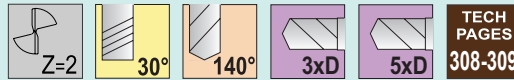


TOLERANCES

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



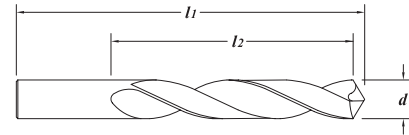
Series 1580H, 1280H

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

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

AlTiN-based Coating

- 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



HIGH PERFORMANCE DRILLS

3xD (1580H) EDP#	5xD (1280H) EDP#	d †		l1 Overall Length	l2 Flute Length	1-11	12-24	25-49	50-100
		Decimal	Diameter Metric						
20301		.1181	3.000	46	16	31.64	30.26	28.89	27.51
	21301	.1181	3.000	50	19	33.06	31.63	30.19	28.75
20306		.1200	#31 3.048	1-13/16"	5/8"	31.96	30.57	29.18	27.79
	21306	.1200	#31 3.048	2"	3/4"	33.33	31.88	30.43	28.98
20311		.1250	1/8" 3.175	1-15/16"	11/16"	32.25	30.84	29.44	28.04
	21311	.1250	1/8" 3.175	2"	3/4"	33.59	32.13	30.67	29.21
20316		.1285	#30 3.264	1-15/16"	11/16"	32.53	31.12	29.70	28.29
	21316	.1285	#30 3.264	2-1/4"	3/4"	33.89	32.42	30.94	29.47
20321		.1360	#29 3.454	2-1/16"	3/4"	32.84	31.42	29.99	28.56
	21321	.1360	#29 3.454	2-1/4"	7/8"	34.14	32.66	31.17	29.69
20326		.1378	3.500	52	19	33.17	31.72	30.28	28.84
	21326	.1378	3.500	57	22	34.42	32.92	31.43	29.93
20331		.1405	#28 3.569	2-1/16"	3/4"	33.48	32.02	30.57	29.11
	21331	.1405	#28 3.569	2-1/4"	7/8"	34.70	33.19	31.68	30.17
20336		.1406	9/64" 3.571	2-1/16"	3/4"	33.76	32.30	30.83	29.36
	21336	.1406	9/64" 3.571	2-1/4"	7/8"	34.99	33.47	31.95	30.43
20341		.1440	#27 3.658	2-1/16"	3/4"	34.06	32.58	31.10	29.62
	21341	.1440	#27 3.658	2-1/4"	7/8"	35.22	33.69	32.16	30.63
20346		.1470	#26 3.734	2-3/16"	13/16"	34.33	32.84	31.34	29.85
	21346	.1470	#26 3.734	2-1/4"	7/8"	35.51	33.97	32.42	30.88
20351		.1495	#25 3.797	2-3/16"	13/16"	34.68	33.18	31.67	30.16
	21351	.1495	#25 3.797	2-1/4"	15/16"	35.79	34.23	32.68	31.12
20356		.1520	#24 3.861	2-3/16"	13/16"	34.96	33.44	31.92	30.40
	21356	.1520	#24 3.861	2-1/4"	15/16"	36.04	34.47	32.91	31.34
20361		.1540	#23 3.912	2-3/16"	13/16"	35.27	33.74	32.20	30.67
	21361	.1540	#23 3.912	2-1/4"	15/16"	36.35	34.77	33.19	31.61
20366		.1562	5/32" 3.967	2-3/16"	13/16"	35.55	34.00	32.46	30.91
	21366	.1562	5/32" 3.967	2-1/2"	15/16"	36.60	35.01	33.42	31.83
20371		.1570	#22 3.988	2-3/16"	13/16"	35.88	34.32	32.76	31.20
	21371	.1570	#22 3.988	2-1/2"	15/16"	36.87	35.27	33.66	32.06
20376		.1575	4.000	56	21	36.17	34.60	33.02	31.45
	21376	.1575	4.000	65	24	37.15	35.53	33.92	32.30
20381		.1590	#21 4.039	2-3/16"	13/16"	36.48	34.89	33.31	31.72
	21381	.1590	#21 4.039	2-1/2"	15/16"	37.41	35.78	34.16	32.53
20386		.1610	#20 4.089	2-3/16"	13/16"	36.79	35.19	33.59	31.99
	21386	.1610	#20 4.089	2-1/2"	15/16"	37.71	36.07	34.43	32.79
20391		.1660	#19 4.216	2-9/32"	15/16"	37.11	35.50	33.88	32.27
	21391	.1660	#19 4.216	2-1/2"	1"	37.97	36.32	34.67	33.02
20396		.1695	#18 4.305	2-9/32"	15/16"	37.40	35.77	34.15	32.52
	21396	.1695	#18 4.305	2-1/2"	1"	38.23	36.56	34.90	33.24
20401		.1719	11/64" 4.366	2-9/32"	15/16"	37.71	36.07	34.43	32.79
	21401	.1719	11/64" 4.366	2-1/2"	1"	38.50	36.83	35.15	33.48

continued →

Series 1580H, 1280H (continued)

.1730" - .2380"
(4.394mm - 6.045mm)

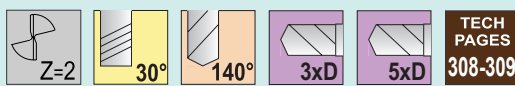
3xD (1580H) EDP#	5xD (1280H) EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
		Decimal	Metric							
20406		.1730	#17	4.394	2-9/32"	15/16"	38.02	36.37	34.71	33.06
	21406	.1730	#17	4.394	2-1/2"	1"	38.77	37.08	35.40	33.71
20411		.1770	#16	4.496	2-9/32"	15/16"	38.28	36.62	34.95	33.29
	21411	.1770	#16	4.496	2-1/2"	1"	39.07	37.37	35.67	33.97
20416		.1772		4.500	58	24	38.61	36.93	35.25	33.57
	21416	.1772		4.500	65	25	39.34	37.63	35.92	34.21
20421		.1800	#15	4.572	2-9/32"	15/16"	38.87	37.18	35.49	33.80
	21421	.1800	#15	4.572	2-3/4"	1"	39.58	37.86	36.14	34.42
20426		.1820	#14	4.623	2-9/32"	15/16"	39.23	37.52	35.82	34.11
	21426	.1820	#14	4.623	2-3/4"	1"	39.85	38.12	36.38	34.65
20431		.1850	#13	4.700	2-9/32"	15/16"	39.51	37.80	36.08	34.36
	21431	.1850	#13	4.700	2-3/4"	1-1/4"	40.15	38.40	36.66	34.91
20436		.1875	3/16"	4.763	2-13/32"	1"	39.82	38.09	36.36	34.63
	21436	.1875	3/16"	4.763	2-3/4"	1-1/4"	40.43	38.68	36.92	35.16
20441		.1890	#12	4.801	2-13/32"	1"	40.12	38.38	36.63	34.89
	21441	.1890	#12	4.801	2-3/4"	1-1/4"	40.70	38.93	37.16	35.39
20446		.1910	#11	4.851	2-13/32"	1"	40.49	38.73	36.97	35.21
	21446	.1910	#11	4.851	2-3/4"	1-1/4"	40.95	39.17	37.39	35.61
20451		.1935	#10	4.915	2-13/32"	1"	40.73	38.96	37.19	35.42
	21451	.1935	#10	4.915	2-3/4"	1-1/4"	41.24	39.45	37.65	35.86
20456		.1960	#9	4.978	2-13/32"	1"	41.02	39.24	37.45	35.67
	21456	.1960	#9	4.978	3"	1-5/16"	41.49	39.69	37.88	36.08
20461		.1969		5.000	61	25	41.25	39.46	37.66	35.87
	21461	.1969		5.000	75	33	41.78	39.96	38.15	36.33
20466		.1990	#8	5.055	2-13/32"	1"	41.63	39.82	38.01	36.20
	21466	.1990	#8	5.055	3"	1-5/16"	42.00	40.17	38.35	36.52
20471		.2010	#7	5.105	2-13/32"	1"	41.76	39.94	38.13	36.31
	21471	.2010	#7	5.105	3"	1-5/16"	42.18	40.35	38.51	36.68
20476		.2031	13/64"	5.159	2-13/32"	1"	42.03	40.21	38.38	36.55
	21476	.2031	13/64"	5.159	3"	1-5/16"	42.49	40.65	38.80	36.95
20481		.2040	#6	5.182	2-13/32"	1"	42.32	40.48	38.64	36.80
	21481	.2040	#6	5.182	3"	1-3/8"	42.80	40.94	39.08	37.22
20486		.2055	#5	5.220	2-13/32"	1"	42.63	40.78	38.92	37.07
	21486	.2055	#5	5.220	3"	1-3/8"	43.09	41.22	39.34	37.47
20491		.2090	#4	5.309	2-13/32"	1"	42.88	41.02	39.15	37.29
	21491	.2090	#4	5.309	3"	1-3/8"	43.38	41.49	39.61	37.72
20496		.2130	#3	5.410	2-5/8"	1-3/32"	43.17	41.29	39.42	37.54
	21496	.2130	#3	5.410	3"	1-3/8"	43.68	41.78	39.88	37.98
20501		.2165		5.500	67	28	43.45	41.56	39.67	37.78
	21501	.2165		5.500	75	35	43.94	42.03	40.12	38.21
20506		.2188	7/32"	5.558	2-5/8"	1-3/32"	43.80	41.90	39.99	38.09
	21506	.2188	7/32"	5.558	3"	1-3/8"	44.22	42.30	40.37	38.45
20511		.2210	#2	5.613	2-5/8"	1-3/32"	44.13	42.21	40.29	38.37
	21511	.2210	#2	5.613	3"	1-3/8"	45.17	43.21	41.24	39.28
20516		.2280	#1	5.791	2-5/8"	1-3/32"	44.46	42.53	40.59	38.66
	21516	.2280	#1	5.791	3"	1-3/8"	45.40	43.43	41.45	39.48
20521		.2340	A	5.944	2-5/8"	1-3/32"	44.76	42.81	40.87	38.92
	21521	.2340	A	5.944	3-1/4"	1-1/2"	46.08	44.08	42.07	40.07
20526		.2344	15/64"	5.954	2-5/8"	1-3/32"	45.10	43.14	41.18	39.22
	21526	.2344	15/64"	5.954	3-1/4"	1-1/2"	46.20	44.19	42.18	40.17
20531		.2362		6.000	67	28	45.41	43.44	41.46	39.49
	21531	.2362		6.000	80	38	46.35	44.33	42.32	40.30
20536		.2380	B	6.045	2-3/4"	1-7/32"	45.72	43.74	41.75	39.76
	21536	.2380	B	6.045	3-1/4"	1-5/8"	46.47	44.45	42.43	40.41

3xD (1580H) EDP#	5xD (1280H) EDP#	d^{\dagger}		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
		Decimal	Diameter							Metric
20541		.2420	C	6.147	2-3/4"	1-7/32"	46.09	44.09	42.08	40.08
	21541	.2420	C	6.147	3-1/4"	1-5/8"	46.79	44.76	42.72	40.69
20546		.2460	D	6.248	2-3/4"	1-7/32"	46.35	44.33	42.32	40.30
	21546	.2460	D	6.248	3-1/4"	1-5/8"	47.09	45.05	43.00	40.95
20551		.2500	1/4" / E	6.350	2-3/4"	1-7/32"	46.75	44.72	42.68	40.65
	21551	.2500	1/4" / E	6.350	3-1/4"	1-5/8"	47.36	45.30	43.24	41.18
20556		.2559		6.500	70	31	47.50	45.43	43.37	41.30
	21556	.2559		6.500	80	41	48.20	46.10	44.01	41.91
20561		.2570	F	6.528	2-3/4"	1-7/32"	48.24	46.15	44.05	41.95
	21561	.2570	F	6.528	3-1/4"	1-11/16"	49.02	46.89	44.76	42.63
20566		.2610	G	6.629	2-3/4"	1-7/32"	48.98	46.85	44.72	42.59
	21566	.2610	G	6.629	3-1/2"	1-11/16"	49.88	47.71	45.54	43.37
20571		.2656	17/64"	6.746	2-15/16"	1-11/32"	49.71	47.55	45.39	43.23
	21571	.2656	17/64"	6.746	3-1/2"	1-11/16"	50.68	48.48	46.27	44.07
20576		.2660	H	6.756	2-15/16"	1-11/32"	50.45	48.26	46.06	43.87
	21576	.2660	H	6.756	3-1/2"	1-11/16"	51.54	49.30	47.06	44.82
20581		.2720	I	6.909	2-15/16"	1-11/32"	51.20	48.97	46.75	44.52
	21581	.2720	I	6.909	3-1/2"	1-11/16"	52.37	50.09	47.82	45.54
20586		.2756		7.000	75	34	51.95	49.69	47.43	45.17
	21586	.2756		7.000	88	43	53.18	50.86	48.55	46.24
20591		.2770	J	7.036	2-15/16"	1-11/32"	52.67	50.38	48.09	45.80
	21591	.2770	J	7.036	3-1/2"	1-11/16"	54.02	51.67	49.32	46.97
20596		.2810	K	7.137	2-15/16"	1-11/32"	53.42	51.10	48.77	46.45
	21596	.2810	K	7.137	3-1/2"	1-3/4"	54.88	52.49	50.11	47.72
20601		.2812	9/32"	7.142	2-15/16"	1-11/32"	54.17	51.81	49.46	47.10
	21601	.2812	9/32"	7.142	3-1/2"	1-3/4"	55.71	53.28	50.86	48.44
20606		.2900	L	7.366	2-15/16"	1-11/32"	54.90	52.51	50.13	47.74
	21606	.2900	L	7.366	3-1/2"	1-3/4"	56.48	54.02	51.57	49.11
20611		.2950	M	7.493	2-15/16"	1-11/32"	55.97	53.54	51.10	48.67
	21611	.2950	M	7.493	3-3/4"	1-3/4"	57.28	54.79	52.30	49.81
20616		.2953		7.500	75	34	55.97	53.54	51.10	48.67
	21616	.2953		7.500	95	44	57.28	54.79	52.30	49.81
20621		.2969	19/64"	7.541	3-3/32"	1-15/32"	56.47	54.01	51.56	49.10
	21621	.2969	19/64"	7.541	3-3/4"	1-7/8"	57.86	55.34	52.83	50.31
20626		.3020	N	7.671	3-3/32"	1-15/32"	59.00	56.43	53.87	51.30
	21626	.3020	N	7.671	3-3/4"	1-7/8"	60.15	57.53	54.92	52.30
20631		.3125	5/16"	7.938	3-3/32"	1-15/32"	59.20	56.63	54.05	51.48
	21631	.3125	5/16"	7.938	3-3/4"	1-7/8"	60.33	57.71	55.08	52.46
20636		.3150		8.000	79	37	62.48	59.76	57.05	54.33
	21636	.3150		8.000	95	48	63.60	60.83	58.07	55.30
20641		.3160	O	8.026	3-3/32"	1-15/32"	62.48	59.76	57.05	54.33
	21641	.3160	O	8.026	3-3/4"	1-7/8"	63.60	60.83	58.07	55.30
20646		.3230	P	8.204	3-3/32"	1-15/32"	62.93	60.19	57.46	54.72
	21646	.3230	P	8.204	3-3/4"	2-3/32"	63.83	61.05	58.28	55.50
20651		.3281	21/64"	8.334	3-3/32"	1-15/32"	64.09	61.30	58.52	55.73
	21651	.3281	21/64"	8.334	4"	2-3/32"	64.42	61.62	58.82	56.02
20656		.3320	Q	8.433	3-3/32"	1-15/32"	65.24	62.40	59.57	56.73
	21656	.3320	Q	8.433	4"	2-3/32"	65.70	62.84	59.99	57.13
20661		.3346		8.500	79	37	65.52	62.67	59.82	56.97
	21661	.3346		8.500	100	53	66.18	63.31	60.43	57.55
20666		.3390	R	8.611	3-5/16"	1-9/16"	67.29	64.36	61.44	58.51
	21666	.3390	R	8.611	4"	2-3/32"	68.00	65.04	62.09	59.13
20671		.3438	11/32"	8.733	3-5/16"	1-9/16"	68.76	65.77	62.78	59.79
	21671	.3438	11/32"	8.733	4"	2-3/16"	70.38	67.32	64.26	61.20

continued →

Series 1580H, 1280H (continued)

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



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

AlTiN-based Coating

High performance - high penetration solid submicron grain carbide drill



3xD (1580H) EDP#	5xD (1280H) EDP#	<i>d</i> † Diameter		<i>l1</i> Overall Length	<i>l2</i> Flute Length	1-11	12-24	25-49	50-100	
		Decimal	Metric							
20676		.3480	S	8.839	3-5/16"	1-9/16"	71.04	67.95	64.86	61.77
	21676	.3480	S	8.839	4"	2-3/16"	73.14	69.96	66.78	63.60
20681		.3543		9.000	84	40	72.84	69.67	66.51	63.34
	21681	.3543		9.000	100	56	73.57	70.37	67.17	63.97
20686		.3580	T	9.093	3-5/16"	1-9/16"	75.69	72.40	69.11	65.82
	21686	.3580	T	9.093	4-1/4"	2-9/32"	76.48	73.15	69.83	66.50
20691		.3594	23/64"	9.129	3-5/16"	1-9/16"	76.16	72.85	69.54	66.23
	21691	.3594	23/64"	9.129	4-1/4"	2-9/32"	76.94	73.59	70.25	66.90
20696		.3680	U	9.347	3-5/16"	1-9/16"	77.75	74.37	70.99	67.61
	21696	.3680	U	9.347	4-1/4"	2-9/32"	81.32	77.78	74.25	70.71
20701		.3740		9.500	84	40	78.40	74.99	71.58	68.17
	21701	.3740		9.500	105	58	82.11	78.54	74.97	71.40
20706		.3750	3/8"	9.525	3-1/2"	1-11/16"	78.87	75.44	72.01	68.58
	21706	.3750	3/8"	9.525	4-1/4"	2-3/8"	82.94	79.33	75.73	72.12
20711		.3770	V	9.576	3-1/2"	1-11/16"	81.89	78.33	74.77	71.21
	21711	.3770	V	9.576	4-1/4"	2-3/8"	84.96	81.27	77.57	73.88
20716		.3860	W	9.804	3-1/2"	1-11/16"	83.33	79.71	76.08	72.46
	21716	.3860	W	9.804	4-1/2"	2-3/8"	86.47	82.71	78.95	75.19
20721		.3906	25/64"	9.921	3-1/2"	1-11/16"	84.38	80.71	77.04	73.37
	21721	.3906	25/64"	9.921	4-1/2"	2-3/8"	87.52	83.71	79.91	76.10
20726		.3937		10.000	89	43	86.93	83.15	79.37	75.59
	21726	.3937		10.000	115	60	90.15	86.23	82.31	78.39
20731		.3970	X	10.084	3-1/2"	1-11/16"	88.11	84.28	80.45	76.62
	21731	.3970	X	10.084	4-1/2"	2-1/2"	91.25	87.29	83.32	79.35
20736		.4040	Y	10.262	3-1/2"	1-11/16"	88.69	84.83	80.98	77.12
	21736	.4040	Y	10.262	4-1/2"	2-9/16"	94.00	89.91	85.83	81.74
20741		.4062	13/32"	10.317	3-1/2"	1-11/16"	91.43	87.45	83.48	79.50
	21741	.4062	13/32"	10.317	4-1/2"	2-9/16"	94.82	90.70	86.57	82.45
20746		.4130	Z	10.490	3-1/2"	1-11/16"	92.28	88.26	84.25	80.24
	21746	.4130	Z	10.490	4-1/2"	2-5/8"	95.68	91.52	87.36	83.20
20751		.4134		10.500	89	43	92.28	88.26	84.25	80.24
	21751	.4134		10.500	115	67	95.68	91.52	87.36	83.20
20756		.4219	27/64"	10.716	3-3/4"	1-13/16"	93.15	89.10	85.05	81.00
	21756	.4219	27/64"	10.716	4-1/2"	2-11/16"	96.54	92.35	88.15	83.95
20761		.4331		11.000	95	46	99.98	95.63	91.29	86.94
	21761	.4331		11.000	115	68	103.59	99.09	94.58	90.08
20766		.4375	7/16"	11.113	3-3/4"	1-13/16"	99.98	95.63	91.29	86.94
	21766	.4375	7/16"	11.113	4-3/4"	2-13/16"	104.01	99.48	94.96	90.44
20771		.4528		11.500	95	46	107.32	102.65	97.99	93.32
	21771	.4528		11.500	120	71	111.14	106.30	101.47	96.64
20776		.4531	29/64"	11.509	3-3/4"	1-13/16"	107.32	102.65	97.99	93.32
	21776	.4531	29/64"	11.509	4-3/4"	2-7/8"	111.14	106.30	101.47	96.64

3xD (1580H) EDP#	5xD (1280H) EDP#	d^{\dagger} Diameter		l_1 Overall Length	l_2 Flute Length	1-11	12-24	25-49	50-100	
		Decimal	Metric							
20781		.4688	15/32"	11.908	4"	1-15/16"	112.76	107.86	102.95	98.05
	21781	.4688	15/32"	11.908	4-3/4"	2-7/8"	116.73	111.65	106.58	101.50
20786		.4724		12.000	102	49	113.09	108.17	103.26	98.34
	21786	.4724		12.000	120	73	117.08	111.99	106.90	101.81
20791		.4844	31/64"	12.304	4"	1-15/16"	113.87	108.92	103.97	99.02
	21791	.4844	31/64"	12.304	5-5/16"	3"	118.38	113.23	108.09	102.94
20796		.4921		12.500	102	49	115.00	110.00	105.00	100.00
	21796	.4921		12.500	135	76	119.80	114.59	109.38	104.17
20801		.5000	1/2"	12.700	4"	1-15/16"	115.74	110.70	105.67	100.64
	21801	.5000	1/2"	12.700	5-3/8"	3-1/16"	120.04	114.82	109.60	104.38
20806		.5118		13.000	107	53	126.86	121.34	115.83	110.31
	21806	.5118		13.000	135	78	130.54	124.86	119.19	113.51
20811		.5156	33/64"	13.096	4-7/32"	2-3/32"	129.86	124.21	118.57	112.92
	21811	.5156	33/64"	13.096	5-3/8"	3-1/8"	133.58	127.78	121.97	116.16
20816		.5312	17/32"	13.492	4-7/32"	2-3/32"	132.85	127.07	121.30	115.52
	21816	.5312	17/32"	13.492	5-11/16"	3-5/16"	136.72	130.78	124.83	118.89
20821		.5315		13.500	110	56	135.85	129.94	124.04	118.13
	21821	.5315		13.500	145	84	139.75	133.67	127.60	121.52
20826		.5469	35/64"	13.891	4-5/16"	2-7/32"	138.83	132.79	126.76	120.72
	21826	.5469	35/64"	13.891	5-13/16"	3-3/8"	142.78	136.58	130.37	124.16
20831		.5512		14.000	110	56	141.83	135.66	129.50	123.33
	21831	.5512		14.000	145	86	145.88	139.54	133.19	126.85
20836		.5625	9/16"	14.288	4-9/16"	2-15/32"	152.67	146.04	139.40	132.76
	21836	.5625	9/16"	14.288	5-15/16"	3-1/2"	156.77	149.95	143.14	136.32
20841		.5709		14.500	116	63	155.54	148.78	142.01	135.25
	21841	.5709		14.500	150	89	159.65	152.71	145.77	138.83
20846		.5781	37/64"	14.684	4-15/16"	2-9/16"	158.32	151.44	144.55	137.67
	21846	.5781	37/64"	14.684	6"	3-1/2"	162.52	155.45	148.39	141.32
20851		.5906		15.000	125	65	161.24	154.23	147.22	140.21
	21851	.5906		15.000	150	90	165.57	158.37	151.17	143.97
20856		.5938	19/32"	15.083	4-15/16"	2-9/16"	162.12	155.07	148.02	140.97
	21856	.5938	19/32"	15.083	6"	3-9/16"	166.42	159.18	151.95	144.71
20861		.6094	39/64"	15.479	5-1/16"	2-13/16"	162.94	155.86	148.77	141.69
	21861	.6094	39/64"	15.479	6-3/16"	3-11/16"	180.35	172.51	164.67	156.83
20866		.6102		15.500	129	71	163.78	156.66	149.54	142.42
	21866	.6102		15.500	160	94	181.18	173.31	165.43	157.55
20871		.6250	5/8"	15.875	5-1/4"	3-1/8"	164.61	157.45	150.30	143.14
	21871	.6250	5/8"	15.875	6-5/16"	3-3/4"	182.03	174.12	166.20	158.29
20876		.6299		16.000	133	79	168.58	161.25	153.92	146.59
	21876	.6299		16.000	160	95	186.12	178.02	169.93	161.84