"	36.36	34.78	33.20	31.62
	21356	.1520	#24	2-1/4"	15/16"	.788"	37.48	35.85	34.22	32.59
20361		.1540	#23	2-3/16"	13/16"	.490"	36.69	35.09	33.50	31.90
	21361	.1540	#23	2-1/4"	15/16"	.798"	37.80	36.16	34.51	32.87
20366		.1562	5/32"	2-3/16"	13/16"	.497"	36.97	35.37	33.76	32.15
	21366	.1562	5/32"	2-1/2"	15/16"	.809"	38.07	36.41	34.76	33.10
20371		.1570	#22	2-3/16"	13/16"	.500"	37.32	35.70	34.07	32.45
	21371	.1570	#22	2-1/2"	15/16"	.814"	38.34	36.67	35.01	33.34
20376		.1575	4.000	56	21	13	37.62	35.98	34.35	32.71
	21376	.1575	4.000	65	24	21	38.63	36.95	35.27	33.59
20381		.1590	#21	2-3/16"	13/16"	.506"	37.94	36.29	34.64	32.99
	21381	.1590	#21	2-1/2"	15/16"	.824"	38.90	37.21	35.52	33.83
20386		.1610	#20	2-3/16"	13/16"	.512"	38.26	36.60	34.93	33.27
	21386	.1610	#20	2-1/2"	15/16"	.834"	39.22	37.51	35.81	34.10
20391		.1660	#19	2-9/32"	15/16"	.528"	38.59	36.92	35.24	33.56
	21391	.1660	#19	2-1/2"	1"	.860"	39.49	37.77	36.06	34.34
20396		.1695	#18	2-9/32"	15/16"	.539"	38.89	37.20	35.51	33.82
	21396	.1695	#18	2-1/2"	1"	.878"	39.76	38.03	36.30	34.57
20401		.1719	11/64"	2-9/32"	15/16"	.547"	39.22	37.51	35.81	34.10
	21401	.1719	11/64"	2-1/2"	1"	.891"	40.04	38.30	36.56	34.82

3xD (1580H) EDP#	5xD (1280H) EDP#	$d^{\dagger}$		Metric	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal	Diameter								
20406		.1730	#17	4.394	2-9/32"	15/16"	.551"	39.54	37.82	36.10	34.38
	21406	.1730	#17	4.394	2-1/2"	1"	.897"	40.32	38.57	36.81	35.06
20411		.1770	#16	4.496	2-9/32"	15/16"	.563"	39.81	38.08	36.35	34.62
	21411	.1770	#16	4.496	2-1/2"	1"	.917"	40.63	38.86	37.10	35.33
20416		.1772		4.500	58	24	14	40.15	38.40	36.66	34.91
	21416	.1772		4.500	65	25	23	40.92	39.14	37.36	35.58
20421		.1800	#15	4.572	2-9/32"	15/16"	.573"	40.42	38.67	36.91	35.15
	21421	.1800	#15	4.572	2-3/4"	1"	.933"	41.17	39.38	37.59	35.80
20426		.1820	#14	4.623	2-9/32"	15/16"	.579"	40.79	39.02	37.24	35.47
	21426	.1820	#14	4.623	2-3/4"	1"	.943"	41.45	39.64	37.84	36.04
20431		.1850	#13	4.700	2-9/32"	15/16"	.589"	41.09	39.30	37.52	35.73
	21431	.1850	#13	4.700	2-3/4"	1-1/4"	.959"	41.76	39.94	38.13	36.31
20436		.1875	3/16"	4.763	2-13/32"	1"	.597"	41.42	39.62	37.82	36.02
	21436	.1875	3/16"	4.763	2-3/4"	1-1/4"	.972"	42.06	40.23	38.40	36.57
20441		.1890	#12	4.801	2-13/32"	1"	.601"	41.73	39.92	38.10	36.29
	21441	.1890	#12	4.801	2-3/4"	1-1/4"	.979"	42.33	40.49	38.65	36.81
20446		.1910	#11	4.851	2-13/32"	1"	.608"	42.11	40.28	38.45	36.62
	21446	.1910	#11	4.851	2-3/4"	1-1/4"	.990"	42.58	40.73	38.88	37.03
20451		.1935	#10	4.915	2-13/32"	1"	.616"	42.37	40.52	38.68	36.84
	21451	.1935	#10	4.915	2-3/4"	1-1/4"	1.003"	42.88	41.02	39.15	37.29
20456		.1960	#9	4.978	2-13/32"	1"	.624"	42.67	40.81	38.96	37.10
	21456	.1960	#9	4.978	3"	1-5/16"	1.016"	43.15	41.27	39.40	37.52
20461		.1969		5.000	61	25	16	42.90	41.03	39.17	37.30
	21461	.1969		5.000	75	33	26	43.45	41.56	39.67	37.78
20466		.1990	#8	5.055	2-13/32"	1"	.633"	43.30	41.42	39.53	37.65
	21466	.1990	#8	5.055	3"	1-5/16"	1.031"	43.68	41.78	39.88	37.98
20471		.2010	#7	5.105	2-13/32"	1"	.640"	43.42	41.54	39.65	37.76
	21471	.2010	#7	5.105	3"	1-5/16"	1.042"	43.87	41.97	40.06	38.15
20476		.2031	13/64"	5.159	2-13/32"	1"	.646"	43.71	41.81	39.91	38.01
	21476	.2031	13/64"	5.159	3"	1-5/16"	1.053"	44.19	42.27	40.35	38.43
20481		.2040	#6	5.182	2-13/32"	1"	.649"	44.01	42.10	40.18	38.27
	21481	.2040	#6	5.182	3"	1-3/8"	1.057"	44.52	42.58	40.65	38.71
20486		.2055	#5	5.220	2-13/32"	1"	.654"	44.33	42.41	40.48	38.55
	21486	.2055	#5	5.220	3"	1-3/8"	1.065"	44.82	42.87	40.92	38.97
20491		.2090	#4	5.309	2-13/32"	1"	.665"	44.60	42.66	40.72	38.78
	21491	.2090	#4	5.309	3"	1-3/8"	1.083"	45.11	43.15	41.19	39.23
20496		.2130	#3	5.410	2-5/8"	1-3/32"	.678"	44.90	42.94	40.99	39.04
	21496	.2130	#3	5.410	3"	1-3/8"	1.104"	45.43	43.45	41.48	39.50
20501		.2165		5.500	67	28	18	45.18	43.22	41.25	39.29
	21501	.2165		5.500	75	35	29	45.70	43.71	41.73	39.74
20506		.2188	7/32"	5.558	2-5/8"	1-3/32"	.696"	45.55	43.57	41.59	39.61
	21506	.2188	7/32"	5.558	3"	1-3/8"	1.134"	45.99	43.99	41.99	39.99
20511		.2210	#2	5.613	2-5/8"	1-3/32"	.703"	45.89	43.89	41.90	39.90
	21511	.2210	#2	5.613	3"	1-3/8"	1.145"	46.98	44.94	42.89	40.85
20516		.2280	#1	5.791	2-5/8"	1-3/32"	.726"	46.24	44.23	42.22	40.21
	21516	.2280	#1	5.791	3"	1-3/8"	1.182"	47.22	45.17	43.11	41.06
20521		.2340	A	5.944	2-5/8"	1-3/32"	.745"	46.55	44.53	42.50	40.48
	21521	.2340	A	5.944	3-1/4"	1-1/2"	1.213"	47.92	45.84	43.75	41.67
20526		.2344	15/64"	5.954	2-5/8"	1-3/32"	.746"	46.91	44.87	42.83	40.79
	21526	.2344	15/64"	5.954	3-1/4"	1-1/2"	1.215"	48.05	45.96	43.87	41.78
20531		.2362		6.000	67	28	19	47.23	45.18	43.12	41.07
	21531	.2362		6.000	80	38	31	48.20	46.10	44.01	41.91
20536		.2380	B	6.045	2-3/4"	1-7/32"	.757"	47.55	45.49	43.42	41.35
	21536	.2380	B	6.045	3-1/4"	1-5/8"	1.233"	48.33	46.23	44.13	42.03

continued →

Series 1580H, 1280H (continued)

.2420" - .3438"
(6.147mm - 8.733mm)

3xD (1580H) EDP#	5xD (1280H) EDP#	$d^{\dagger}$			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal	Diameter	Metric							
20541		.2420	C	6.147	2-3/4"	1-7/32"	.770"	47.93	45.85	43.76	41.68
	21541	.2420	C	6.147	3-1/4"	1-5/8"	1.254"	48.67	46.55	44.44	42.32
20546		.2460	D	6.248	2-3/4"	1-7/32"	.783"	48.20	46.10	44.01	41.91
	21546	.2460	D	6.248	3-1/4"	1-5/8"	1.275"	48.98	46.85	44.72	42.59
20551		.2500	1/4" / E	6.350	2-3/4"	1-7/32"	.796"	48.62	46.51	44.39	42.28
	21551	.2500	1/4" / E	6.350	3-1/4"	1-5/8"	1.296"	49.25	47.11	44.97	42.83
20556		.2559		6.500	70	31	21	49.39	47.25	45.10	42.95
	21556	.2559		6.500	80	41	34	50.13	47.95	45.77	43.59
20561		.2570	F	6.528	2-3/4"	1-7/32"	.818"	50.17	47.99	45.81	43.63
	21561	.2570	F	6.528	3-1/4"	1-11/16"	1.332"	50.99	48.77	46.56	44.34
20566		.2610	G	6.629	2-3/4"	1-7/32"	.831"	50.93	48.72	46.50	44.29
	21566	.2610	G	6.629	3-1/2"	1-11/16"	1.353"	51.87	49.61	47.36	45.10
20571		.2656	17/64"	6.746	2-15/16"	1-11/32"	.845"	51.70	49.46	47.21	44.96
	21571	.2656	17/64"	6.746	3-1/2"	1-11/16"	1.376"	52.70	50.41	48.12	45.83
20576		.2660	H	6.756	2-15/16"	1-11/32"	.846"	52.46	50.18	47.90	45.62
	21576	.2660	H	6.756	3-1/2"	1-11/16"	1.378"	53.60	51.27	48.94	46.61
20581		.2720	I	6.909	2-15/16"	1-11/32"	.866"	53.25	50.93	48.62	46.30
	21581	.2720	I	6.909	3-1/2"	1-11/16"	1.410"	54.46	52.10	49.73	47.36
20586		.2756		7.000	75	34	22	54.03	51.68	49.33	46.98
	21586	.2756		7.000	88	43	36	55.30	52.90	50.49	48.09
20591		.2770	J	7.036	2-15/16"	1-11/32"	.881"	54.77	52.39	50.01	47.63
	21591	.2770	J	7.036	3-1/2"	1-11/16"	1.435"	56.18	53.74	51.29	48.85
20596		.2810	K	7.137	2-15/16"	1-11/32"	.894"	55.56	53.14	50.73	48.31
	21596	.2810	K	7.137	3-1/2"	1-3/4"	1.456"	57.07	54.59	52.11	49.63
20601		.2812	9/32"	7.142	2-15/16"	1-11/32"	.895"	56.33	53.88	51.43	48.98
	21601	.2812	9/32"	7.142	3-1/2"	1-3/4"	1.457"	57.94	55.42	52.90	50.38
20606		.2900	L	7.366	2-15/16"	1-11/32"	.923"	57.10	54.62	52.13	49.65
	21606	.2900	L	7.366	3-1/2"	1-3/4"	1.503"	58.73	56.18	53.62	51.07
20611		.2950	M	7.493	2-15/16"	1-11/32"	.939"	58.21	55.68	53.15	50.62
	21611	.2950	M	7.493	3-3/4"	1-3/4"	1.529"	59.57	56.98	54.39	51.80
20616		.2953		7.500	75	34	24	58.21	55.68	53.15	50.62
	21616	.2953		7.500	95	44	39	59.57	56.98	54.39	51.80
20621		.2969	19/64"	7.541	3-3/32"	1-15/32"	.945"	58.72	56.17	53.61	51.06
	21621	.2969	19/64"	7.541	3-3/4"	1-7/8"	1.539"	60.17	57.55	54.94	52.32
20626		.3020	N	7.671	3-3/32"	1-15/32"	.961"	61.35	58.69	56.02	53.35
	21626	.3020	N	7.671	3-3/4"	1-7/8"	1.565"	62.55	59.83	57.11	54.39
20631		.3125	5/16"	7.938	3-3/32"	1-15/32"	.994"	61.57	58.89	56.22	53.54
	21631	.3125	5/16"	7.938	3-3/4"	1-7/8"	1.619"	62.74	60.02	57.29	54.56
20636		.3150		8.000	79	37	25	64.98	62.15	59.33	56.50
	21636	.3150		8.000	95	48	41	66.14	63.26	60.39	57.51
20641		.3160	O	8.026	3-3/32"	1-15/32"	1.006"	64.98	62.15	59.33	56.50
	21641	.3160	O	8.026	3-3/4"	1-7/8"	1.638"	66.14	63.26	60.39	57.51
20646		.3230	P	8.204	3-3/32"	1-15/32"	1.028"	65.45	62.60	59.76	56.91
	21646	.3230	P	8.204	3-3/4"	2-3/32"	1.674"	66.38	63.49	60.61	57.72
20651		.3281	21/64"	8.334	3-3/32"	1-15/32"	1.044"	66.65	63.76	60.86	57.96
	21651	.3281	21/64"	8.334	4"	2-3/32"	1.700"	67.00	64.09	61.17	58.26
20656		.3320	Q	8.433	3-3/32"	1-15/32"	1.056"	67.85	64.90	61.95	59.00
	21656	.3320	Q	8.433	4"	2-3/32"	1.720"	68.33	65.36	62.39	59.42
20661		.3346		8.500	79	37	27	68.14	65.18	62.21	59.25
	21661	.3346		8.500	100	53	44	68.83	65.84	62.84	59.85
20666		.3390	R	8.611	3-5/16"	1-9/16"	1.079"	69.98	66.94	63.89	60.85
	21666	.3390	R	8.611	4"	2-3/32"	1.757"	70.73	67.65	64.58	61.50
20671		.3438	11/32"	8.733	3-5/16"	1-9/16"	1.094"	71.51	68.40	65.29	62.18
	21671	.3438	11/32"	8.733	4"	2-3/16"	1.782"	73.20	70.02	66.83	63.65

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	$\leq 1/8"$	$+.125" - .062" (+3.175 - 1.588mm)$
	$> 1/8"$	$+.125" - .125" (+3.175 - 3.175mm)$



Series 1580H, 1280H (continued)

.3480" - .4531"
(8.839mm - 11.509mm)

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

BALIQ® ALTINOS Coating (AlTiN-based)

High performance - high penetration solid submicron grain carbide drill



HIGH PERFORMANCE
DRILLS

3xD (1580H) EDP#	5xD (1280H) EDP#	d † Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal		Metric							
20676		.3480	S	8.839	3-5/16"	1-9/16"	1.107"	73.88	70.66	67.45	64.24
	21676	.3480	S	8.839	4"	2-3/16"	1.803"	76.06	72.75	69.45	66.14
20681		.3543		9.000	84	40	29	75.75	72.46	69.16	65.87
	21681	.3543		9.000	100	56	47	76.51	73.18	69.86	66.53
20686		.3580	T	9.093	3-5/16"	1-9/16"	1.139"	78.72	75.30	71.87	68.45
	21686	.3580	T	9.093	4-1/4"	2-9/32"	1.855"	79.53	76.08	72.62	69.16
20691		.3594	23/64"	9.129	3-5/16"	1-9/16"	1.144"	79.21	75.77	72.32	68.88
	21691	.3594	23/64"	9.129	4-1/4"	2-9/32"	1.862"	80.02	76.54	73.06	69.58
20696		.3680	U	9.347	3-5/16"	1-9/16"	1.171"	80.86	77.34	73.83	70.31
	21696	.3680	U	9.347	4-1/4"	2-9/32"	1.907"	84.57	80.89	77.22	73.54
20701		.3740		9.500	84	40	30	81.54	77.99	74.45	70.90
	21701	.3740		9.500	105	58	49	85.40	81.69	77.97	74.26
20706		.3750	3/8"	9.525	3-1/2"	1-11/16"	1.193"	82.02	78.45	74.89	71.32
	21706	.3750	3/8"	9.525	4-1/4"	2-3/8"	1.943"	86.25	82.50	78.75	75.00
20711		.3770	V	9.576	3-1/2"	1-11/16"	1.200"	85.17	81.47	77.76	74.06
	21711	.3770	V	9.576	4-1/4"	2-3/8"	1.954"	88.37	84.52	80.68	76.84
20716		.3860	W	9.804	3-1/2"	1-11/16"	1.228"	86.66	82.90	79.13	75.36
	21716	.3860	W	9.804	4-1/2"	2-3/8"	2.000"	89.93	86.02	82.11	78.20
20721		.3906	25/64"	9.921	3-1/2"	1-11/16"	1.243"	87.75	83.93	80.12	76.30
	21721	.3906	25/64"	9.921	4-1/2"	2-3/8"	2.024"	91.01	87.05	83.10	79.14
20726		.3937		10.000	89	43	32	90.40	86.47	82.54	78.61
	21726	.3937		10.000	115	60	52	93.76	89.68	85.61	81.53
20731		.3970	X	10.084	3-1/2"	1-11/16"	1.263"	91.63	87.65	83.66	79.68
	21731	.3970	X	10.084	4-1/2"	2-1/2"	2.057"	94.90	90.77	86.65	82.52
20736		.4040	Y	10.262	3-1/2"	1-11/16"	1.286"	92.23	88.22	84.21	80.20
	21736	.4040	Y	10.262	4-1/2"	2-9/16"	2.094"	97.76	93.51	89.26	85.01
20741		.4062	13/32"	10.317	3-1/2"	1-11/16"	1.293"	95.08	90.95	86.81	82.68
	21741	.4062	13/32"	10.317	4-1/2"	2-9/16"	2.105"	98.61	94.33	90.04	85.75
20746		.4130	Z	10.490	3-1/2"	1-11/16"	1.314"	95.97	91.80	87.62	83.45
	21746	.4130	Z	10.490	4-1/2"	2-5/8"	2.140"	99.51	95.18	90.86	86.53
20751		.4134		10.500	89	43	33	95.97	91.80	87.62	83.45
	21751	.4134		10.500	115	67	54	99.51	95.18	90.86	86.53
20756		.4219	27/64"	10.716	3-3/4"	1-13/16"	1.343"	96.88	92.66	88.45	84.24
	21756	.4219	27/64"	10.716	4-1/2"	2-11/16"	2.186"	100.41	96.04	91.68	87.31
20761		.4331		11.000	95	46	35	103.98	99.46	94.94	90.42
	21761	.4331		11.000	115	68	57	107.73	103.05	98.36	93.68
20766		.4375	7/16"	11.113	3-3/4"	1-13/16"	1.392"	103.98	99.46	94.94	90.42
	21766	.4375	7/16"	11.113	4-3/4"	2-13/16"	2.267"	108.17	103.47	98.76	94.06
20771		.4528		11.500	95	46	37	111.61	106.76	101.90	97.05
	21771	.4528		11.500	120	71	60	115.59	110.56	105.54	100.51
20776		.4531	29/64"	11.509	3-3/4"	1-13/16"	1.442"	111.61	106.76	101.90	97.05
	21776	.4531	29/64"	11.509	4-3/4"	2-7/8"	2.348"	115.59	110.56	105.54	100.51

continued →

Series 1580H, 1280H (continued)

.4688" - .6299"
(11.908mm - 16.000mm)

3xD (1580H) EDP#	5xD (1280H) EDP#	d † Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
		Decimal		Metric							
20781		.4688	15/32"	11.908	4"	1-15/16"	1.492"	117.27	112.17	107.07	101.97
	21781	.4688	15/32"	11.908	4-3/4"	2-7/8"	2.429"	121.39	116.12	110.84	105.56
20786		.4724		12.000	102	49	38	117.61	112.50	107.38	102.27
	21786	.4724		12.000	120	73	62	121.76	116.47	111.17	105.88
20791		.4844	31/64"	12.304	4"	1-15/16"	1.541"	118.43	113.28	108.13	102.98
	21791	.4844	31/64"	12.304	5-5/16"	3"	2.510"	123.12	117.77	112.41	107.06
20796		.4921		12.500	102	49	40	119.60	114.40	109.20	104.00
	21796	.4921		12.500	135	76	65	124.59	119.17	113.76	108.34
20801		.5000	1/2"	12.700	4"	1-15/16"	1.591"	120.37	115.14	109.90	104.67
	21801	.5000	1/2"	12.700	5-3/8"	3-1/16"	2.591"	124.84	119.42	113.99	108.56
20806		.5118		13.000	107	53	41	131.93	126.19	120.46	114.72
	21806	.5118		13.000	135	78	67	135.76	129.86	123.95	118.05
20811		.5156	33/64"	13.096	4-7/32"	2-3/32"	1.641"	135.06	129.18	123.31	117.44
	21811	.5156	33/64"	13.096	5-3/8"	3-1/8"	2.672"	138.93	132.89	126.85	120.81
20816		.5312	17/32"	13.492	4-7/32"	2-3/32"	1.690"	138.16	132.15	126.15	120.14
	21816	.5312	17/32"	13.492	5-11/16"	3-5/16"	2.753"	142.20	136.02	129.83	123.65
20821		.5315		13.500	110	56	43	141.29	135.15	129.00	122.86
	21821	.5315		13.500	145	84	70	145.34	139.02	132.70	126.38
20826		.5469	35/64"	13.891	4-5/16"	2-7/32"	1.740"	144.38	138.11	131.83	125.55
	21826	.5469	35/64"	13.891	5-13/16"	3-3/8"	2.834"	148.50	142.04	135.59	129.13
20831		.5512		14.000	110	56	45	147.50	141.09	134.67	128.26
	21831	.5512		14.000	145	86	73	151.71	145.11	138.52	131.92
20836		.5625	9/16"	14.288	4-9/16"	2-15/32"	1.790"	158.78	151.88	144.97	138.07
	21836	.5625	9/16"	14.288	5-15/16"	3-1/2"	2.915"	163.04	155.95	148.86	141.77
20841		.5709		14.500	116	63	46	161.76	154.73	147.69	140.66
	21841	.5709		14.500	150	89	75	166.04	158.82	151.60	144.38
20846		.5781	37/64"	14.684	4-15/16"	2-9/16"	1.840"	164.66	157.50	150.34	143.18
	21846	.5781	37/64"	14.684	6"	3-1/2"	2.996"	169.02	161.67	154.32	146.97
20851		.5906		15.000	125	65	48	167.69	160.40	153.11	145.82
	21851	.5906		15.000	150	90	78	172.19	164.70	157.22	149.73
20856		.5938	19/32"	15.083	4-15/16"	2-9/16"	1.890"	168.60	161.27	153.94	146.61
	21856	.5938	19/32"	15.083	6"	3-9/16"	3.077"	173.08	165.55	158.03	150.50
20861		.6094	39/64"	15.479	5-1/16"	2-13/16"	1.939"	169.46	162.10	154.73	147.36
	21861	.6094	39/64"	15.479	6-3/16"	3-11/16"	3.158"	187.57	179.41	171.26	163.10
20866		.6102		15.500	129	71	49	170.34	162.93	155.53	148.12
	21866	.6102		15.500	160	94	80	188.43	180.24	172.04	163.85
20871		.6250	5/8"	15.875	5-1/4"	3-1/8"	1.989"	171.20	163.76	156.31	148.87
	21871	.6250	5/8"	15.875	6-5/16"	3-3/4"	3.239"	189.31	181.08	172.85	164.62
20876		.6299		16.000	133	79	51	175.32	167.70	160.07	152.45
	21876	.6299		16.000	160	95	83	193.56	185.14	176.73	168.31



TOLERANCES

d_1 *	3mm - 6mm	+0.016mm +0.004mm (+0.0063" +0.0015")
	> 6mm - 10mm	+0.021mm +0.006mm (+0.0082" +0.0023")
	> 10mm - 18mm	+0.025mm +0.007mm (+0.0098" +0.0027")
	> 18mm - 20mm	+0.029mm +0.008mm (+0.0114" +0.0031")
d_2	h6	
l_1	+3.175mm -3.175mm (+.125" -.125")	
l_2	+3.175mm -3.175mm (+.125" -.125")	
l_4	+1.980mm -.000mm (+.078" -.000")	

**NEW
ITEMS**

Series 1580KD, 1280KD, 1880KD



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

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

BALIQ® ALTINOS Coating (AlTiN-based)

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

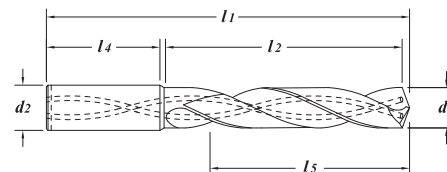
30° helix for better chip evacuation

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#	d_1 Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_3 Max Drill Depth	l_4 Shank Length	1-11	12-24	25-49	50-100
			Decimal	Metric									
27995			.1181	3.000	6.0	62	20	16	36	60.57	57.94	55.30	52.67
	25065		.1181	3.000	6.0	66	28	24	36	71.50	68.39	65.28	62.17
		26942	.1181	3.000	6.0	70	30	26	36	85.82	82.09	78.36	74.63
28005			.1220	3.100	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25075		.1220	3.100	6.0	66	28	23	36	71.50	68.39	65.28	62.17
28015			.1248	3.170	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25085		.1248	3.170	6.0	66	28	23	36	71.50	68.39	65.28	62.17
		26946	.1248	3.170	6.0	70	30	25	36	85.82	82.09	78.36	74.63
28018			.1250	1/8"	3.175	6.0	20	15	36	60.57	57.94	55.30	52.67
	25088		.1250	1/8"	3.175	6.0	28	23	36	71.50	68.39	65.28	62.17
		26948	.1250	1/8"	3.175	6.0	30	25	36	85.82	82.09	78.36	74.63
28025			.1260	3.200	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25095		.1260	3.200	6.0	66	28	23	36	71.50	68.39	65.28	62.17
		26950	.1260	3.200	6.0	70	30	25	36	85.82	82.09	78.36	74.63
28035			.1280	3.250	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25105		.1280	3.250	6.0	66	28	23	36	71.50	68.39	65.28	62.17
		26952	.1280	3.250	6.0	70	30	25	36	85.82	82.09	78.36	74.63
28038			.1285	#30	3.264	6.0	20	15	36	60.57	57.94	55.30	52.67
	25108		.1285	#30	3.264	6.0	28	23	36	71.50	68.39	65.28	62.17
		26954	.1285	#30	3.264	6.0	30	25	36	85.82	82.09	78.36	74.63
28045			.1299	3.300	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25115		.1299	3.300	6.0	66	28	23	36	71.50	68.39	65.28	62.17
		26956	.1299	3.300	6.0	70	30	25	36	85.82	82.09	78.36	74.63
28055			.1339	3.400	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25125		.1339	3.400	6.0	66	28	23	36	71.50	68.39	65.28	62.17
28058			.1360	#29	3.454	6.0	20	15	36	60.57	57.94	55.30	52.67
	25128		.1360	#29	3.454	6.0	28	23	36	71.50	68.39	65.28	62.17
		26960	.1360	#29	3.454	6.0	30	25	36	85.82	82.09	78.36	74.63
28065			.1378	3.500	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25135		.1378	3.500	6.0	66	28	23	36	71.50	68.39	65.28	62.17
		26962	.1378	3.500	6.0	75	37	32	36	85.82	82.09	78.36	74.63
28075			.1417	3.600	6.0	62	20	15	36	60.57	57.94	55.30	52.67
	25145		.1417	3.600	6.0	66	28	23	36	71.50	68.39	65.28	62.17
28085			.1457	3.700	6.0	62	20	14	36	60.57	57.94	55.30	52.67
	25155		.1457	3.700	6.0	66	28	22	36	71.50	68.39	65.28	62.17
28088			.1470	#26	3.734	6.0	20	14	36	60.57	57.94	55.30	52.67
	25158		.1470	#26	3.734	6.0	28	22	36	71.50	68.39	65.28	62.17
		26968	.1470	#26	3.734	6.0	75	37	36	85.82	82.09	78.36	74.63

continued →

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

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

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	d_1 Diameter		d_2 Shank Diameter	l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	l_4 Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric									
NEW	28095			.1476	3.750	6.0	62	20	14	36	60.57	57.94	55.30	52.67
		25165		.1476	3.750	6.0	66	28	22	36	71.50	68.39	65.28	62.17
			26972	.1476	3.750	6.0	75	37	31	36	85.82	82.09	78.36	74.63
NEW	28098			.1495	#25 3.797	6.0	62	20	14	36	60.57	57.94	55.30	52.67
		25172		.1495	#25 3.797	6.0	66	28	22	36	71.50	68.39	65.28	62.17
			26978	.1495	#25 3.797	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28105			.1496	3.800	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25175		.1496	3.800	6.0	74	36	30	36	71.50	68.39	65.28	62.17
	28115			.1535	3.900	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25185		.1535	3.900	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26982	.1535	3.900	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28118			.1562	5/32" 3.967	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25192		.1562	5/32" 3.967	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26984	.1562	5/32" 3.967	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28125			.1563	3.970	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25195		.1563	3.970	6.0	74	36	30	36	71.50	68.39	65.28	62.17
	28135			.1575	4.000	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25205		.1575	4.000	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26986	.1575	4.000	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28138			.1590	#21 4.038	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25208		.1590	#21 4.038	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26988	.1590	#21 4.038	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28140			.1610	#20 4.089	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25212		.1610	#20 4.089	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26990	.1610	#20 4.089	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28145			.1614	4.100	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25215		.1614	4.100	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26992	.1614	4.100	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28155			.1654	4.200	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25225		.1654	4.200	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26994	.1654	4.200	6.0	75	37	31	36	85.82	82.09	78.36	74.63
	28158			.1660	#19 4.216	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25228		.1660	#19 4.216	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26996	.1660	#19 4.216	6.0	85	45	39	36	85.82	82.09	78.36	74.63
	28165			.1673	4.250	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25235		.1673	4.250	6.0	74	36	30	36	71.50	68.39	65.28	62.17
			26998	.1673	4.250	6.0	85	45	39	36	85.82	82.09	78.36	74.63
NEW	28175			.1693	4.300	6.0	66	24	18	36	60.57	57.94	55.30	52.67
		25245		.1693	4.300	6.0	74	36	30	36	71.50	68.39	65.28	62.17
	28178			.1719	11/64" 4.366	6.0	66	24	17	36	60.57	57.94	55.30	52.67
		25248		.1719	11/64" 4.366	6.0	74	36	29	36	71.50	68.39	65.28	62.17
			27002	.1719	11/64" 4.366	6.0	85	45	38	36	85.82	82.09	78.36	74.63
	28185			.1732	4.400	6.0	66	24	17	36	60.57	57.94	55.30	52.67
		25255		.1732	4.400	6.0	74	36	29	36	71.50	68.39	65.28	62.17
			27004	.1732	4.400	6.0	85	45	38	36	85.82	82.09	78.36	74.63
	28188			.1770	#16 4.496	6.0	66	24	17	36	60.57	57.94	55.30	52.67
		25262		.1770	#16 4.496	6.0	74	36	29	36	71.50	68.39	65.28	62.17
			27006	.1770	#16 4.496	6.0	85	45	38	36	85.82	82.09	78.36	74.63
	28195			.1772	4.500	6.0	66	24	17	36	60.57	57.94	55.30	52.67
		25265		.1772	4.500	6.0	74	36	29	36	71.50	68.39	65.28	62.17
			27008	.1772	4.500	6.0	85	45	38	36	85.82	82.09	78.36	74.63
	28205			.1811	4.600	6.0	66	24	17	36	60.57	57.94	55.30	52.67
		25275		.1811	4.600	6.0	74	36	29	36	71.50	68.39	65.28	62.17
			27011	.1811	4.600	6.0	85	45	38	36	85.82	82.09	78.36	74.63
	28208			.1820	#14 4.622	6.0	66	24	17	36	60.57	57.94	55.30	52.67
		25280		.1820	#14 4.622	6.0	74	36	29	36	71.50	68.39	65.28	62.17
			27012	.1820	#14 4.622	6.0	90	50	43	36	85.82	82.09	78.36	74.63

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

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

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>l5</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100	
				Decimal	Metric										
NEW		25285		.1831	4.650	6.0	74	36	29	36	71.50	68.39	65.28	62.17	
			27014	.1831	4.650	6.0	90	50	43	36	85.82	82.09	78.36	74.63	
	28225			.1850	4.700	6.0	66	24	17	36	60.57	57.94	55.30	52.67	
		25295		.1850	4.700	6.0	74	36	29	36	71.50	68.39	65.28	62.17	
	28235			.1870	4.750	6.0	66	24	17	36	60.57	57.94	55.30	52.67	
		25305		.1870	4.750	6.0	74	36	29	36	71.50	68.39	65.28	62.17	
			27016	.1870	4.750	6.0	90	50	43	36	85.82	82.09	78.36	74.63	
	28238			.1875	3/16"	4.762	6.0	66	28	21	36	60.57	57.94	55.30	52.67
		25310		.1875	3/16"	4.762	6.0	74	36	29	36	68.75	65.76	62.77	59.78
			27018	.1875	3/16"	4.762	6.0	90	50	43	36	85.82	82.09	78.36	74.63
28245			.1890	#12	4.800	6.0	66	28	21	36	60.57	57.94	55.30	52.67	
	25315		.1890	#12	4.800	6.0	82	44	37	36	71.50	68.39	65.28	62.17	
		27021	.1890	#12	4.800	6.0	90	50	43	36	85.82	82.09	78.36	74.63	
28255			.1929		4.900	6.0	66	28	21	36	60.57	57.94	55.30	52.67	
	25325		.1929		4.900	6.0	82	44	37	36	71.50	68.39	65.28	62.17	
		27022	.1929		4.900	6.0	90	50	43	36	85.82	82.09	78.36	74.63	
28258			.1960	#9	4.978	6.0	66	28	21	36	60.57	57.94	55.30	52.67	
	25330		.1960	#9	4.978	6.0	82	44	37	36	71.50	68.39	65.28	62.17	
NEW			27024	.1960	#9	4.978	6.0	90	50	43	36	85.82	82.09	78.36	74.63
	28265			.1969	5.000	6.0	66	28	21	36	60.57	57.94	55.30	52.67	
		25335		.1969	5.000	6.0	82	44	37	36	71.50	68.39	65.28	62.17	
			27026	.1969	5.000	6.0	90	50	43	36	85.82	82.09	78.36	74.63	
	28275			.2008	5.100	6.0	66	28	20	36	60.57	57.94	55.30	52.67	
		25345		.2008	5.100	6.0	82	44	36	36	71.50	68.39	65.28	62.17	
	28278			.2010	#7	5.105	6.0	66	28	20	36	60.57	57.94	55.30	52.67
		25348		.2010	#7	5.105	6.0	82	44	36	71.50	68.39	65.28	62.17	
			27031	.2010	#7	5.105	6.0	97	57	49	36	85.82	82.09	78.36	74.63
	28285			.2027	5.150	6.0	66	28	20	36	60.57	57.94	55.30	52.67	
	25355		.2027	5.150	6.0	82	44	36	36	71.50	68.39	65.28	62.17		
28295			.2047	5.200	6.0	66	28	20	36	60.57	57.94	55.30	52.67		
	25365		.2047	5.200	6.0	82	44	36	36	71.50	68.39	65.28	62.17		
28305			.2087	5.300	6.0	66	28	20	36	60.57	57.94	55.30	52.67		
	25375		.2087	5.300	6.0	82	44	36	36	71.50	68.39	65.28	62.17		
28308			.2130	#3	5.410	6.0	66	28	20	36	60.57	57.94	55.30	52.67	
	25380		.2130	#3	5.410	6.0	82	44	36	36	71.50	68.39	65.28	62.17	
		27036	.2130	#3	5.410	6.0	97	57	49	36	85.82	82.09	78.36	74.63	
28315			.2165	5.500	6.0	66	28	20	36	60.57	57.94	55.30	52.67		
	25385		.2165	5.500	6.0	82	44	36	36	71.50	68.39	65.28	62.17		
		27038	.2165	5.500	6.0	97	57	49	36	85.82	82.09	78.36	74.63		
28325			.2185	5.550	6.0	66	28	20	36	60.57	57.94	55.30	52.67		
	25395		.2185	5.550	6.0	82	44	36	36	71.50	68.39	65.28	62.17		
28328			.2188	7/32"	5.557	6.0	66	28	20	36	60.57	57.94	55.30	52.67	
	25398		.2188	7/32"	5.557	6.0	82	44	36	36	71.50	68.39	65.28	62.17	
		27041	.2188	7/32"	5.557	6.0	97	57	49	36	85.82	82.09	78.36	74.63	
28335			.2205	5.600	6.0	66	28	20	36	60.57	57.94	55.30	52.67		
	25397		.2205	5.600	6.0	82	44	36	36	71.50	68.39	65.28	62.17		
NEW			27042	.2205	5.600	6.0	97	57	49	36	85.82	82.09	78.36	74.63	
	28345			.2244	5.700	6.0	66	28	19	36	60.57	57.94	55.30	52.67	
		25400		.2244	5.700	6.0	82	44	35	36	71.50	68.39	65.28	62.17	
			27044	.2244	5.700	6.0	97	57	48	36	85.82	82.09	78.36	74.63	
	28348			.2280	#1	5.791	6.0	66	28	19	36	60.57	57.94	55.30	52.67
		25403		.2280	#1	5.791	6.0	82	44	35	36	71.50	68.39	65.28	62.17
			27046	.2280	#1	5.791	6.0	97	57	48	36	85.82	82.09	78.36	74.63
	28355			.2283	5.800	6.0	66	28	19	36	60.57	57.94	55.30	52.67	
		25405		.2283	5.800	6.0	82	44	35	36	71.50	68.39	65.28	62.17	
			27048	.2283	5.800	6.0	97	57	48	36	85.82	82.09	78.36	74.63	

continued →

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

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

	3xD (1580KD) EDP#	5xD (1280KD) EDP#	7xD (1880KD) EDP#	$d1$ Diameter		$d2$ Shank Diameter	$l1$ Overall Length	$l2$ Flute Length	$l5$ Max Drill Depth	$l4$ Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric									
NEW	28365			.2323	5.900	6.0	66	28	19	36	60.57	57.94	55.30	52.67
		25415		.2323	5.900	6.0	82	44	35	36	71.50	68.39	65.28	62.17
			27051	.2323	5.900	6.0	97	57	48	36	85.82	82.09	78.36	74.63
NEW	28375			.2342	5.950	6.0	66	28	19	36	60.57	57.94	55.30	52.67
		25425		.2342	5.950	6.0	82	44	35	36	71.50	68.39	65.28	62.17
			27052	.2342	5.950	6.0	97	57	48	36	85.82	82.09	78.36	74.63
NEW	28385			.2362	6.000	6.0	66	28	19	36	60.57	57.94	55.30	52.67
		25435		.2362	6.000	6.0	82	44	35	36	71.50	68.39	65.28	62.17
			27054	.2362	6.000	6.0	97	57	48	36	85.82	82.09	78.36	74.63
NEW	28395			.2402	6.100	8.0	79	34	25	36	84.39	80.72	77.05	73.38
		25437		.2402	6.100	8.0	91	53	44	36	100.53	96.16	91.79	87.42
	28405			.2441	6.200	8.0	79	34	25	36	84.39	80.72	77.05	73.38
NEW		25440		.2441	6.200	8.0	91	53	44	36	100.53	96.16	91.79	87.42
	28415			.2480	6.300	8.0	79	34	25	36	84.39	80.72	77.05	73.38
		25443		.2480	6.300	8.0	91	53	44	36	100.53	96.16	91.79	87.42
NEW	28425			.2500	1/4"	6.350	8.0	79	34	24	84.39	80.72	77.05	73.38
		25445		.2500	1/4"	6.350	8.0	91	53	43	100.53	96.16	91.79	87.42
			27056	.2500	1/4"	6.350	8.0	106	66	56	121.37	116.09	110.82	105.54
NEW	28435			.2520	6.400	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25450		.2520	6.400	8.0	91	53	43	36	100.53	96.16	91.79	87.42
			27058	.2520	6.400	8.0	106	66	56	36	121.37	116.09	110.82	105.54
NEW	28445			.2559	6.500	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25455		.2559	6.500	8.0	91	53	43	36	100.53	96.16	91.79	87.42
			27061	.2559	6.500	8.0	106	66	56	36	121.37	116.09	110.82	105.54
NEW	28446			.2571	6.530	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25457		.2571	6.530	8.0	91	53	43	36	100.53	96.16	91.79	87.42
			27062	.2571	6.530	8.0	106	66	56	36	121.37	116.09	110.82	105.54
NEW	28455			.2598	6.600	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25460		.2598	6.600	8.0	91	53	43	36	100.53	96.16	91.79	87.42
			27064	.2598	6.600	8.0	106	66	56	36	121.37	116.09	110.82	105.54
NEW		25463		.2638	6.700	8.0	91	53	43	36	100.53	96.16	91.79	87.42
			27066	.2638	6.700	8.0	106	66	56	36	121.37	116.09	110.82	105.54
	28463			.2656	17/64"	6.746	8.0	79	34	24	84.39	80.72	77.05	73.38
NEW		25464		.2656	17/64"	6.746	8.0	91	53	43	100.53	96.16	91.79	87.42
			27068	.2656	17/64"	6.746	8.0	106	66	56	121.37	116.09	110.82	105.54
	28465			.2657	6.750	8.0	79	34	24	36	84.39	80.72	77.05	73.38
NEW		25465		.2657	6.750	8.0	91	53	43	36	100.53	96.16	91.79	87.42
	28475			.2677	6.800	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25475		.2677	6.800	8.0	91	53	43	36	100.53	96.16	91.79	87.42
NEW			27071	.2677	6.800	8.0	106	66	56	36	121.37	116.09	110.82	105.54
	28485			.2717	6.900	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25485		.2717	6.900	8.0	91	53	43	36	100.53	96.16	91.79	87.42
NEW			27072	.2717	6.900	8.0	116	76	66	36	121.37	116.09	110.82	105.54
	28495			.2756	7.000	8.0	79	34	24	36	84.39	80.72	77.05	73.38
		25495		.2756	7.000	8.0	91	53	43	36	100.53	96.16	91.79	87.42
NEW			27074	.2756	7.000	8.0	116	76	66	36	121.37	116.09	110.82	105.54
	28498			.2770	J	7.035	8.0	79	41	30	84.39	80.72	77.05	73.38
		25498		.2770	J	7.035	8.0	91	53	42	100.53	96.16	91.79	87.42
NEW			27076	.2770	J	7.035	8.0	116	76	65	121.37	116.09	110.82	105.54
	28505			.2795	7.100	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25505		.2795	7.100	8.0	91	53	42	36	100.53	96.16	91.79	87.42
NEW	28508			.2812	9/32"	7.142	8.0	79	41	30	84.39	80.72	77.05	73.38
		25512		.2812	9/32"	7.142	8.0	91	53	42	100.53	96.16	91.79	87.42
			27079	.2812	9/32"	7.142	8.0	116	76	65	121.37	116.09	110.82	105.54

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

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

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>l5</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric									
NEW	28515			.2815	7.150	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25515		.2815	7.150	8.0	91	53	42	36	100.53	96.16	91.79	87.42
			27082	.2815	7.150	8.0	116	76	65	36	121.37	116.09	110.82	105.54
	28525			.2835	7.200	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25525		.2835	7.200	8.0	91	53	42	36	100.53	96.16	91.79	87.42
	28535			.2874	7.300	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25530		.2874	7.300	8.0	91	53	42	36	100.53	96.16	91.79	87.42
	28545			.2913	7.400	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25535		.2913	7.400	8.0	91	53	42	36	100.53	96.16	91.79	87.42
	28555			.2953	7.500	8.0	79	41	30	36	84.39	80.72	77.05	73.38
NEW		25545		.2953	7.500	8.0	91	53	42	36	100.53	96.16	91.79	87.42
			27086	.2953	7.500	8.0	116	76	65	36	121.37	116.09	110.82	105.54
	28565			.2972	7.550	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25555		.2972	7.550	8.0	91	53	42	36	100.53	96.16	91.79	87.42
			27088	.2972	7.550	8.0	116	76	65	36	121.37	116.09	110.82	105.54
	28575			.2992	7.600	8.0	79	41	30	36	84.39	80.72	77.05	73.38
		25565		.2992	7.600	8.0	91	53	42	36	100.53	96.16	91.79	87.42
	28578			.3020	N 7.670	8.0	79	41	29	36	84.39	80.72	77.05	73.38
		25570		.3020	N 7.670	8.0	91	53	41	36	100.53	96.16	91.79	87.42
			27092	.3020	N 7.670	8.0	116	76	64	36	121.37	116.09	110.82	105.54
NEW	28585			.3031	7.700	8.0	79	41	29	36	84.39	80.72	77.05	73.38
		25575		.3031	7.700	8.0	91	53	41	36	100.53	96.16	91.79	87.42
	28595			.3071	7.800	8.0	79	41	29	36	84.39	80.72	77.05	73.38
		25585		.3071	7.800	8.0	91	53	41	36	100.53	96.16	91.79	87.42
			27096	.3071	7.800	8.0	116	76	64	36	121.37	116.09	110.82	105.54
	28602			.3125	5/16" 7.937	8.0	79	41	29	36	84.39	80.72	77.05	73.38
		25593		.3125	5/16" 7.937	8.0	91	53	41	36	100.53	96.16	91.79	87.42
			27101	.3125	5/16" 7.937	8.0	116	76	64	36	121.37	116.09	110.82	105.54
	28605			.3130	7.950	8.0	79	41	29	36	84.39	80.72	77.05	73.38
		25595		.3130	7.950	8.0	91	53	41	36	100.53	96.16	91.79	87.42
NEW			27102	.3130	7.950	8.0	116	76	64	36	121.37	116.09	110.82	105.54
	28615			.3150	8.000	8.0	79	41	29	36	84.39	80.72	77.05	73.38
		25605		.3150	8.000	8.0	91	53	41	36	100.53	96.16	91.79	87.42
			27104	.3150	8.000	8.0	116	76	64	36	121.37	116.09	110.82	105.54
	28625			.3189	8.100	10.0	89	47	35	40	113.71	108.77	103.82	98.88
		25610		.3189	8.100	10.0	103	61	49	40	129.52	123.89	118.26	112.63
	28635			.3228	8.200	10.0	89	47	35	40	113.71	108.77	103.82	98.88
		25615		.3228	8.200	10.0	103	61	49	40	129.52	123.89	118.26	112.63
	28638			.3230	P 8.204	10.0	89	47	35	40	113.71	108.77	103.82	98.88
		25618		.3230	P 8.204	10.0	103	61	49	40	129.52	123.89	118.26	112.63
NEW			27108	.3230	P 8.204	10.0	131	87	75	40	165.51	158.31	151.12	143.92
	28645			.3268	8.300	10.0	89	47	35	40	113.71	108.77	103.82	98.88
		25625		.3268	8.300	10.0	103	61	49	40	129.52	123.89	118.26	112.63
	28648			.3281	21/64" 8.333	10.0	89	47	35	40	113.71	108.77	103.82	98.88
		25628		.3281	21/64" 8.333	10.0	103	61	49	40	129.52	123.89	118.26	112.63
			27112	.3281	21/64" 8.333	10.0	131	87	75	40	165.51	158.31	151.12	143.92
	28655			.3287	8.350	10.0	89	47	34	40	113.71	108.77	103.82	98.88
		25635		.3287	8.350	10.0	103	61	48	40	129.52	123.89	118.26	112.63
			27114	.3287	8.350	10.0	131	87	74	40	165.51	158.31	151.12	143.92
	28665			.3307	8.400	10.0	89	47	34	40	113.71	108.77	103.82	98.88
NEW		25640		.3307	8.400	10.0	103	61	48	40	129.52	123.89	118.26	112.63
	28675			.3346	8.500	10.0	89	47	34	40	113.71	108.77	103.82	98.88
		25645		.3346	8.500	10.0	103	61	48	40	129.52	123.89	118.26	112.63
			27118	.3346	8.500	10.0	131	87	74	40	165.51	158.31	151.12	143.92
	28685			.3386	8.600	10.0	89	47	34	40	113.71	108.77	103.82	98.88
		25655		.3386	8.600	10.0	103	61	48	40	129.52	123.89	118.26	112.63
			27121	.3386	8.600	10.0	131	87	74	40	165.51	158.31	151.12	143.92

continued →

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

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

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>l5</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
			Decimal		Metric									
28688			.3390	R	8.610	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25658		.3390	R	8.610	10.0	103	61	48	40	129.52	123.89	118.26	112.63
		27122	.3390	R	8.610	10.0	131	87	74	40	165.51	158.31	151.12	143.92
28695			.3425		8.700	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25665		.3425		8.700	10.0	103	61	48	40	129.52	123.89	118.26	112.63
		27124	.3425		8.700	10.0	131	87	74	40	165.51	158.31	151.12	143.92
28698			.3438	11/32"	8.732	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25670		.3438	11/32"	8.732	10.0	103	61	48	40	129.52	123.89	118.26	112.63
		27126	.3438	11/32"	8.732	10.0	131	87	74	40	165.51	158.31	151.12	143.92
28725			.3445		8.750	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25675		.3445		8.750	10.0	103	61	48	40	129.52	123.89	118.26	112.63
		27128	.3445		8.750	10.0	131	87	74	40	165.51	158.31	151.12	143.92
28735			.3465		8.800	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25685		.3465		8.800	10.0	103	61	48	40	129.52	123.89	118.26	112.63
		27130	.3465		8.800	10.0	131	87	74	40	165.51	158.31	151.12	143.92
28745			.3504		8.900	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25695		.3504		8.900	10.0	103	61	48	40	129.52	123.89	118.26	112.63
28755			.3543		9.000	10.0	89	47	34	40	113.71	108.77	103.82	98.88
	25705		.3543		9.000	10.0	103	61	48	40	129.52	123.89	118.26	112.63
		27134	.3543		9.000	10.0	131	87	74	40	165.51	158.31	151.12	143.92
28765			.3583		9.100	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25715		.3583		9.100	10.0	103	61	47	40	129.52	123.89	118.26	112.63
28768			.3594	23/64"	9.128	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25720		.3594	23/64"	9.128	10.0	103	61	47	40	129.52	123.89	118.26	112.63
		27138	.3594	23/64"	9.128	10.0	139	95	84	40	165.51	158.31	151.12	143.92
	25725		.3602		9.150	10.0	103	61	47	40	129.52	123.89	118.26	112.63
NEW		27140	.3602		9.150	10.0	139	95	81	40	165.51	158.31	151.12	143.92
28815			.3622		9.200	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25735		.3622		9.200	10.0	103	61	47	40	129.52	123.89	118.26	112.63
28825			.3661		9.300	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25745		.3661		9.300	10.0	103	61	47	40	129.52	123.89	118.26	112.63
28845			.3701		9.400	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25750		.3701		9.400	10.0	103	61	47	40	129.52	123.89	118.26	112.63
28855			.3740		9.500	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25755		.3740		9.500	10.0	103	61	47	40	129.52	123.89	118.26	112.63
NEW		27146	.3740		9.500	10.0	139	95	81	40	165.51	158.31	151.12	143.92
28858			.3750	3/8"	9.525	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25760		.3750	3/8"	9.525	10.0	103	61	47	40	129.52	123.89	118.26	112.63
		27148	.3750	3/8"	9.525	10.0	139	95	81	40	165.51	158.31	151.12	143.92
28875			.3760		9.550	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25765		.3760		9.550	10.0	103	61	47	40	129.52	123.89	118.26	112.63
NEW		27150	.3760		9.550	10.0	139	95	81	40	165.51	158.31	151.12	143.92
28878			.3780		9.600	10.0	89	47	33	40	113.71	108.77	103.82	98.88
	25767		.3780		9.600	10.0	103	61	47	40	129.52	123.89	118.26	112.63
		27152	.3780		9.600	10.0	139	95	81	40	165.51	158.31	151.12	143.92
28882			.3819		9.700	10.0	89	47	32	40	113.71	108.77	103.82	98.88
	25770		.3819		9.700	10.0	103	61	46	40	129.52	123.89	118.26	112.63
28885			.3858		9.800	10.0	89	47	32	40	113.71	108.77	103.82	98.88
	25775		.3858		9.800	10.0	103	61	46	40	129.52	123.89	118.26	112.63
28895			.3898		9.900	10.0	89	47	32	40	113.71	108.77	103.82	98.88
	25785		.3898		9.900	10.0	103	61	46	40	129.52	123.89	118.26	112.63
		27160	.3898		9.900	10.0	139	95	80	40	165.51	158.31	151.12	143.92
28898			.3906	25/64"	9.920	10.0	89	47	32	40	113.71	108.77	103.82	98.88
	25787		.3906	25/64"	9.920	10.0	103	61	46	40	129.52	123.89	118.26	112.63
		27162	.3906	25/64"	9.920	10.0	139	95	80	40	165.51	158.31	151.12	143.92

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

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

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>l5</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
28905			.3937	10.000	10.0	89	47	32	40	113.71	108.77	103.82	98.88
	25795		.3937	10.000	10.0	103	61	46	40	129.52	123.89	118.26	112.63
		27164	.3937	10.000	10.0	139	95	80	40	165.51	158.31	151.12	143.92
28925			.3976	10.100	12.0	102	55	40	45	147.23	140.83	134.43	128.03
	25800		.3976	10.100	12.0	118	71	56	45	167.05	159.79	152.52	145.26
28935			.4016	10.200	12.0	102	55	40	45	147.23	140.83	134.43	128.03
	25805		.4016	10.200	12.0	118	71	56	45	167.05	159.79	152.52	145.26
28945			.4055	10.300	12.0	102	55	40	45	147.23	140.83	134.43	128.03
	25815		.4055	10.300	12.0	118	71	56	45	167.05	159.79	152.52	145.26
NEW		27170	.4055	10.300	12.0	155	106	91	45	215.11	205.76	196.40	187.05
28948			.4062 13/32"	10.317	12.0	102	55	40	45	147.23	140.83	134.43	128.03
	25817		.4062 13/32"	10.317	12.0	118	71	56	45	167.05	159.79	152.52	145.26
		27172	.4062 13/32"	10.317	12.0	155	106	91	45	215.11	205.76	196.40	187.05
28953			.4130 Z	10.490	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25823		.4130 Z	10.490	12.0	118	71	55	45	167.05	159.79	152.52	145.26
		27178	.4130 Z	10.490	12.0	155	106	90	45	215.11	205.76	196.40	187.05
28955			.4134	10.500	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25825		.4134	10.500	12.0	118	71	55	45	167.05	159.79	152.52	145.26
		27180	.4134	10.500	12.0	155	106	90	45	215.11	205.76	196.40	187.05
28965			.4173	10.600	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25830		.4173	10.600	12.0	118	71	55	45	167.05	159.79	152.52	145.26
NEW		27182	.4173	10.600	12.0	155	106	90	45	215.11	205.76	196.40	187.05
28975			.4213	10.700	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25835		.4213	10.700	12.0	118	71	55	45	167.05	159.79	152.52	145.26
NEW		27184	.4213	10.700	12.0	155	106	90	45	215.11	205.76	196.40	187.05
28978			.4219 27/64"	10.716	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25838		.4219 27/64"	10.716	12.0	118	71	55	45	167.05	159.79	152.52	145.26
		27186	.4219 27/64"	10.716	12.0	155	106	90	45	215.11	205.76	196.40	187.05
28985			.4252	10.800	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25845		.4252	10.800	12.0	118	71	55	45	167.05	159.79	152.52	145.26
28995			.4331	11.000	12.0	102	55	39	45	147.23	140.83	134.43	128.03
	25855		.4331	11.000	12.0	118	71	55	45	167.05	159.79	152.52	145.26
		27190	.4331	11.000	12.0	163	114	98	45	215.11	205.76	196.40	187.05
29005			.4370	11.100	12.0	102	55	38	45	147.23	140.83	134.43	128.03
	25865		.4370	11.100	12.0	118	71	54	45	167.05	159.79	152.52	145.26
29008			.4375 7/16"	11.112	12.0	102	55	38	45	147.23	140.83	134.43	128.03
	25868		.4375 7/16"	11.112	12.0	118	71	54	45	167.05	159.79	152.52	145.26
		27194	.4375 7/16"	11.112	12.0	163	114	97	45	215.11	205.76	196.40	187.05
29015			.4409	11.200	12.0	102	55	38	45	147.23	140.83	134.43	128.03
	25875		.4409	11.200	12.0	118	71	54	45	167.05	159.79	152.52	145.26
29025			.4488	11.400	12.0	102	55	38	45	147.23	140.83	134.43	128.03
	25880		.4488	11.400	12.0	118	71	54	45	167.05	159.79	152.52	145.26
29035			.4528	11.500	12.0	102	55	38	45	147.23	140.83	134.43	128.03
	25885		.4528	11.500	12.0	118	71	54	45	167.05	159.79	152.52	145.26
NEW	29038		.4531 29/64"	11.508	12.0	102	55	38	45	147.23	140.83	134.43	128.03
	25888		.4531 29/64"	11.508	12.0	118	71	54	45	167.05	159.79	152.52	145.26
		27200	.4531 29/64"	11.508	12.0	163	114	97	45	215.11	205.76	196.40	187.05
29045			.4606	11.700	12.0	102	55	37	45	147.23	140.83	134.43	128.03
	25895		.4606	11.700	12.0	118	71	53	45	167.05	159.79	152.52	145.26
29055			.4685	11.900	12.0	102	55	37	45	147.23	140.83	134.43	128.03
29058			.4688 15/32"	11.907	12.0	102	55	37	45	147.23	140.83	134.43	128.03
	25910		.4688 15/32"	11.907	12.0	118	71	53	45	167.05	159.79	152.52	145.26
		27208	.4688 15/32"	11.907	12.0	163	114	96	45	215.11	205.76	196.40	187.05

continued →

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

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

	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>l5</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
				Decimal	Metric									
NEW	29065	25915	27210	.4724	12.000	12.0	102	55	37	45	147.23	140.83	134.43	128.03
				.4724	12.000	12.0	118	71	53	45	167.05	159.79	152.52	145.26
NEW				.4724	12.000	12.0	163	114	96	45	215.11	205.76	196.40	187.05
	29075			.4764	12.100	14.0	107	60	42	45	205.67	196.72	187.78	178.84
NEW		25925		.4764	12.100	14.0	124	77	59	45	246.47	235.75	225.04	214.32
	29085			.4803	12.200	14.0	107	60	42	45	205.67	196.72	187.78	178.84
NEW		25930		.4803	12.200	14.0	124	77	59	45	246.47	235.75	225.04	214.32
	29095			.4842	12.300	14.0	107	60	42	45	205.67	196.72	187.78	178.84
NEW		25935		.4842	12.300	14.0	124	77	59	45	246.47	235.75	225.04	214.32
	29098			.4844	31/64"	12.303	14.0	107	60	42	205.67	196.72	187.78	178.84
NEW		25937		.4844	31/64"	12.303	14.0	124	77	59	246.47	235.75	225.04	214.32
			27214	.4844	31/64"	12.303	14.0	182	133	115	287.20	274.71	262.23	249.74
NEW	29115			.4921	12.500	14.0	107	60	41	45	205.67	196.72	187.78	178.84
		25945		.4921	12.500	14.0	124	77	58	45	246.47	235.75	225.04	214.32
NEW			27218	.4921	12.500	14.0	182	133	114	45	287.20	274.71	262.23	249.74
	29125			.4961	12.600	14.0	107	60	41	45	205.67	196.72	187.78	178.84
NEW		25950		.4961	12.600	14.0	124	77	58	45	246.47	235.75	225.04	214.32
	29135			.5000	1/2"	12.700	14.0	107	60	41	205.67	196.72	187.78	178.84
NEW		25955		.5000	1/2"	12.700	14.0	124	77	58	246.47	235.75	225.04	214.32
			27220	.5000	1/2"	12.700	14.0	182	133	114	287.20	274.71	262.23	249.74
NEW	29145			.5039	12.800	14.0	107	60	41	45	205.67	196.72	187.78	178.84
		25960		.5039	12.800	14.0	124	77	58	45	246.47	235.75	225.04	214.32
NEW	29148			.5051	12.830	14.0	107	60	41	45	205.67	196.72	187.78	178.84
		25961		.5051	12.830	14.0	124	77	58	45	246.47	235.75	225.04	214.32
NEW			27224	.5051	12.830	14.0	182	133	114	45	287.20	274.71	262.23	249.74
	29155			.5079	12.900	14.0	107	60	41	45	205.67	196.72	187.78	178.84
NEW			27226	.5079	12.900	14.0	182	133	114	45	287.20	274.71	262.23	249.74
	29161			.5098	12.950	14.0	107	60	41	45	197.75	189.16	180.56	171.96
NEW			27228	.5098	12.950	14.0	182	133	114	45	287.20	274.71	262.23	249.74
	29165			.5118	13.000	14.0	107	60	41	45	205.67	196.72	187.78	178.84
NEW		25965		.5118	13.000	14.0	124	77	58	45	246.47	235.75	225.04	214.32
			27230	.5118	13.000	14.0	182	133	114	45	287.20	274.71	262.23	249.74
NEW	29175			.5157	13.100	14.0	107	60	40	45	205.67	196.72	187.78	178.84
		25975		.5157	13.100	14.0	124	77	57	45	246.47	235.75	225.04	214.32
NEW	29181			.5236	13.300	14.0	107	60	40	45	205.67	196.72	187.78	178.84
	29184			.5312	17/32"	13.492	14.0	107	60	40	205.67	196.72	187.78	178.84
NEW		25983		.5312	17/32"	13.492	14.0	124	77	45	246.47	235.75	225.04	214.32
			27238	.5312	17/32"	13.492	14.0	182	133	113	287.20	274.71	262.23	249.74
NEW	29185			.5315	13.500	14.0	107	60	40	45	205.67	196.72	187.78	178.84
		25985		.5315	13.500	14.0	124	77	57	45	246.47	235.75	225.04	214.32
NEW			27240	.5315	13.500	14.0	182	133	113	45	287.20	274.71	262.23	249.74
	29195			.5394	13.700	14.0	107	60	39	45	205.67	196.72	187.78	178.84
NEW		25995		.5394	13.700	14.0	124	77	56	45	246.47	235.75	225.04	214.32
	29205			.5433	13.800	14.0	107	60	39	45	205.67	196.72	187.78	178.84
NEW		26005		.5433	13.800	14.0	124	77	56	45	246.47	235.75	225.04	214.32
	29215			.5512	14.000	14.0	107	60	39	45	205.67	196.72	187.78	178.84
NEW		26015		.5512	14.000	14.0	124	77	56	45	246.47	235.75	225.04	214.32
			27250	.5512	14.000	14.0	182	133	112	45	287.20	274.71	262.23	249.74
NEW	29225			.5551	14.100	16.0	115	65	44	48	251.39	240.46	229.53	218.60
		26025		.5551	14.100	16.0	133	83	62	48	327.73	313.48	299.23	284.98
NEW	29235			.5591	14.200	16.0	115	65	44	48	251.39	240.46	229.53	218.60
		26027		.5591	14.200	16.0	133	83	62	48	327.73	313.48	299.23	284.98
NEW	29245			.5610	14.250	16.0	115	65	44	48	251.39	240.46	229.53	218.60

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

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

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>l5</i> Max Drill Depth	<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	44	48	251.39	240.46	229.53	218.60
		26042		.5625	9/16"	14.287	16.0	133	83	62	48	327.73	313.48	299.23	284.98
			27254	.5625	9/16"	14.287	16.0	204	152	131	48	379.91	363.40	346.88	330.36
	29255			.5630		14.300	16.0	115	65	44	48	251.39	240.46	229.53	218.60
		26045		.5630		14.300	16.0	133	83	62	48	327.73	313.48	299.23	284.98
	29265			.5709		14.500	16.0	115	65	43	48	251.39	240.46	229.53	218.60
		26055		.5709		14.500	16.0	133	83	61	48	327.73	313.48	299.23	284.98
			27258	.5709		14.500	16.0	204	152	130	48	379.91	363.40	346.88	330.36
	29275			.5787		14.700	16.0	115	65	43	48	251.39	240.46	229.53	218.60
		26065		.5787		14.700	16.0	133	83	61	48	327.73	313.48	299.23	284.98
NEW	29285			.5827		14.800	16.0	115	65	43	48	251.39	240.46	229.53	218.60
		26067		.5827		14.800	16.0	133	83	61	48	327.73	313.48	299.23	284.98
	29305			.5906		15.000	16.0	115	65	43	48	251.39	240.46	229.53	218.60
		26075		.5906		15.000	16.0	133	83	61	48	327.73	313.48	299.23	284.98
			27264	.5906		15.000	16.0	204	152	130	48	379.91	363.40	346.88	330.36
	29308			.5938	19/32"	15.082	16.0	115	65	42	48	251.39	240.46	229.53	218.60
		26083		.5938	19/32"	15.082	16.0	133	83	60	48	327.73	313.48	299.23	284.98
	29315			.5945		15.100	16.0	115	65	42	48	251.39	240.46	229.53	218.60
		26085		.5945		15.100	16.0	133	83	60	48	327.73	313.48	299.23	284.98
			27268	.5945		15.100	16.0	204	152	129	48	379.91	363.40	346.88	330.36
NEW	29325			.6102		15.500	16.0	115	65	42	48	251.39	240.46	229.53	218.60
		26095		.6102		15.500	16.0	133	83	60	48	327.73	313.48	299.23	284.98
		26105		.6181		15.700	16.0	133	83	59	48	327.73	313.48	299.23	284.98
	29345			.6220		15.800	16.0	115	65	41	48	251.39	240.46	229.53	218.60
NEW		26107		.6220		15.800	16.0	133	83	59	48	327.73	313.48	299.23	284.98
			27276	.6220		15.800	16.0	204	152	128	48	379.91	363.40	346.88	330.36
	29348			.6250	5/8"	15.875	16.0	115	65	41	48	251.39	240.46	229.53	218.60
		26108		.6250	5/8"	15.875	16.0	133	83	59	48	327.73	313.48	299.23	284.98
NEW			27278	.6250	5/8"	15.875	16.0	204	152	128	48	379.91	363.40	346.88	330.36
		26115		.6299		16.000	16.0	133	83	59	48	327.73	313.48	299.23	284.98
NEW			27282	.6299		16.000	16.0	204	152	128	48	379.91	363.40	346.88	330.36
	29363			.6331		16.080	18.0	123	73	49	48	317.85	304.03	290.21	276.39
	26118			.6331		16.080	18.0	143	93	69	48	389.62	372.68	355.74	338.80
	29365			.6339		16.100	18.0	123	73	49	48	317.85	304.03	290.21	276.39
	26119			.6339		16.100	18.0	143	93	69	48	389.62	372.68	355.74	338.80
	26123			.6378		16.200	18.0	143	93	69	48	389.62	372.68	355.74	338.80
29375				.6398		16.250	18.0	123	73	49	48	317.85	304.03	290.21	276.39
	26125			.6398		16.250	18.0	143	93	69	48	389.62	372.68	355.74	338.80
29385				.6496		16.500	18.0	123	73	48	48	317.85	304.03	290.21	276.39
	26135			.6496		16.500	18.0	143	93	68	48	389.62	372.68	355.74	338.80
29395				.6555		16.650	18.0	123	73	48	48	317.85	304.03	290.21	276.39
	26145			.6555		16.650	18.0	143	93	68	48	389.62	372.68	355.74	338.80
29405				.6693		17.000	18.0	123	73	48	48	317.85	304.03	290.21	276.39
	26155			.6693		17.000	18.0	143	93	68	48	389.62	372.68	355.74	338.80
29415				.6713		17.050	18.0	123	73	47	48	317.85	304.03	290.21	276.39
	26165			.6713		17.050	18.0	143	93	67	48	389.62	372.68	355.74	338.80
29425				.6870		17.450	18.0	123	73	47	48	317.85	304.03	290.21	276.39
	26175			.6870		17.450	18.0	143	93	67	48	389.62	372.68	355.74	338.80
29435				.6890		17.500	18.0	123	73	47	48	317.85	304.03	290.21	276.39
	26185			.6890		17.500	18.0	143	93	67	48	389.62	372.68	355.74	338.80
29445				.7027		17.850	18.0	123	73	46	48	317.85	304.03	290.21	276.39
	26195			.7027		17.850	18.0	143	93	66	48	389.62	372.68	355.74	338.80
29455				.7087		18.000	18.0	123	73	46	48	317.85	304.03	290.21	276.39
	26205			.7087		18.000	18.0	143	93	66	48	389.62	372.68	355.74	338.80
	26215			.7185		18.250	20.0	153	101	74	50	472.93	452.36	431.80	411.24
	26225			.7283		18.500	20.0	153	101	73	50	472.93	452.36	431.80	411.24

continued →

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

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

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>l5</i> Max Drill Depth	<i>l4</i> Shank Length	1-11	12-24	25-49	50-100
			Decimal	Metric									
	26235		.7342	18.650	20.0	153	101	73	50	472.93	452.36	431.80	411.24
	26245		.7480	19.000	20.0	153	101	73	50	472.93	452.36	431.80	411.24
29505			.7500	3/4"	19.050	20.0	131	79	50	419.91	401.65	383.40	365.14
	26255		.7500	3/4"	19.050	20.0	153	101	72	472.93	452.36	431.80	411.24
29545			.7579	19.250	20.0	131	79	50	50	419.91	401.65	383.40	365.14
	26260		.7590	19.280	20.0	153	101	72	50	472.93	452.36	431.80	411.24
29551			.7598	19.300	20.0	131	79	50	50	419.91	401.65	383.40	365.14
	26261		.7598	19.300	20.0	153	101	72	50	472.93	452.36	431.80	411.24
29565			.7677	19.500	20.0	131	79	50	50	419.91	401.65	383.40	365.14
	26281		.7795	19.800	20.0	153	101	71	50	472.93	452.36	431.80	411.24
29595			.7815	19.850	20.0	131	79	49	50	419.91	401.65	383.40	365.14
29605			.7874	20.000	20.0	131	79	49	50	419.91	401.65	383.40	365.14



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)



TECH
PAGES
332-333

Series 1580KH, 1280KH, 1880KH

.1181" - .1540"
(3.000mm - 3.912mm)

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

BALIQ® ALTINOS Coating (AlTiN-based)

High performance - high penetration solid submicron grain carbide drill

Coolant through capabilities for high pressure coolant systems

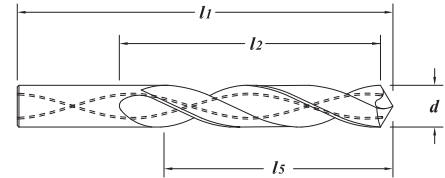
Extended tool life and greater surface finish through faster SFM rates

Up to 70% faster than standard carbide drills

30° helix for better chip evacuation

Honed cutting edge

Live tooling recommended on lathe processes



3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	d † Diameter		l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal	Metric							
22010			.1181	3.000	46	16	10	42.18	40.35	38.51	36.68
	25366		.1181	3.000	50	19	16	46.66	44.63	42.60	40.57
		26366	.1181	3.000	65	28	22	52.06	49.80	47.53	45.27
22015			.1200	#31 3.048	1-13/16"	5/8"	.382"	42.63	40.78	38.92	37.07
	25371		.1200	#31 3.048	2"	3/4"	.622"	47.02	44.98	42.93	40.89
		26371	.1200	#31 3.048	2-1/2"	1-1/8"	.862"	52.50	50.22	47.93	45.65
22020			.1250	1/8" 3.175	1-15/16"	11/16"	.398"	42.99	41.12	39.25	37.38
	25376		.1250	1/8" 3.175	2"	3/4"	.648"	47.41	45.35	43.29	41.23
		26376	.1250	1/8" 3.175	2-1/2"	1-1/8"	.898"	52.91	50.61	48.31	46.01
22025			.1285	#30 3.264	1-15/16"	11/16"	.409"	43.38	41.49	39.61	37.72
	25381		.1285	#30 3.264	2-1/4"	3/4"	.666"	47.83	45.75	43.67	41.59
		26381	.1285	#30 3.264	2-1/2"	1-1/8"	.923"	53.39	51.07	48.75	46.43
22030			.1360	#29 3.454	2-1/16"	3/4"	.433"	43.78	41.88	39.97	38.07
	25386		.1360	#29 3.454	2-1/4"	7/8"	.705"	48.19	46.09	44.00	41.90
		26386	.1360	#29 3.454	3"	1-1/4"	.977"	53.77	51.44	49.10	46.76
22035			.1378	3.500	52	19	11	44.23	42.31	40.38	38.46
	25391		.1378	3.500	57	22	18	48.55	46.44	44.33	42.22
		26391	.1378	3.500	75	32	25	54.20	51.84	49.49	47.13
22040			.1405	#28 3.569	2-1/16"	3/4"	.447"	44.63	42.69	40.75	38.81
	25396		.1405	#28 3.569	2-1/4"	7/8"	.728"	48.96	46.83	44.70	42.57
		26396	.1405	#28 3.569	3"	1-1/4"	1.009"	54.64	52.26	49.89	47.51
22045			.1406	9/64" 3.571	2-1/16"	3/4"	.447"	45.02	43.07	41.11	39.15
	25401		.1406	9/64" 3.571	2-1/4"	7/8"	.729"	49.38	47.23	45.09	42.94
		26401	.1406	9/64" 3.571	3"	1-1/4"	1.010"	55.10	52.70	50.31	47.91
22050			.1440	#27 3.658	2-1/16"	3/4"	.458"	45.43	43.45	41.48	39.50
	25406		.1440	#27 3.658	2-1/4"	7/8"	.746"	49.70	47.54	45.38	43.22
		26406	.1440	#27 3.658	3"	1-3/8"	1.034"	55.48	53.06	50.65	48.24
22055			.1470	#26 3.734	2-3/16"	13/16"	.468"	45.77	43.78	41.79	39.80
	25411		.1470	#26 3.734	2-1/4"	7/8"	.762"	50.13	47.95	45.77	43.59
		26411	.1470	#26 3.734	3"	1-3/8"	1.056"	55.94	53.50	51.07	48.64
22060			.1495	#25 3.797	2-3/16"	13/16"	.476"	46.24	44.23	42.22	40.21
	25416		.1495	#25 3.797	2-1/4"	15/16"	.775"	50.51	48.31	46.12	43.92
		26416	.1495	#25 3.797	3"	1-3/8"	1.074"	56.37	53.92	51.47	49.02
22065			.1520	#24 3.861	2-3/16"	13/16"	.484"	46.62	44.59	42.57	40.54
	25421		.1520	#24 3.861	2-1/4"	15/16"	.788"	50.86	48.65	46.44	44.23
		26421	.1520	#24 3.861	3"	1-1/2"	1.092"	56.76	54.30	51.83	49.36
22070			.1540	#23 3.912	2-3/16"	13/16"	.490"	47.02	44.98	42.93	40.89
	25426		.1540	#23 3.912	2-1/4"	15/16"	.798"	51.29	49.06	46.83	44.60
		26426	.1540	#23 3.912	3"	1-1/2"	1.106"	57.24	54.75	52.26	49.77

continued →

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

.1562" - .1935"
(3.967mm - 4.915mm)

3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	$d^{\dagger}$ Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal		Metric							
22075			.1562	5/32"	3.967	2-3/16"	13/16"	.497"	47.40	45.34	43.28	41.22
	25431		.1562	5/32"	3.967	2-1/2"	15/16"	.809"	51.66	49.41	47.17	44.92
		26431	.1562	5/32"	3.967	3"	1-1/2"	1.122"	57.65	55.14	52.64	50.13
22080			.1570	#22	3.988	2-3/16"	13/16"	.500"	47.83	45.75	43.67	41.59
	25436		.1570	#22	3.988	2-1/2"	15/16"	.814"	52.01	49.75	47.49	45.23
		26436	.1570	#22	3.988	3"	1-1/2"	1.128"	58.05	55.53	53.00	50.48
22085			.1575		4.000	56	21	13	48.21	46.11	44.02	41.92
	25441		.1575		4.000	65	24	21	52.43	50.15	47.87	45.59
		26441	.1575		4.000	75	38	29	58.50	55.96	53.41	50.87
22090			.1590	#21	4.039	2-3/16"	13/16"	.506"	48.66	46.54	44.43	42.31
	25446		.1590	#21	4.039	2-1/2"	15/16"	.824"	52.79	50.49	48.20	45.90
		26446	.1590	#21	4.039	3"	1-1/2"	1.142"	58.88	56.32	53.76	51.20
22095			.1610	#20	4.089	2-3/16"	13/16"	.512"	49.05	46.92	44.78	42.65
	25451		.1610	#20	4.089	2-1/2"	15/16"	.834"	53.19	50.88	48.56	46.25
		26451	.1610	#20	4.089	3"	1-1/2"	1.156"	59.34	56.76	54.18	51.60
22100			.1660	#19	4.216	2-9/32"	15/16"	.528"	49.47	47.32	45.17	43.02
	25456		.1660	#19	4.216	2-1/2"	1"	.860"	53.59	51.26	48.93	46.60
		26456	.1660	#19	4.216	3"	1-1/2"	1.192"	59.80	57.20	54.60	52.00
22105			.1695	#18	4.305	2-9/32"	15/16"	.539"	49.88	47.71	45.54	43.37
	25461		.1695	#18	4.305	2-1/2"	1"	.878"	53.98	51.63	49.29	46.94
		26461	.1695	#18	4.305	3-1/2"	1-3/4"	1.217"	60.20	57.59	54.97	52.35
22110			.1719	11/64"	4.366	2-9/32"	15/16"	.547"	50.28	48.09	45.91	43.72
	25466		.1719	11/64"	4.366	2-1/2"	1"	.891"	54.35	51.99	49.62	47.26
		26466	.1719	11/64"	4.366	3-1/2"	1-3/4"	1.235"	60.63	57.99	55.36	52.72
22115			.1730	#17	4.394	2-9/32"	15/16"	.551"	50.69	48.49	46.28	44.08
	25471		.1730	#17	4.394	2-1/2"	1"	.897"	54.71	52.33	49.95	47.57
		26471	.1730	#17	4.394	3-1/2"	1-3/4"	1.243"	61.03	58.38	55.72	53.07
22120			.1770	#16	4.496	2-9/32"	15/16"	.563"	51.04	48.82	46.60	44.38
	25476		.1770	#16	4.496	2-1/2"	1"	.917"	55.11	52.71	50.32	47.92
		26476	.1770	#16	4.496	3-1/2"	1-3/4"	1.271"	61.51	58.84	56.16	53.49
22125			.1772		4.500	58	24	14	51.49	49.25	47.01	44.77
	25481		.1772		4.500	65	25	23	55.52	53.11	50.69	48.28
		26481	.1772		4.500	88	45	32	61.95	59.26	56.56	53.87
22130			.1800	#15	4.572	2-9/32"	15/16"	.573"	51.81	49.56	47.30	45.05
	25486		.1800	#15	4.572	2-3/4"	1"	.933"	55.89	53.46	51.03	48.60
		26486	.1800	#15	4.572	3-1/2"	1-3/4"	1.293"	62.35	59.64	56.93	54.22
22135			.1820	#14	4.623	2-9/32"	15/16"	.579"	52.31	50.04	47.76	45.49
	25491		.1820	#14	4.623	2-3/4"	1"	.913"	56.25	53.80	51.36	48.91
		26491	.1820	#14	4.623	3-1/2"	1-3/4"	1.307"	62.76	60.03	57.30	54.57
22140			.1850	#13	4.699	2-9/32"	15/16"	.589"	52.68	50.39	48.10	45.81
	25496		.1850	#13	4.699	2-3/4"	1-1/4"	.959"	56.65	54.19	51.72	49.26
		26496	.1850	#13	4.699	3-1/2"	1-3/4"	1.329"	63.20	60.46	57.71	54.96
22145			.1875	3/16"	4.763	2-13/32"	1"	.597"	53.11	50.80	48.49	46.18
	25501		.1875	3/16"	4.763	2-3/4"	1-1/4"	.972"	57.06	54.58	52.10	49.62
		26501	.1875	3/16"	4.763	4"	2"	1.347"	63.69	60.92	58.15	55.38
22150			.1890	#12	4.801	2-13/32"	1"	.601"	53.49	51.16	48.84	46.51
	25506		.1890	#12	4.801	2-3/4"	1-1/4"	.979"	57.42	54.92	52.43	49.93
		26506	.1890	#12	4.801	4"	2"	1.357"	64.07	61.28	58.50	55.71
22155			.1910	#11	4.851	2-13/32"	1"	.608"	53.98	51.63	49.29	46.94
	25511		.1910	#11	4.851	2-3/4"	1-1/4"	.990"	57.79	55.28	52.76	50.25
		26511	.1910	#11	4.851	4"	2"	1.372"	64.49	61.69	58.88	56.08
22160			.1935	#10	4.915	2-13/32"	1"	.616"	54.29	51.93	49.57	47.21
	25516		.1935	#10	4.915	2-3/4"	1-1/4"	1.003"	58.22	55.69	53.16	50.63
		26516	.1935	#10	4.915	4"	2"	1.390"	64.94	62.12	59.29	56.47

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

.1960" - .2420"
(4.978mm - 6.147mm)

HIGH PERFORMANCE
DRILLS

3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	d † Diameter		l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100	
			Decimal		Metric							
22165			.1960	#9	4.978	2-13/32"	1"	.624"	54.69	52.32	49.94	47.56
	25521		.1960	#9	4.978	3"	1-5/16"	1.016"	58.56	56.01	53.47	50.92
		26521	.1960	#9	4.978	4"	2"	1.408"	65.32	62.48	59.64	56.80
22170			.1969		5.000	61	25	16	55.00	52.61	50.22	47.83
	25526		.1969		5.000	75	33	26	58.96	56.40	53.83	51.27
		26526	.1969		5.000	100	50	36	65.78	62.92	60.06	57.20
22175			.1990	#8	5.055	2-13/32"	1"	.633"	55.51	53.10	50.68	48.27
	25531		.1990	#8	5.055	3"	1-5/16"	1.031"	59.26	56.68	54.11	51.53
		26531	.1990	#8	5.055	4"	2"	1.429"	66.11	63.24	60.36	57.49
22180			.2010	#7	5.105	2-13/32"	1"	.640"	55.67	53.25	50.83	48.41
	25536		.2010	#7	5.105	3"	1-5/16"	1.042"	59.52	56.94	54.35	51.76
		26536	.2010	#7	5.105	4"	2"	1.444"	66.41	63.53	60.64	57.75
22185			.2031	13/64"	5.159	2-13/32"	1"	.646"	56.04	53.60	51.17	48.73
	25541		.2031	13/64"	5.159	3"	1-5/16"	1.053"	59.96	57.35	54.75	52.14
		26541	.2031	13/64"	5.159	4"	2"	1.459"	66.91	64.00	61.09	58.18
22190			.2040	#6	5.182	2-13/32"	1"	.649"	56.43	53.98	51.52	49.07
	25546		.2040	#6	5.182	3"	1-3/8"	1.057"	60.41	57.78	55.16	52.53
		26546	.2040	#6	5.182	4"	2"	1.465"	67.39	64.46	61.53	58.60
22195			.2055	#5	5.220	2-13/32"	1"	.654"	56.82	54.35	51.88	49.41
	25551		.2055	#5	5.220	3"	1-3/8"	1.065"	60.80	58.16	55.51	52.87
		26551	.2055	#5	5.220	4"	2"	1.476"	67.85	64.90	61.95	59.00
22200			.2090	#4	5.309	2-13/32"	1"	.665"	57.19	54.70	52.22	49.73
	25556		.2090	#4	5.309	3"	1-3/8"	1.083"	61.23	58.56	55.90	53.24
		26556	.2090	#4	5.309	4"	2"	1.501"	68.30	65.33	62.36	59.39
22205			.2130	#3	5.410	2-5/8"	1-3/32"	.678"	57.57	55.07	52.56	50.06
	25561		.2130	#3	5.410	3"	1-3/8"	1.104"	61.62	58.94	56.26	53.58
		26561	.2130	#3	5.410	4"	2"	1.530"	68.76	65.77	62.78	59.79
22210			.2165		5.500	67	28	18	57.94	55.42	52.90	50.38
	25566		.2165		5.500	75	35	29	62.00	59.30	56.61	53.91
		26566	.2165		5.500	100	50	40	69.17	66.17	63.16	60.15
22215			.2188	7/32"	5.558	2-5/8"	1-3/32"	.696"	58.42	55.88	53.34	50.80
	25571		.2188	7/32"	5.558	3"	1-3/8"	1.134"	62.13	59.43	56.73	54.03
		26571	.2188	7/32"	5.558	4"	2"	1.571"	69.59	66.56	63.54	60.51
22220			.2210	#2	5.613	2-5/8"	1-3/32"	.703"	58.83	56.28	53.72	51.16
	25576		.2210	#2	5.613	3"	1-3/8"	1.145"	63.19	60.45	57.70	54.95
		26576	.2210	#2	5.613	4"	2"	1.587"	70.68	67.61	64.53	61.46
22225			.2280	#1	5.791	2-5/8"	1-3/32"	.726"	59.27	56.69	54.12	51.54
	25581		.2280	#1	5.791	3"	1-3/8"	1.182"	63.42	60.67	57.91	55.15
		26581	.2280	#1	5.791	4-1/8"	2-1/8"	1.638"	80.98	77.46	73.94	70.42
22230			.2340	A	5.944	2-5/8"	1-3/32"	.745"	59.70	57.10	54.51	51.91
	25586		.2340	A	5.944	3-1/4"	1-1/2"	1.213"	71.17	68.08	64.98	61.89
		26586	.2340	A	5.944	4-1/8"	2-1/8"	1.681"	85.50	81.79	78.07	74.35
22235			.2344	15/64"	5.954	2-5/8"	1-3/32"	.746"	60.13	57.52	54.90	52.29
	25591		.2344	15/64"	5.954	3-1/4"	1-1/2"	1.215"	71.30	68.20	65.10	62.00
		26591	.2344	15/64"	5.954	4-1/8"	2-1/8"	1.684"	85.63	81.91	78.18	74.46
22240			.2362		6.000	67	28	19	60.57	57.94	55.30	52.67
	25596		.2362		6.000	80	38	31	71.50	68.39	65.28	62.17
		26596	.2362		6.000	105	55	43	85.82	82.09	78.36	74.63
22245			.2380	B	6.045	2-3/4"	1-7/32"	.757"	63.97	61.19	58.41	55.63
	25601		.2380	B	6.045	3-1/4"	1-5/8"	1.233"	73.76	70.55	67.35	64.14
		26601	.2380	B	6.045	4-1/8"	2-1/8"	1.709"	89.07	85.20	81.32	77.45
22250			.2420	C	6.147	2-3/4"	1-7/32"	.770"	64.50	61.70	58.89	56.09
	25606		.2420	C	6.147	3-1/4"	1-5/8"	1.254"	74.11	70.88	67.66	64.44
		26606	.2420	C	6.147	4-1/4"	2-1/4"	1.738"	89.41	85.53	81.64	77.75

continued →

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

.2460" - .3125"
(6.248mm - 7.938mm)

3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	$d^{\dagger}$ Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal		Metric							
22255			.2460	D	6.248	2-3/4"	1-7/32"	.783"	64.86	62.04	59.22	56.40
	25611		.2460	D	6.248	3-1/4"	1-5/8"	1.275"	74.43	71.19	67.96	64.72
		26611	.2460	D	6.248	4-1/4"	2-1/4"	1.767"	89.75	85.84	81.94	78.04
22260			.2500	1/4" / E	6.350	2-3/4"	1-7/32"	.796"	65.40	62.56	59.71	56.87
	25616		.2500	1/4" / E	6.350	3-1/4"	1-5/8"	1.296"	74.75	71.50	68.25	65.00
		26616	.2500	1/4" / E	6.350	4-1/4"	2-1/4"	1.796"	90.07	86.15	82.24	78.32
22265			.2559		6.500	70	31	21	66.47	63.58	60.69	57.80
	25621		.2559		6.500	80	41	34	75.67	72.38	69.09	65.80
		26621	.2559		6.500	105	58	47	91.01	87.05	83.10	79.14
22270			.2570	F	6.528	2-3/4"	1-7/32"	.818"	67.49	64.56	61.62	58.69
	25626		.2570	F	6.528	3-1/4"	1-11/16"	1.332"	77.42	74.05	70.69	67.32
		26626	.2570	F	6.528	4-3/8"	2-3/8"	1.846"	94.51	90.40	86.29	82.18
22275			.2610	G	6.629	2-3/4"	1-7/32"	.831"	68.52	65.54	62.56	59.58
	25631		.2610	G	6.629	3-1/2"	1-11/16"	1.353"	78.37	74.97	71.56	68.15
		26631	.2610	G	6.629	4-3/8"	2-3/8"	1.875"	95.48	91.33	87.18	83.03
22280			.2656	17/64"	6.746	2-15/16"	1-11/32"	.845"	69.58	66.55	63.53	60.50
	25636		.2656	17/64"	6.746	3-1/2"	1-11/16"	1.376"	79.28	75.83	72.39	68.94
		26636	.2656	17/64"	6.746	4-3/8"	2-3/8"	1.908"	96.40	92.21	88.02	83.83
22285			.2660	H	6.756	2-15/16"	1-11/32"	.846"	70.60	67.53	64.46	61.39
	25641		.2660	H	6.756	3-1/2"	1-11/16"	1.378"	80.22	76.74	73.25	69.76
		26641	.2660	H	6.756	4-3/8"	2-3/8"	1.910"	97.42	93.18	88.95	84.71
22290			.2720	I	6.909	2-15/16"	1-11/32"	.866"	71.63	68.52	65.40	62.29
	25646		.2720	I	6.909	3-1/2"	1-11/16"	1.410"	80.33	76.84	73.34	69.85
		26646	.2720	I	6.909	4-3/8"	2-3/8"	1.954"	97.51	93.27	89.03	84.79
22295			.2756		7.000	75	34	22	72.67	69.51	66.35	63.19
	25651		.2756		7.000	88	43	36	81.24	77.70	74.17	70.64
		26651	.2756		7.000	110	61	50	98.44	94.16	89.88	85.60
22300			.2770	J	7.036	2-15/16"	1-11/32"	.881"	73.67	70.47	67.26	64.06
	25656		.2770	J	7.036	3-1/2"	1-11/16"	1.435"	85.34	81.63	77.92	74.21
		26656	.2770	J	7.036	4-3/8"	2-3/8"	1.989"	103.42	98.92	94.43	89.93
22305			.2810	K	7.137	2-15/16"	1-11/32"	.894"	74.77	71.52	68.27	65.02
	25661		.2810	K	7.137	3-1/2"	1-3/4"	1.456"	86.30	82.54	78.79	75.04
		26661	.2810	K	7.137	4-7/16"	2-7/16"	2.018"	104.40	99.86	95.32	90.78
22310			.2812	9/32"	7.142	2-15/16"	1-11/32"	.895"	75.81	72.51	69.22	65.92
	25666		.2812	9/32"	7.142	3-1/2"	1-3/4"	1.457"	87.23	83.44	79.64	75.85
		26666	.2812	9/32"	7.142	4-7/16"	2-7/16"	2.020"	105.36	100.78	96.20	91.62
22315			.2900	L	7.366	2-15/16"	1-11/32"	.923"	76.82	73.48	70.14	66.80
	25671		.2900	L	7.366	3-1/2"	1-3/4"	1.503"	87.62	83.81	80.00	76.19
		26671	.2900	L	7.366	4-7/16"	2-7/16"	2.083"	105.77	101.17	96.57	91.97
22320			.2950	M	7.493	2-15/16"	1-11/32"	.939"	78.30	74.90	71.49	68.09
	25676		.2950	M	7.493	3-3/4"	1-3/4"	1.529"	88.14	84.30	80.47	76.64
		26676	.2950	M	7.493	4-7/16"	2-7/16"	2.119"	106.28	101.66	97.04	92.42
22325			.2953		7.500	75	34	24	78.30	74.90	71.49	68.09
	25681		.2953		7.500	95	44	39	88.14	84.30	80.47	76.64
		26681	.2953		7.500	115	66	54	106.28	101.66	97.04	92.42
22330			.2969	19/64"	7.541	3-3/32"	1-15/32"	.945"	78.97	75.54	72.10	68.67
	25686		.2969	19/64"	7.541	3-3/4"	1-7/8"	1.539"	94.15	90.06	85.96	81.87
		26686	.2969	19/64"	7.541	4-9/16"	2-9/16"	2.132"	114.75	109.76	104.77	99.78
22335			.3020	N	7.671	3-3/32"	1-15/32"	.961"	82.55	78.96	75.37	71.78
	25691		.3020	N	7.671	3-3/4"	1-7/8"	1.565"	96.27	92.08	87.90	83.71
		26691	.3020	N	7.671	4-9/16"	2-9/16"	2.169"	116.97	111.88	106.80	101.71
22340			.3125	5/16"	7.938	3-3/32"	1-15/32"	.994"	82.83	79.23	75.63	72.03
	25696		.3125	5/16"	7.938	3-3/4"	1-7/8"	1.619"	96.49	92.29	88.10	83.90
		26696	.3125	5/16"	7.938	4-11/16"	2-9/16"	2.244"	117.17	112.08	106.98	101.89

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)


**TECH
PAGES
332-333**
Series 1580KH, 1280KH, 1880KH (continued)

 .3150" - .3750"
(8.000mm - 9.525mm)

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

BALIQ® ALTINOS Coating (AlTiN-based)

High performance - high penetration solid submicron grain carbide drill


 HIGH PERFORMANCE
DRILLS

3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	d † Diameter		l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal	Metric							
22345			.3150	8.000	79	37	25	84.39	80.72	77.05	73.38
	25701		.3150	8.000	95	48	41	100.54	96.17	91.80	87.43
		26701	.3150	8.000	120	69	57	121.37	116.09	110.82	105.54
22350			.3160	O 8.026	3-3/32"	1-15/32"	1.006"	84.39	80.72	77.05	73.38
	25706		.3160	O 8.026	3-3/4"	1-7/8"	1.638"	101.46	97.05	92.64	88.23
		26706	.3160	O 8.026	4-11/16"	2-11/16"	2.270"	123.42	118.05	112.69	107.32
22355			.3230	P 8.204	3-3/32"	1-15/32"	1.028"	85.00	81.30	77.61	73.91
	25711		.3230	P 8.204	3-3/4"	2-3/32"	1.674"	101.73	97.31	92.88	88.46
		26711	.3230	P 8.204	4-11/16"	2-11/16"	2.320"	123.68	118.31	112.93	107.55
22360			.3281	21/64" 8.334	3-3/32"	1-15/32"	1.044"	86.60	82.83	79.07	75.30
	25716		.3281	21/64" 8.334	4"	2-3/32"	1.700"	102.40	97.94	93.49	89.04
		26716	.3281	21/64" 8.334	4-11/16"	2-11/16"	2.356"	124.37	118.97	113.56	108.15
22365			.3320	Q 8.433	3-3/32"	1-15/32"	1.056"	88.14	84.30	80.47	76.64
	25721		.3320	Q 8.433	4"	2-3/32"	1.720"	102.98	98.51	94.03	89.55
		26721	.3320	Q 8.433	4-15/16"	2-15/16"	2.384"	124.99	119.56	114.12	108.69
22370			.3346	8.500	79	37	27	88.49	84.65	80.80	76.95
	25726		.3346	8.500	100	53	44	103.52	99.02	94.52	90.02
		26726	.3346	8.500	125	75	61	125.53	120.08	114.62	109.16
22375			.3390	R 8.611	3-5/16"	1-9/16"	1.079"	90.87	86.92	82.97	79.02
	25731		.3390	R 8.611	4"	2-3/32"	1.757"	106.92	102.27	97.62	92.97
		26731	.3390	R 8.611	4-15/16"	2-15/16"	2.435"	131.47	125.75	120.04	114.32
22380			.3438	11/32" 8.733	3-5/16"	1-9/16"	1.094"	92.87	88.84	84.80	80.76
	25736		.3438	11/32" 8.733	4"	2-3/16"	1.782"	109.55	104.79	100.02	95.26
		26736	.3438	11/32" 8.733	4-15/16"	2-15/16"	2.470"	134.26	128.43	122.59	116.75
22385			.3480	S 8.839	3-5/16"	1-9/16"	1.107"	95.94	91.77	87.60	83.43
	25741		.3480	S 8.839	4"	2-3/16"	1.803"	112.03	107.16	102.29	97.42
		26741	.3480	S 8.839	5"	3"	2.499"	136.82	130.87	124.92	118.97
22390			.3543	9.000	84	40	29	98.39	94.12	89.84	85.56
	25746		.3543	9.000	100	56	47	112.49	107.60	102.71	97.82
		26746	.3543	9.000	125	77	65	137.32	131.35	125.38	119.41
22395			.3580	T 9.093	3-5/16"	1-9/16"	1.139"	102.26	97.81	93.37	88.92
	25751		.3580	T 9.093	4-1/4"	2-9/32"	1.855"	114.62	109.64	104.65	99.67
		26751	.3580	T 9.093	5"	3"	2.571"	144.35	138.07	131.80	125.52
22400			.3594	23/64" 9.129	3-5/16"	1-9/16"	1.144"	102.88	98.41	93.93	89.46
	25756		.3594	23/64" 9.129	4-1/4"	2-9/32"	1.862"	115.06	110.06	105.05	100.05
		26756	.3594	23/64" 9.129	5"	3"	2.581"	144.85	138.56	132.26	125.96
22405			.3680	U 9.347	3-5/16"	1-9/16"	1.171"	104.43	99.89	95.35	90.81
	25761		.3680	U 9.347	4-1/4"	2-9/32"	1.907"	121.96	116.66	111.35	106.05
		26761	.3680	U 9.347	5"	3"	2.643"	153.26	146.60	139.93	133.27
22410			.3740	9.500	84	40	30	105.27	100.69	96.12	91.54
	25766		.3740	9.500	105	58	49	122.56	117.23	111.90	106.57
		26766	.3740	9.500	130	80	68	154.22	147.51	140.81	134.10
22415			.3750	3/8" 9.525	3-1/2"	1-11/16"	1.193"	105.92	101.31	96.71	92.10
	25771		.3750	3/8" 9.525	4-1/4"	2-3/8"	1.943"	125.59	120.13	114.67	109.21
		26771	.3750	3/8" 9.525	5-1/8"	3-1/8"	2.693"	158.29	151.40	144.52	137.64

continued →

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

.3770" - .4921"
(9.576mm - 12.500mm)

3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	$d^{\dagger}$ Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal		Metric							
22420			.3770	V	9.576	3-1/2"	1-11/16"	1.200"	109.99	105.20	100.42	95.64
	25776		.3770	V	9.576	4-1/4"	2-3/8"	1.954"	126.01	120.53	115.05	109.57
		26776	.3770	V	9.576	5-1/8"	3-1/8"	2.708"	160.78	153.79	146.80	139.81
22425			.3860	W	9.804	3-1/2"	1-11/16"	1.228"	111.91	107.04	102.18	97.31
	25781		.3860	W	9.804	4-1/2"	2-3/8"	2.000"	127.39	121.85	116.31	110.77
		26781	.3860	W	9.804	5-1/8"	3-1/8"	2.772"	161.33	154.32	147.30	140.29
22430			.3906	25/64"	9.921	3-1/2"	1-11/16"	1.243"	113.31	108.38	103.46	98.53
	25786		.3906	25/64"	9.921	4-1/2"	2-3/8"	2.024"	128.34	122.76	117.18	111.60
		26786	.3906	25/64"	9.921	5-1/4"	3-1/4"	2.805"	162.31	155.25	148.20	141.14
22435			.3937		10.000	89	43	32	113.71	108.77	103.82	98.88
	25791		.3937		10.000	115	60	52	129.51	123.88	118.25	112.62
		26791	.3937		10.000	135	83	72	165.51	158.31	151.12	143.92
22440			.3970	X	10.084	3-1/2"	1-11/16"	1.263"	114.71	109.73	104.74	99.75
	25796		.3970	X	10.084	4-1/2"	2-1/2"	2.057"	133.92	128.10	122.27	116.45
		26796	.3970	X	10.084	5-1/4"	3-1/4"	2.851"	169.20	161.84	154.49	147.13
22445			.4040	Y	10.262	3-1/2"	1-11/16"	1.286"	115.49	110.47	105.45	100.43
	25801		.4040	Y	10.262	4-1/2"	2-9/16"	2.094"	134.52	128.67	122.82	116.97
		26801	.4040	Y	10.262	5-3/8"	3-3/8"	2.902"	172.55	165.04	157.54	150.04
22450			.4062	13/32"	10.317	3-1/2"	1-11/16"	1.293"	119.04	113.86	108.69	103.51
	25806		.4062	13/32"	10.317	4-1/2"	2-9/16"	2.105"	137.10	131.14	125.18	119.22
		26806	.4062	13/32"	10.317	5-3/8"	3-3/8"	2.917"	173.52	165.98	158.43	150.89
22455			.4130	Z	10.490	3-1/2"	1-11/16"	1.314"	120.14	114.92	109.69	104.47
	25811		.4130	Z	10.490	4-1/2"	2-5/8"	2.140"	139.25	133.20	127.14	121.09
		26811	.4130	Z	10.490	5-3/8"	3-3/8"	2.966"	176.40	168.73	161.06	153.39
22460			.4134		10.500	89	43	33	120.14	114.92	109.69	104.47
	25816		.4134		10.500	115	67	54	139.25	133.20	127.14	121.09
		26816	.4134		10.500	135	86	75	176.40	168.73	161.06	153.39
22465			.4219	27/64"	10.716	3-3/4"	1-13/16"	1.343"	121.27	116.00	110.72	105.45
	25821		.4219	27/64"	10.716	4-1/2"	2-11/16"	2.186"	141.22	135.08	128.94	122.80
		26821	.4219	27/64"	10.716	5-7/16"	3-7/16"	3.030"	178.60	170.83	163.07	155.30
22470			.4331		11.000	95	46	35	130.16	124.50	118.84	113.18
	25826		.4331		11.000	115	68	57	146.30	139.94	133.58	127.22
		26826	.4331		11.000	135	88	79	185.51	177.44	169.38	161.31
22475			.4375	7/16"	11.113	3-3/4"	1-13/16"	1.392"	130.16	124.50	118.84	113.18
	25831		.4375	7/16"	11.113	4-3/4"	2-13/16"	2.267"	149.26	142.77	136.28	129.79
		26831	.4375	7/16"	11.113	5-7/16"	3-7/16"	3.142"	189.47	181.24	173.00	164.76
22480			.4528		11.500	95	46	37	139.73	133.65	127.58	121.50
	25836		.4528		11.500	120	71	60	154.59	147.87	141.15	134.43
		26836	.4528		11.500	140	91	83	196.20	187.67	179.14	170.61
22485			.4531	29/64"	11.509	3-3/4"	1-13/16"	1.442"	139.73	133.65	127.58	121.50
	25841		.4531	29/64"	11.509	4-3/4"	2-7/8"	2.348"	159.88	152.93	145.98	139.03
		26841	.4531	29/64"	11.509	5-9/16"	3-13/16"	3.254"	202.34	193.55	184.75	175.95
22490			.4688	15/32"	11.908	4"	1-15/16"	1.492"	146.81	140.43	134.04	127.66
	25846		.4688	15/32"	11.908	4-3/4"	2-7/8"	2.429"	163.53	156.42	149.31	142.20
		26846	.4688	15/32"	11.908	5-9/16"	3-13/16"	3.367"	207.40	198.39	189.37	180.35
22495			.4724		12.000	102	49	38	147.25	140.84	134.44	128.04
	25851		.4724		12.000	120	73	62	167.05	159.79	152.52	145.26
		26851	.4724		12.000	140	98	86	212.73	203.48	194.23	184.98
22500			.4844	31/64"	12.304	4"	1-15/16"	1.541"	156.25	149.46	142.66	135.87
	25856		.4844	31/64"	12.304	5-5/16"	3"	2.510"	174.28	166.71	159.13	151.55
		26856	.4844	31/64"	12.304	5-9/16"	3-13/16"	3.479"	218.26	208.77	199.28	189.79
22505			.4921		12.500	102	49	40	164.69	157.53	150.37	143.21
	25861		.4921		12.500	135	76	65	187.07	178.94	170.80	162.67
		26861	.4921		12.500	150	102	90	219.47	209.92	200.38	190.84

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

.5000" - .6299"
(12.700mm - 16.000mm)

HIGH PERFORMANCE
DRILLS

3xD (1580KH) EDP#	5xD (1280KH) EDP#	7xD (1880KH) EDP#	d † Diameter			l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	1-11	12-24	25-49	50-100
			Decimal		Metric							
22510			.5000	1/2"	12.700	4"	1-15/16"	1.591"	165.73	158.52	151.32	144.11
	25866		.5000	1/2"	12.700	5-3/8"	3-1/16"	2.591"	188.84	180.63	172.42	164.21
		26866	.5000	1/2"	12.700	6"	4"	3.591"	220.26	210.68	201.11	191.53
22515			.5118		13.000	107	53	41	183.95	175.96	167.96	159.96
	25871		.5118		13.000	135	78	67	214.15	204.84	195.53	186.22
		26871	.5118		13.000	150	102	93	230.59	220.56	210.54	200.51
22520			.5156	33/64"	13.096	4-7/32"	2-3/32"	1.641"	188.31	180.13	171.94	163.75
	25876		.5156	33/64"	13.096	5-3/8"	3-1/8"	2.672"	223.22	213.51	203.81	194.10
		26876	.5156	33/64"	13.096	6"	4"	3.703"	240.29	229.85	219.40	208.95
22525			.5312	17/32"	13.492	4-7/32"	2-3/32"	1.690"	192.63	184.25	175.88	167.50
	25881		.5312	17/32"	13.492	5-11/16"	3-5/16"	2.753"	226.81	216.95	207.09	197.23
		26881	.5312	17/32"	13.492	6-1/8"	4-1/8"	3.815"	244.19	233.57	222.96	212.34
22530			.5315		13.500	110	56	43	196.98	188.42	179.85	171.29
	25886		.5315		13.500	145	84	70	230.31	220.30	210.28	200.27
		26886	.5315		13.500	155	105	97	247.96	237.18	226.40	215.62
22535			.5469	35/64"	13.891	4-5/16"	2-7/32"	1.740"	201.28	192.53	183.78	175.03
	25891		.5469	35/64"	13.891	5-13/16"	3-3/8"	2.834"	242.93	232.36	221.80	211.24
		26891	.5469	35/64"	13.891	6-1/8"	4-1/8"	3.928"	255.71	244.60	233.48	222.36
22540			.5512		14.000	110	56	45	205.65	196.71	187.77	178.83
	25896		.5512		14.000	145	86	73	246.49	235.77	225.06	214.34
		26896	.5512		14.000	155	105	101	259.49	248.20	236.92	225.64
22545			.5625	9/16"	14.288	4-9/16"	2-15/32"	1.790"	227.68	217.78	207.88	197.98
	25901		.5625	9/16"	14.288	5-15/16"	3-1/2"	2.915"	265.56	254.01	242.47	230.92
		26901	.5625	9/16"	14.288	6-1/4"	4-3/8"	4.040"	280.15	267.97	255.79	243.61
22550			.5709		14.500	116	63	46	231.98	221.89	211.81	201.72
	25906		.5709		14.500	150	89	75	267.66	256.03	244.39	232.75
		26906	.5709		14.500	160	109	104	282.37	270.09	257.82	245.54
22555			.5781	37/64"	14.684	4-15/16"	2-9/16"	1.840"	236.12	225.85	215.59	205.32
	25911		.5781	37/64"	14.684	6"	3-1/2"	2.996"	268.40	256.73	245.06	233.39
		26911	.5781	37/64"	14.684	6-1/4"	4-3/8"	4.152"	283.13	270.82	258.51	246.20
22560			.5906		15.000	125	65	48	240.45	230.00	219.54	209.09
	25916		.5906		15.000	150	90	78	271.88	260.06	248.24	236.42
		26916	.5906		15.000	160	112	108	286.81	274.34	261.87	249.40
22565			.5938	19/32"	15.083	4-15/16"	2-9/16"	1.890"	241.78	231.26	220.75	210.24
	25921		.5938	19/32"	15.083	6"	3-9/16"	3.077"	278.97	266.84	254.71	242.58
		26921	.5938	19/32"	15.083	6-3/8"	4-3/8"	4.265"	294.26	281.47	268.67	255.88
22570			.6094	39/64"	15.479	5-1/16"	2-13/16"	1.939"	242.97	232.41	221.84	211.28
	25926		.6094	39/64"	15.479	6-3/16"	3-11/16"	3.158"	313.95	300.30	286.65	273.00
		26926	.6094	39/64"	15.479	6-7/16"	4-7/16"	4.377"	331.13	316.73	302.34	287.94
22575			.6102		15.500	129	71	49	244.24	233.62	223.00	212.38
	25931		.6102		15.500	160	94	80	314.81	301.13	287.44	273.75
		26931	.6102		15.500	165	113	111	332.07	317.64	303.20	288.76
22580			.6250	5/8"	15.875	5-1/4"	3-1/8"	1.989"	245.44	234.77	224.10	213.43
	25936		.6250	5/8"	15.875	6-5/16"	3-3/4"	3.239"	323.50	309.43	295.37	281.30
		26936	.6250	5/8"	15.875	6-9/16"	4-9/16"	4.489"	341.26	326.43	311.59	296.75
22585			.6299		16.000	133	79	51	251.39	240.46	229.53	218.60
	25941		.6299		16.000	160	95	83	327.74	313.49	299.24	284.99
		26941	.6299		16.000	165	117	115	345.74	330.70	315.67	300.64