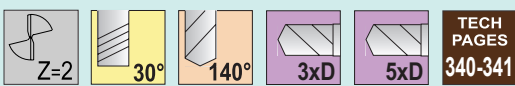


Series 1580H, 1280H

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

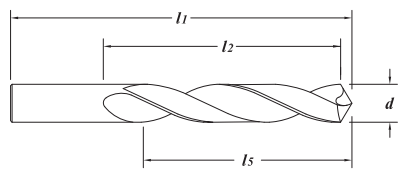


TOLERANCES		
<i>d</i>	+.0000" - .0005" (+.0000 - .0127mm)	
<i>l₁</i>	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)
<i>l₂</i>	≤ 1/8"	+.125" - .062" (+3.175 - 1.588mm)
	> 1/8"	+.125" - .125" (+3.175 - 3.175mm)

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#	<i>d</i> † Diameter		<i>l₁</i> Overall Length	<i>l₂</i> Flute Length	<i>l₅</i> Max Drill Depth	LIST PRICE
		Decimal	Metric				
20301		.1181	3.000	46	16	10	31.18
	21301	.1181	3.000	50	19	16	32.59
20306		.1200	#31 3.048	1-13/16"	5/8"	.382"	31.50
	21306	.1200	#31 3.048	2"	3/4"	.622"	32.85
20311		.1250	1/8" 3.175	1-15/16"	11/16"	.398"	31.78
	21311	.1250	1/8" 3.175	2"	3/4"	.648"	33.11
20316		.1285	#30 3.264	1-15/16"	11/16"	.409"	32.07
	21316	.1285	#30 3.264	2-1/4"	3/4"	.666"	33.41
20321		.1360	#29 3.454	2-1/16"	3/4"	.433"	32.37
	21321	.1360	#29 3.454	2-1/4"	7/8"	.705"	33.66
20326		.1378	3.500	52	19	11	32.69
	21326	.1378	3.500	57	22	18	33.93
20331		.1405	#28 3.569	2-1/16"	3/4"	.447"	32.99
	21331	.1405	#28 3.569	2-1/4"	7/8"	.728"	34.20
20336		.1406	9/64" 3.571	2-1/16"	3/4"	.447"	33.28
	21336	.1406	9/64" 3.571	2-1/4"	7/8"	.729"	34.50
20341		.1440	#27 3.658	2-1/16"	3/4"	.458"	33.57
	21341	.1440	#27 3.658	2-1/4"	7/8"	.746"	34.73
20346		.1470	#26 3.734	2-3/16"	13/16"	.468"	33.83
	21346	.1470	#26 3.734	2-1/4"	7/8"	.762"	35.01
20351		.1495	#25 3.797	2-3/16"	13/16"	.476"	34.19
	21351	.1495	#25 3.797	2-1/4"	15/16"	.775"	35.27
20356		.1520	#24 3.861	2-3/16"	13/16"	.484"	34.47
	21356	.1520	#24 3.861	2-1/4"	15/16"	.788"	35.52
20361		.1540	#23 3.912	2-3/16"	13/16"	.490"	34.77
	21361	.1540	#23 3.912	2-1/4"	15/16"	.798"	35.83
20366		.1562	5/32" 3.967	2-3/16"	13/16"	.497"	35.04
	21366	.1562	5/32" 3.967	2-1/2"	15/16"	.809"	36.08
20371		.1570	#22 3.988	2-3/16"	13/16"	.500"	35.37
	21371	.1570	#22 3.988	2-1/2"	15/16"	.814"	36.34
20376		.1575	4.000	56	21	13	35.65
	21376	.1575	4.000	65	24	21	36.61
20381		.1590	#21 4.039	2-3/16"	13/16"	.506"	35.96
	21381	.1590	#21 4.039	2-1/2"	15/16"	.824"	36.87
20386		.1610	#20 4.089	2-3/16"	13/16"	.512"	36.26
	21386	.1610	#20 4.089	2-1/2"	15/16"	.834"	37.17
20391		.1660	#19 4.216	2-9/32"	15/16"	.528"	36.58
	21391	.1660	#19 4.216	2-1/2"	1"	.860"	37.43
20396		.1695	#18 4.305	2-9/32"	15/16"	.539"	36.86
	21396	.1695	#18 4.305	2-1/2"	1"	.878"	37.68
20401		.1719	11/64" 4.366	2-9/32"	15/16"	.547"	37.17
	21401	.1719	11/64" 4.366	2-1/2"	1"	.891"	37.95

3xD (1580H) EDP#	5xD (1280H) EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	l_5 Max Drill Depth	LIST PRICE	
		Decimal	Metric					
20406		.1730	#17	4.394	2-9/32"	15/16"	.551"	37.47
	21406	.1730	#17	4.394	2-1/2"	1"	.897"	38.22
20411		.1770	#16	4.496	2-9/32"	15/16"	.563"	37.74
	21411	.1770	#16	4.496	2-1/2"	1"	.917"	38.51
20416		.1772		4.500	58	24	14	38.05
	21416	.1772		4.500	65	25	23	38.78
20421		.1800	#15	4.572	2-9/32"	15/16"	.573"	38.31
	21421	.1800	#15	4.572	2-3/4"	1"	.933"	39.02
20426		.1820	#14	4.623	2-9/32"	15/16"	.579"	38.66
	21426	.1820	#14	4.623	2-3/4"	1"	.943"	39.28
20431		.1850	#13	4.700	2-9/32"	15/16"	.589"	38.95
	21431	.1850	#13	4.700	2-3/4"	1-1/4"	.959"	39.58
20436		.1875	3/16"	4.763	2-13/32"	1"	.597"	39.26
	21436	.1875	3/16"	4.763	2-3/4"	1-1/4"	.972"	39.86
20441		.1890	#12	4.801	2-13/32"	1"	.601"	39.56
	21441	.1890	#12	4.801	2-3/4"	1-1/4"	.979"	40.12
20446		.1910	#11	4.851	2-13/32"	1"	.608"	39.92
	21446	.1910	#11	4.851	2-3/4"	1-1/4"	.990"	40.36
20451		.1935	#10	4.915	2-13/32"	1"	.616"	40.16
	21451	.1935	#10	4.915	2-3/4"	1-1/4"	1.003"	40.65
20456		.1960	#9	4.978	2-13/32"	1"	.624"	40.44
	21456	.1960	#9	4.978	3"	1-5/16"	1.016"	40.90
20461		.1969		5.000	61	25	16	40.66
	21461	.1969		5.000	75	33	26	41.18
20466		.1990	#8	5.055	2-13/32"	1"	.633"	41.04
	21466	.1990	#8	5.055	3"	1-5/16"	1.031"	41.40
20471		.2010	#7	5.105	2-13/32"	1"	.640"	41.16
	21471	.2010	#7	5.105	3"	1-5/16"	1.042"	41.58
20476		.2031	13/64"	5.159	2-13/32"	1"	.646"	41.43
	21476	.2031	13/64"	5.159	3"	1-5/16"	1.053"	41.89
20481		.2040	#6	5.182	2-13/32"	1"	.649"	41.71
	21481	.2040	#6	5.182	3"	1-3/8"	1.057"	42.19
20486		.2055	#5	5.220	2-13/32"	1"	.654"	42.02
	21486	.2055	#5	5.220	3"	1-3/8"	1.065"	42.48
20491		.2090	#4	5.309	2-13/32"	1"	.665"	42.27
	21491	.2090	#4	5.309	3"	1-3/8"	1.083"	42.76
20496		.2130	#3	5.410	2-5/8"	1-3/32"	.678"	42.55
	21496	.2130	#3	5.410	3"	1-3/8"	1.104"	43.06
20501		.2165		5.500	67	28	18	42.83
	21501	.2165		5.500	75	35	29	43.32
20506		.2188	7/32"	5.558	2-5/8"	1-3/32"	.696"	43.17
	21506	.2188	7/32"	5.558	3"	1-3/8"	1.134"	43.59
20511		.2210	#2	5.613	2-5/8"	1-3/32"	.703"	43.49
	21511	.2210	#2	5.613	3"	1-3/8"	1.145"	44.53
20516		.2280	#1	5.791	2-5/8"	1-3/32"	.726"	43.83
	21516	.2280	#1	5.791	3"	1-3/8"	1.182"	44.76
20521		.2340	A	5.944	2-5/8"	1-3/32"	.745"	44.12
	21521	.2340	A	5.944	3-1/4"	1-1/2"	1.213"	45.42
20526		.2344	15/64"	5.954	2-5/8"	1-3/32"	.746"	44.46
	21526	.2344	15/64"	5.954	3-1/4"	1-1/2"	1.215"	45.54
20531		.2362		6.000	67	28	19	44.77
	21531	.2362		6.000	80	38	31	45.68
20536		.2380	B	6.045	2-3/4"	1-7/32"	.757"	45.07
	21536	.2380	B	6.045	3-1/4"	1-5/8"	1.233"	45.81

continued →

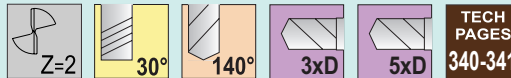
Series 1580H, 1280H (continued)

.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	LIST PRICE	
		Decimal	Diameter					Metric
20541		.2420	C	6.147	2-3/4"	1-7/32"	.770"	45.43
	21541	.2420	C	6.147	3-1/4"	1-5/8"	1.254"	46.13
20546		.2460	D	6.248	2-3/4"	1-7/32"	.783"	45.68
	21546	.2460	D	6.248	3-1/4"	1-5/8"	1.275"	46.42
20551		.2500	1/4" / E	6.350	2-3/4"	1-7/32"	.796"	46.09
	21551	.2500	1/4" / E	6.350	3-1/4"	1-5/8"	1.296"	46.68
20556		.2559		6.500	70	31	21	46.82
	21556	.2559		6.500	80	41	34	47.51
20561		.2570	F	6.528	2-3/4"	1-7/32"	.818"	47.56
	21561	.2570	F	6.528	3-1/4"	1-11/16"	1.332"	48.33
20566		.2610	G	6.629	2-3/4"	1-7/32"	.831"	48.28
	21566	.2610	G	6.629	3-1/2"	1-11/16"	1.353"	49.16
20571		.2656	17/64"	6.746	2-15/16"	1-11/32"	.845"	49.01
	21571	.2656	17/64"	6.746	3-1/2"	1-11/16"	1.376"	49.95
20576		.2660	H	6.756	2-15/16"	1-11/32"	.846"	49.73
	21576	.2660	H	6.756	3-1/2"	1-11/16"	1.378"	50.80
20581		.2720	I	6.909	2-15/16"	1-11/32"	.866"	50.47
	21581	.2720	I	6.909	3-1/2"	1-11/16"	1.410"	51.62
20586		.2756		7.000	75	34	22	51.21
	21586	.2756		7.000	88	43	36	52.42
20591		.2770	J	7.036	2-15/16"	1-11/32"	.881"	51.92
	21591	.2770	J	7.036	3-1/2"	1-11/16"	1.435"	53.25
20596		.2810	K	7.137	2-15/16"	1-11/32"	.894"	52.66
	21596	.2810	K	7.137	3-1/2"	1-3/4"	1.456"	54.10
20601		.2812	9/32"	7.142	2-15/16"	1-11/32"	.895"	53.39
	21601	.2812	9/32"	7.142	3-1/2"	1-3/4"	1.457"	54.91
20606		.2900	L	7.366	2-15/16"	1-11/32"	.923"	54.12
	21606	.2900	L	7.366	3-1/2"	1-3/4"	1.503"	55.67
20611		.2950	M	7.493	2-15/16"	1-11/32"	.939"	55.18
	21611	.2950	M	7.493	3-3/4"	1-3/4"	1.529"	56.46
20616		.2953		7.500	75	34	24	55.18
	21616	.2953		7.500	95	44	39	56.46
20621		.2969	19/64"	7.541	3-3/32"	1-15/32"	.945"	55.66
	21621	.2969	19/64"	7.541	3-3/4"	1-7/8"	1.539"	57.03
20626		.3020	N	7.671	3-3/32"	1-15/32"	.961"	58.15
	21626	.3020	N	7.671	3-3/4"	1-7/8"	1.565"	59.29
20631		.3125	5/16"	7.938	3-3/32"	1-15/32"	.994"	58.36
	21631	.3125	5/16"	7.938	3-3/4"	1-7/8"	1.619"	59.47
20636		.3150		8.000	79	37	25	61.59
	21636	.3150		8.000	95	48	41	62.69
20641		.3160	O	8.026	3-3/32"	1-15/32"	1.006"	61.59
	21641	.3160	O	8.026	3-3/4"	1-7/8"	1.638"	62.69
20646		.3230	P	8.204	3-3/32"	1-15/32"	1.028"	62.03
	21646	.3230	P	8.204	3-3/4"	2-3/32"	1.674"	62.91
20651		.3281	21/64"	8.334	3-3/32"	1-15/32"	1.044"	63.18
	21651	.3281	21/64"	8.334	4"	2-3/32"	1.700"	63.50
20656		.3320	Q	8.433	3-3/32"	1-15/32"	1.056"	64.31
	21656	.3320	Q	8.433	4"	2-3/32"	1.720"	64.77
20661		.3346		8.500	79	37	27	64.58
	21661	.3346		8.500	100	53	44	65.24
20666		.3390	R	8.611	3-5/16"	1-9/16"	1.079"	66.33
	21666	.3390	R	8.611	4"	2-3/32"	1.757"	67.04
20671		.3438	11/32"	8.733	3-5/16"	1-9/16"	1.094"	67.78
	21671	.3438	11/32"	8.733	4"	2-3/16"	1.782"	69.38

TOLERANCES

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



Series 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#	<i>d</i> † Diameter		<i>l1</i> Overall Length	<i>l2</i> Flute Length	<i>l5</i> Max Drill Depth	LIST PRICE
		Decimal	Metric				
20676		.3480	S	8.839	3-5/16"	1-9/16"	70.02
	21676	.3480	S	8.839	4"	2-3/16"	72.09
20681		.3543		9.000	84	40	71.80
	21681	.3543		9.000	100	56	72.52
20686		.3580	T	9.093	3-5/16"	1-9/16"	74.61
	21686	.3580	T	9.093	4-1/4"	2-9/32"	75.38
20691		.3594	23/64"	9.129	3-5/16"	1-9/16"	75.08
	21691	.3594	23/64"	9.129	4-1/4"	2-9/32"	75.84
20696		.3680	U	9.347	3-5/16"	1-9/16"	76.64
	21696	.3680	U	9.347	4-1/4"	2-9/32"	80.16
20701		.3740		9.500	84	40	77.28
	21701	.3740		9.500	105	58	80.94
20706		.3750	3/8"	9.525	3-1/2"	1-11/16"	77.74
	21706	.3750	3/8"	9.525	4-1/4"	2-3/8"	81.75
20711		.3770	V	9.576	3-1/2"	1-11/16"	80.73
	21711	.3770	V	9.576	4-1/4"	2-3/8"	83.76
20716		.3860	W	9.804	3-1/2"	1-11/16"	82.14
	21716	.3860	W	9.804	4-1/2"	2-3/8"	85.24
20721		.3906	25/64"	9.921	3-1/2"	1-11/16"	83.17
	21721	.3906	25/64"	9.921	4-1/2"	2-3/8"	86.26
20726		.3937		10.000	89	43	85.68
	21726	.3937		10.000	115	60	88.87
20731		.3970	X	10.084	3-1/2"	1-11/16"	86.85
	21731	.3970	X	10.084	4-1/2"	2-1/2"	89.95
20736		.4040	Y	10.262	3-1/2"	1-11/16"	87.42
	21736	.4040	Y	10.262	4-1/2"	2-9/16"	92.66
20741		.4062	13/32"	10.317	3-1/2"	1-11/16"	90.12
	21741	.4062	13/32"	10.317	4-1/2"	2-9/16"	93.47
20746		.4130	Z	10.490	3-1/2"	1-11/16"	90.96
	21746	.4130	Z	10.490	4-1/2"	2-5/8"	94.32
20751		.4134		10.500	89	43	90.96
	21751	.4134		10.500	115	67	94.32
20756		.4219	27/64"	10.716	3-3/4"	1-13/16"	91.82
	21756	.4219	27/64"	10.716	4-1/2"	2-11/16"	95.17
20761		.4331		11.000	95	46	98.56
	21761	.4331		11.000	115	68	102.11
20766		.4375	7/16"	11.113	3-3/4"	1-13/16"	98.56
	21766	.4375	7/16"	11.113	4-3/4"	2-13/16"	102.53
20771		.4528		11.500	95	46	105.78
	21771	.4528		11.500	120	71	109.56
20776		.4531	29/64"	11.509	3-3/4"	1-13/16"	105.78
	21776	.4531	29/64"	11.509	4-3/4"	2-7/8"	109.56

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	LIST PRICE
		Decimal	Metric				
20781		.4688	15/32"	11.908	4"	1-15/16"	111.15
	21781	.4688	15/32"	11.908	4-3/4"	2-7/8"	115.06
20786		.4724		12.000	102	49	111.47
	21786	.4724		12.000	120	73	115.41
20791		.4844	31/64"	12.304	4"	1-15/16"	112.25
	21791	.4844	31/64"	12.304	5-5/16"	3"	116.70
20796		.4921		12.500	102	49	113.36
	21796	.4921		12.500	135	76	118.09
20801		.5000	1/2"	12.700	4"	1-15/16"	114.09
	21801	.5000	1/2"	12.700	5-3/8"	3-1/16"	118.33
20806		.5118		13.000	107	53	125.04
	21806	.5118		13.000	135	78	128.67
20811		.5156	33/64"	13.096	4-7/32"	2-3/32"	128.01
	21811	.5156	33/64"	13.096	5-3/8"	3-1/8"	131.68
20816		.5312	17/32"	13.492	4-7/32"	2-3/32"	130.95
	21816	.5312	17/32"	13.492	5-11/16"	3-5/16"	134.78
20821		.5315		13.500	110	56	133.92
	21821	.5315		13.500	145	84	137.75
20826		.5469	35/64"	13.891	4-5/16"	2-7/32"	136.85
	21826	.5469	35/64"	13.891	5-13/16"	3-3/8"	140.75
20831		.5512		14.000	110	56	139.80
	21831	.5512		14.000	145	86	143.79
20836		.5625	9/16"	14.288	4-9/16"	2-15/32"	150.50
	21836	.5625	9/16"	14.288	5-15/16"	3-1/2"	154.53
20841		.5709		14.500	116	63	153.32
	21841	.5709		14.500	150	89	157.37
20846		.5781	37/64"	14.684	4-15/16"	2-9/16"	156.07
	21846	.5781	37/64"	14.684	6"	3-1/2"	160.20
20851		.5906		15.000	125	65	158.94
	21851	.5906		15.000	150	90	163.21
20856		.5938	19/32"	15.083	4-15/16"	2-9/16"	159.80
	21856	.5938	19/32"	15.083	6"	3-9/16"	164.05
20861		.6094	39/64"	15.479	5-1/16"	2-13/16"	160.62
	21861	.6094	39/64"	15.479	6-3/16"	3-11/16"	177.78
20866		.6102		15.500	129	71	161.45
	21866	.6102		15.500	160	94	178.60
20871		.6250	5/8"	15.875	5-1/4"	3-1/8"	162.27
	21871	.6250	5/8"	15.875	6-5/16"	3-3/4"	179.44
20876		.6299		16.000	133	79	166.17
	21876	.6299		16.000	160	95	183.46

