

True Radius Sweep Chart

Sweep #	Radius(in)	Radius(mm)	30.0	27.5	25.0	22.5	20.0	17.5	15.0	12.5	10.0	7.5	5.0	2.5
1	3600.063	91441.588	0.125	0.105	0.087	0.070	0.056	0.043	0.031	0.022	0.014	0.008	0.003	0.001
2	1800.125	45723.175	0.250	0.210	0.174	0.141	0.111	0.085	0.062	0.043	0.028	0.016	0.007	0.002
3	1200.188	30484.763	0.375	0.315	0.260	0.211	0.167	0.128	0.094	0.065	0.042	0.023	0.010	0.003
4	900.250	22866.350	0.500	0.420	0.347	0.281	0.222	0.170	0.125	0.087	0.056	0.031	0.014	0.003
5	720.313	18295.938	0.625	0.525	0.434	0.351	0.278	0.213	0.156	0.108	0.069	0.039	0.017	0.004
6	600.375	15249.525	0.750	0.630	0.521	0.422	0.333	0.255	0.187	0.130	0.083	0.047	0.021	0.005
7	514.723	13073.970	0.875	0.735	0.607	0.492	0.389	0.298	0.219	0.152	0.097	0.055	0.024	0.006
8	450.500	11442.700	1.000	0.840	0.694	0.562	0.444	0.340	0.250	0.173	0.111	0.062	0.028	0.007
9	400.563	10174.288	1.125	0.945	0.781	0.632	0.500	0.382	0.281	0.195	0.125	0.070	0.031	0.008
10	360.625	9159.875	1.250	1.050	0.868	0.703	0.555	0.425	0.312	0.217	0.139	0.078	0.035	0.009
11	327.960	8330.190	1.375	1.155	0.954	0.773	0.610	0.467	0.343	0.238	0.152	0.086	0.038	0.010
12	300.750	7639.050	1.500	1.260	1.041	0.843	0.666	0.510	0.374	0.260	0.166	0.094	0.042	0.010
13	277.736	7054.484	1.625	1.365	1.127	0.913	0.721	0.552	0.405	0.281	0.180	0.101	0.045	0.011
14	258.018	6553.654	1.750	1.470	1.214	0.983	0.776	0.594	0.436	0.303	0.194	0.109	0.048	0.012
15	240.938	6119.813	1.875	1.575	1.301	1.053	0.832	0.636	0.467	0.324	0.208	0.117	0.052	0.013
16	226.000	5740.400	2.000	1.679	1.387	1.123	0.887	0.679	0.498	0.346	0.221	0.124	0.055	0.014
17	212.827	5405.811	2.125	1.784	1.473	1.193	0.942	0.721	0.529	0.367	0.235	0.132	0.059	0.015
18	201.125	5108.575	2.250	1.889	1.560	1.263	0.997	0.763	0.560	0.389	0.249	0.140	0.062	0.016
19	190.661	4842.794	2.375	1.994	1.646	1.332	1.052	0.805	0.591	0.410	0.262	0.148	0.066	0.016
20	181.250	4603.750	2.500	2.098	1.732	1.402	1.107	0.847	0.622	0.432	0.276	0.155	0.069	0.017
21	172.741	4387.623	2.625	2.203	1.819	1.472	1.162	0.889	0.652	0.453	0.290	0.163	0.072	0.018
22	165.011	4191.289	2.750	2.308	1.905	1.541	1.217	0.931	0.683	0.474	0.303	0.171	0.076	0.019
23	157.959	4012.165	2.875	2.412	1.991	1.611	1.271	0.972	0.714	0.495	0.317	0.178	0.079	0.020
24	151.500	3848.100	3.000	2.517	2.077	1.680	1.326	1.014	0.744	0.517	0.330	0.186	0.083	0.021
25	145.563	3697.288	3.125	2.621	2.163	1.749	1.381	1.056	0.775	0.538	0.344	0.193	0.086	0.021
26	140.087	3558.198	3.250	2.726	2.249	1.819	1.435	1.097	0.805	0.559	0.357	0.201	0.089	0.022
27	135.021	3429.529	3.375	2.830	2.335	1.888	1.489	1.139	0.836	0.580	0.371	0.208	0.093	0.023
28	130.321	3310.164	3.500	2.935	2.420	1.957	1.544	1.180	0.866	0.601	0.384	0.216	0.096	0.024
29	125.950	3199.141	3.625	3.039	2.506	2.026	1.598	1.222	0.896	0.622	0.398	0.224	0.099	0.025
30	121.875	3095.625	3.750	3.143	2.592	2.095	1.652	1.263	0.927	0.643	0.411	0.231	0.103	0.026
31	118.067	2998.890	3.875	3.247	2.677	2.164	1.706	1.304	0.957	0.664	0.424	0.238	0.106	0.026
32	114.500	2908.300	4.000	3.351	2.763	2.232	1.760	1.345	0.987	0.684	0.438	0.246	0.109	0.027
33	111.153	2823.297	4.125	3.456	2.848	2.301	1.814	1.386	1.017	0.705	0.451	0.253	0.113	0.028
34	108.007	2743.387	4.250	3.560	2.933	2.370	1.868	1.427	1.047	0.726	0.464	0.261	0.116	0.029
35	105.045	2668.134	4.375	3.664	3.018	2.438	1.922	1.468	1.076	0.746	0.477	0.268	0.119	0.030
36	102.250	2597.150	4.500	3.767	3.103	2.506	1.975	1.509	1.106	0.767	0.490	0.275	0.122	0.031
37	99.610	2530.089	4.625	3.871	3.188	2.574	2.028	1.549	1.136	0.787	0.503	0.283	0.126	0.031
38	97.112	2466.641	4.750	3.975	3.273	2.642	2.082	1.590	1.165	0.808	0.516	0.290	0.129	0.032
39	94.745	2406.528	4.875	4.079	3.358	2.710	2.135	1.630	1.195	0.828	0.529	0.297	0.132	0.033
40	92.500	2349.500	5.000	4.182	3.442	2.778	2.188	1.670	1.224	0.848	0.542	0.305	0.135	0.034
41	90.367	2295.331	5.125	4.286	3.527	2.846	2.241	1.711	1.254	0.869	0.555	0.312	0.138	0.035
42	88.339	2243.818	5.250	4.389	3.611	2.913	2.294	1.751	1.283	0.889	0.568	0.319	0.142	0.035
43	86.408	2194.774	5.375	4.493	3.696	2.981	2.346	1.791	1.312	0.909	0.581	0.326	0.145	0.036
44	84.568	2148.032	5.500	4.596	3.780	3.048	2.399	1.830	1.341	0.929	0.593	0.333	0.148	0.037
45	82.813	2103.438	5.625	4.699	3.864	3.115	2.451	1.870	1.370	0.949	0.606	0.340	0.151	0.038
46	81.136	2060.851	5.750	4.803	3.948	3.182	2.504	1.910	1.399	0.969	0.619	0.347	0.154	0.039
47	79.533	2020.144	5.875	4.906	4.031	3.249	2.556	1.949	1.427	0.988	0.631	0.354	0.157	0.039
48	78.000	1981.200	6.000	5.009	4.115	3.316	2.608	1.988	1.456	1.008	0.644	0.361	0.160	0.040
49	76.532	1943.910	6.125	5.111	4.198	3.382	2.659	2.028	1.484	1.028	0.656	0.368	0.164	0.041
50	75.125	1908.175	6.250	5.214	4.282	3.449	2.711	2.067	1.513	1.047	0.669	0.375	0.167	0.042
51	73.776	1873.904	6.375	5.317	4.365	3.515	2.763	2.106	1.541	1.067	0.681	0.382	0.170	0.042
52	72.481	1841.012	6.500	5.420	4.448	3.581	2.814	2.144	1.569	1.086	0.693	0.389	0.173	0.043
53	71.237	1809.421	6.625	5.522	4.531	3.647	2.865	2.183	1.597	1.105	0.705	0.396	0.176	0.044
54	70.042	1779.058	6.750	5.624	4.614	3.712	2.916	2.221	1.625	1.124	0.718	0.403	0.179	0.045
55	68.892	1749.858	6.875	5.727	4.696	3.778	2.967	2.260	1.653	1.144	0.730	0.409	0.182	0.045
56	67.786	1721.757	7.000	5.829	4.779	3.843	3.018	2.298	1.680	1.162	0.742	0.416	0.185	0.046
57	66.720	1694.698	7.125	5.931	4.861	3.908	3.068	2.336	1.708	1.181	0.754	0.423	0.188	0.047
58	65.694	1668.627	7.250	6.033	4.943	3.973	3.118	2.374	1.735	1.200	0.766	0.430	0.191	0.048
59	64.704	1643.493	7.375	6.135	5.025	4.038	3.169	2.411	1.763	1.219	0.777	0.436	0.193	0.048
60	63.750	1619.250	7.500	6.236	5.106	4.103	3.218	2.449	1.790	1.238	0.789	0.443	0.196	0.049
61	62.829	1595.854	7.625	6.338	5.188	4.167	3.268	2.486	1.817	1.256	0.801	0.449	0.199	0.050
62	61.940	1573.264	7.750	6.439	5.269	4.231	3.318	2.524	1.844	1.274	0.813	0.456	0.202	0.050
63	61.080	1551.441	7.875	6.541	5.351	4.295	3.367	2.561	1.870	1.293	0.824	0.462	0.205	0.051
64	60.250	1530.350	8.000	6.642	5.432	4.359	3.416	2.597	1.897	1.311	0.836	0.469	0.208	0.052
65	59.447	1509.957	8.125	6.743	5.512	4.422	3.465	2.634	1.924	1.329	0.847	0.475	0.211	0.053
66	58.670	1490.230	8.250	6.844	5.593	4.486	3.514	2.671	1.950	1.347	0.858	0.481	0.213	0.053



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67	57.919	1471.139	8.375	6.945	5.673	4.549	3.563	2.707	1.976	1.365	0.870	0.488	0.216	0.054
68	57.191	1452.656	8.500	7.046	5.754	4.612	3.611	2.743	2.002	1.383	0.881	0.494	0.219	0.055
69	56.486	1434.755	8.625	7.146	5.834	4.675	3.659	2.779	2.028	1.400	0.892	0.500	0.222	0.055
70	55.804	1417.411	8.750	7.247	5.913	4.737	3.707	2.815	2.054	1.418	0.903	0.506	0.224	0.056
71	55.142	1400.600	8.875	7.347	5.993	4.799	3.755	2.851	2.079	1.435	0.914	0.512	0.227	0.057
72	54.500	1384.300	9.000	7.447	6.072	4.861	3.802	2.886	2.105	1.453	0.925	0.519	0.230	0.057
73	53.878	1368.490	9.125	7.547	6.151	4.923	3.850	2.921	2.130	1.470	0.936	0.525	0.233	0.058
74	53.274	1353.151	9.250	7.647	6.230	4.985	3.897	2.956	2.155	1.487	0.947	0.531	0.235	0.059
75	52.688	1338.263	9.375	7.746	6.309	5.046	3.944	2.991	2.180	1.504	0.958	0.537	0.238	0.059
76	52.118	1323.808	9.500	7.846	6.387	5.107	3.990	3.026	2.205	1.521	0.968	0.542	0.240	0.060
77	51.566	1309.770	9.625	7.945	6.466	5.168	4.037	3.060	2.230	1.538	0.979	0.548	0.243	0.061
78	51.029	1296.133	9.750	8.044	6.544	5.228	4.083	3.095	2.254	1.555	0.989	0.554	0.246	0.061
79	50.507	1282.881	9.875	8.143	6.621	5.289	4.129	3.129	2.279	1.571	1.000	0.560	0.248	0.062
80	50.000	1270.000	10.000	8.242	6.699	5.349	4.174	3.163	2.303	1.588	1.010	0.566	0.251	0.063
81	49.507	1257.476	10.125	8.340	6.776	5.408	4.220	3.196	2.327	1.604	1.020	0.571	0.253	0.063
82	49.027	1245.297	10.250	8.439	6.853	5.468	4.265	3.230	2.351	1.620	1.031	0.577	0.256	0.064
83	48.561	1233.449	10.375	8.537	6.930	5.527	4.310	3.263	2.375	1.636	1.041	0.583	0.258	0.064
84	48.107	1221.921	10.500	8.635	7.006	5.586	4.354	3.296	2.398	1.652	1.051	0.588	0.261	0.065
85	47.665	1210.702	10.625	8.733	7.082	5.645	4.399	3.329	2.422	1.668	1.061	0.594	0.263	0.066
86	47.235	1199.781	10.750	8.831	7.158	5.703	4.443	3.361	2.445	1.684	1.071	0.599	0.265	0.066
87	46.817	1189.147	10.875	8.928	7.234	5.761	4.487	3.394	2.468	1.700	1.080	0.605	0.268	0.067
88	46.409	1178.791	11.000	9.025	7.309	5.819	4.531	3.426	2.491	1.715	1.090	0.610	0.270	0.067
89	46.012	1168.703	11.125	9.122	7.384	5.877	4.574	3.458	2.514	1.730	1.100	0.615	0.272	0.068
90	45.625	1158.875	11.250	9.219	7.459	5.934	4.617	3.490	2.536	1.746	1.109	0.621	0.275	0.069
91	45.248	1149.298	11.375	9.316	7.534	5.991	4.660	3.521	2.559	1.761	1.119	0.626	0.277	0.069
92	44.880	1139.963	11.500	9.412	7.608	6.047	4.703	3.552	2.581	1.776	1.128	0.631	0.279	0.070
93	44.522	1130.863	11.625	9.508	7.682	6.104	4.745	3.584	2.603	1.791	1.138	0.636	0.282	0.070
94	44.173	1121.991	11.750	9.604	7.755	6.160	4.787	3.614	2.625	1.806	1.147	0.641	0.284	0.071
95	43.832	1113.339	11.875	9.700	7.829	6.216	4.829	3.645	2.646	1.820	1.156	0.646	0.286	0.071
96	43.500	1104.900	12.000	9.795	7.902	6.271	4.870	3.675	2.668	1.835	1.165	0.651	0.288	0.072
97	43.176	1096.668	12.125	9.891	7.974	6.326	4.912	3.706	2.689	1.849	1.174	0.656	0.290	0.072
98	42.860	1088.636	12.250	9.986	8.047	6.381	4.953	3.735	2.711	1.863	1.183	0.661	0.293	0.073
99	42.551	1080.799	12.375	10.080	8.119	6.435	4.993	3.765	2.732	1.877	1.192	0.666	0.295	0.074
100	42.250	1073.150	12.500	10.175	8.190	6.490	5.034	3.795	2.752	1.891	1.200	0.671	0.297	0.074
101	41.956	1065.684	12.625	10.269	8.262	6.543	5.074	3.824	2.773	1.905	1.209	0.676	0.299	0.075
102	41.669	1058.396	12.750	10.363	8.333	6.597	5.113	3.853	2.793	1.919	1.218	0.681	0.301	0.075
103	41.389	1051.279	12.875	10.457	8.403	6.650	5.153	3.882	2.814	1.933	1.226	0.685	0.303	0.076
104	41.115	1044.331	13.000	10.550	8.474	6.703	5.192	3.910	2.834	1.946	1.235	0.690	0.305	0.076
105	40.848	1037.545	13.125	10.643	8.544	6.755	5.231	3.939	2.854	1.960	1.243	0.694	0.307	0.077
106	40.587	1030.917	13.250	10.736	8.613	6.807	5.270	3.967	2.874	1.973	1.251	0.699	0.309	0.077
107	40.332	1024.442	13.375	10.829	8.683	6.859	5.308	3.994	2.893	1.986	1.259	0.703	0.311	0.078
108	40.083	1018.117	13.500	10.921	8.752	6.911	5.346	4.022	2.912	1.999	1.267	0.708	0.313	0.078
109	39.840	1011.937	13.625	11.013	8.820	6.962	5.384	4.049	2.932	2.012	1.275	0.712	0.315	0.079
110	39.602	1005.898	13.750	11.105	8.888	7.013	5.421	4.076	2.951	2.024	1.283	0.717	0.317	0.079
111	39.370	999.996	13.875	11.197	8.956	7.063	5.458	4.103	2.969	2.037	1.291	0.721	0.319	0.079
112	39.143	994.229	14.000	11.288	9.024	7.113	5.495	4.130	2.988	2.050	1.299	0.725	0.321	0.080
113	38.921	988.591	14.125	11.378	9.091	7.163	5.532	4.156	3.007	2.062	1.307	0.729	0.323	0.080
114	38.704	983.080	14.250	11.469	9.157	7.212	5.568	4.182	3.025	2.074	1.314	0.734	0.324	0.081
115	38.492	977.693	14.375	11.559	9.224	7.261	5.604	4.208	3.043	2.086	1.322	0.738	0.326	0.081
116	38.284	972.426	14.500	11.649	9.290	7.309	5.639	4.234	3.061	2.098	1.329	0.742	0.328	0.082
117	38.082	967.276	14.625	11.738	9.355	7.358	5.675	4.259	3.079	2.110	1.336	0.746	0.330	0.082
118	37.883	962.240	14.750	11.828	9.420	7.405	5.710	4.284	3.096	2.122	1.344	0.750	0.331	0.083
119	37.690	957.316	14.875	11.916	9.485	7.453	5.744	4.309	3.114	2.133	1.351	0.754	0.333	0.083
120	37.500	952.500	15.000	12.005	9.549	7.500	5.779	4.334	3.131	2.145	1.358	0.758	0.335	0.083
121	37.315	947.790	15.125	12.093	9.613	7.547	5.813	4.358	3.148	2.156	1.365	0.761	0.337	0.084
122	37.133	943.183	15.250	12.181	9.676	7.593	5.846	4.382	3.164	2.167	1.372	0.765	0.338	0.084
123	36.956	938.677	15.375	12.268	9.739	7.639	5.880	4.406	3.181	2.178	1.379	0.769	0.340	0.085
124	36.782	934.269	15.500	12.355	9.802	7.684	5.913	4.430	3.198	2.189	1.385	0.773	0.341	0.085
125	36.613	929.958	15.625	12.442	9.864	7.730	5.945	4.453	3.214	2.200	1.392	0.776	0.343	0.085
126	36.446	925.739	15.750	12.528	9.926	7.774	5.978	4.476	3.230	2.211	1.399	0.780	0.345	0.086
127	36.284	921.613	15.875	12.614	9.987	7.819	6.010	4.499	3.246	2.221	1.405	0.784	0.346	0.086
128	36.125	917.575	16.000	12.699	10.048	7.863	6.042	4.522	3.261	2.232	1.412	0.787	0.348	0.087
129	35.969	913.625	16.125	12.784	10.108	7.906	6.073	4.544	3.277	2.242	1.418	0.791	0.349	0.087
130	35.817	909.760	16.250	12.869	10.168	7.949	6.104	4.566	3.292	2.252	1.424	0.794	0.351	0.087
131	35.668	905.978	16.375	12.953	10.228	7.992	6.135	4.588	3.307	2.262	1.430	0.797	0.352	0.088
132	35.523	902.277	16.500	13.037	10.287	8.034	6.165	4.610	3.322	2.272	1.437	0.801	0.354	0.088



Sweep #	Radius(in)	Radius(mm)	30.0	27.5	25.0	22.5	20.0	17.5	15.0	12.5	10.0	7.5	5.0	2.5
133	35.380	898.656	16.625	13.120	10.345	8.076	6.195	4.631	3.337	2.282	1.443	0.804	0.355	0.088
134	35.241	895.113	16.750	13.203	10.403	8.118	6.225	4.652	3.352	2.291	1.449	0.807	0.357	0.089
135	35.104	891.646	16.875	13.286	10.461	8.159	6.255	4.673	3.366	2.301	1.454	0.811	0.358	0.089
136	34.971	888.253	17.000	13.368	10.518	8.199	6.284	4.694	3.380	2.310	1.460	0.814	0.359	0.089
137	34.840	884.933	17.125	13.449	10.574	8.240	6.312	4.714	3.394	2.320	1.466	0.817	0.361	0.090
138	34.712	881.684	17.250	13.530	10.630	8.280	6.341	4.734	3.408	2.329	1.472	0.820	0.362	0.090
139	34.587	878.504	17.375	13.611	10.686	8.319	6.369	4.754	3.422	2.338	1.477	0.823	0.363	0.090
140	34.464	875.393	17.500	13.691	10.741	8.358	6.397	4.774	3.435	2.347	1.483	0.826	0.365	0.091
141	34.344	872.348	17.625	13.770	10.796	8.397	6.424	4.793	3.449	2.356	1.488	0.829	0.366	0.091
142	34.227	869.369	17.750	13.850	10.850	8.435	6.451	4.812	3.462	2.364	1.493	0.832	0.367	0.091
143	34.112	866.453	17.875	13.928	10.903	8.472	6.478	4.831	3.475	2.373	1.499	0.835	0.368	0.092
144	34.000	863.600	18.000	14.006	10.957	8.510	6.505	4.850	3.488	2.381	1.504	0.838	0.370	0.092
145	33.890	860.808	18.125	14.084	11.009	8.547	6.531	4.868	3.500	2.389	1.509	0.840	0.371	0.092
146	33.783	858.076	18.250	14.161	11.061	8.583	6.556	4.886	3.513	2.398	1.514	0.843	0.372	0.093
147	33.677	855.403	18.375	14.237	11.113	8.619	6.582	4.904	3.525	2.406	1.519	0.846	0.373	0.093
148	33.574	852.788	18.500	14.313	11.164	8.655	6.607	4.921	3.537	2.414	1.524	0.848	0.374	0.093
149	33.474	850.229	18.625	14.389	11.214	8.690	6.632	4.939	3.549	2.422	1.529	0.851	0.376	0.093
150	33.375	847.725	18.750	14.464	11.264	8.725	6.656	4.956	3.561	2.429	1.533	0.854	0.377	0.094
151	33.279	845.275	18.875	14.538	11.314	8.759	6.680	4.973	3.572	2.437	1.538	0.856	0.378	0.094
152	33.184	842.879	19.000	14.612	11.362	8.793	6.704	4.989	3.584	2.444	1.543	0.859	0.379	0.094
153	33.092	840.535	19.125	14.685	11.411	8.826	6.728	5.006	3.595	2.452	1.547	0.861	0.380	0.095
154	33.002	838.241	19.250	14.757	11.458	8.859	6.751	5.022	3.606	2.459	1.552	0.864	0.381	0.095
155	32.913	835.998	19.375	14.829	11.506	8.892	6.774	5.038	3.617	2.466	1.556	0.866	0.382	0.095
156	32.827	833.804	19.500	14.900	11.552	8.924	6.796	5.054	3.627	2.473	1.560	0.868	0.383	0.095
157	32.742	831.658	19.625	14.971	11.598	8.956	6.818	5.069	3.638	2.480	1.564	0.871	0.384	0.096
158	32.660	829.559	19.750	15.041	11.644	8.987	6.840	5.084	3.648	2.487	1.569	0.873	0.385	0.096
159	32.579	827.507	19.875	15.111	11.689	9.018	6.861	5.099	3.659	2.493	1.573	0.875	0.386	0.096
160	32.500	825.500	20.000	15.179	11.733	9.048	6.883	5.114	3.669	2.500	1.577	0.877	0.387	0.096
161	32.423	823.538	20.125	15.248	11.777	9.078	6.903	5.128	3.678	2.506	1.581	0.879	0.388	0.097
162	32.347	821.619	20.250	15.315	11.821	9.107	6.924	5.143	3.688	2.513	1.585	0.881	0.389	0.097
163	32.273	819.744	20.375	15.382	11.863	9.136	6.944	5.157	3.698	2.519	1.588	0.884	0.390	0.097
164	32.201	817.911	20.500	15.448	11.905	9.165	6.964	5.170	3.707	2.525	1.592	0.886	0.391	0.097
165	32.131	816.119	20.625	15.514	11.947	9.193	6.984	5.184	3.716	2.531	1.596	0.888	0.391	0.097
166	32.062	814.368	20.750	15.578	11.988	9.221	7.003	5.197	3.725	2.537	1.599	0.890	0.392	0.098
167	31.994	812.657	20.875	15.642	12.028	9.248	7.022	5.210	3.734	2.543	1.603	0.891	0.393	0.098
168	31.929	810.986	21.000	15.706	12.068	9.275	7.040	5.223	3.743	2.549	1.606	0.893	0.394	0.098
169	31.864	809.353	21.125	15.768	12.107	9.301	7.058	5.236	3.751	2.554	1.610	0.895	0.395	0.098
170	31.801	807.757	21.250	15.830	12.146	9.327	7.076	5.248	3.760	2.560	1.613	0.897	0.396	0.098
171	31.740	806.199	21.375	15.891	12.184	9.353	7.094	5.260	3.768	2.565	1.616	0.899	0.396	0.099
172	31.680	804.678	21.500	15.952	12.222	9.378	7.111	5.272	3.776	2.570	1.620	0.901	0.397	0.099
173	31.622	803.192	21.625	16.011	12.259	9.403	7.128	5.284	3.784	2.575	1.623	0.902	0.398	0.099
174	31.565	801.742	21.750	16.070	12.295	9.427	7.145	5.295	3.792	2.581	1.626	0.904	0.399	0.099
175	31.509	800.327	21.875	16.128	12.330	9.451	7.161	5.307	3.799	2.586	1.629	0.906	0.399	0.099
176	31.455	798.945	22.000	16.186	12.366	9.474	7.177	5.318	3.807	2.590	1.632	0.907	0.400	0.100
177	31.401	797.598	22.125	16.242	12.400	9.497	7.193	5.328	3.814	2.595	1.635	0.909	0.401	0.100
178	31.350	796.283	22.250	16.298	12.434	9.520	7.208	5.339	3.821	2.600	1.638	0.910	0.401	0.100
179	31.299	795.000	22.375	16.353	12.467	9.542	7.223	5.349	3.828	2.604	1.640	0.912	0.402	0.100
180	31.250	793.750	22.500	16.407	12.500	9.563	7.238	5.360	3.835	2.609	1.643	0.913	0.403	0.100
181	31.202	792.531	22.625	16.460	12.532	9.585	7.253	5.370	3.842	2.613	1.646	0.915	0.403	0.100
182	31.155	791.343	22.750	16.513	12.564	9.605	7.267	5.379	3.849	2.618	1.648	0.916	0.404	0.100
183	31.110	790.185	22.875	16.565	12.595	9.626	7.281	5.389	3.855	2.622	1.651	0.918	0.404	0.101
184	31.065	789.057	23.000	16.615	12.625	9.646	7.294	5.398	3.861	2.626	1.654	0.919	0.405	0.101
185	31.022	787.958	23.125	16.665	12.655	9.665	7.308	5.407	3.868	2.630	1.656	0.920	0.406	0.101
186	30.980	786.888	23.250	16.714	12.684	9.684	7.321	5.416	3.874	2.634	1.658	0.922	0.406	0.101
187	30.939	785.846	23.375	16.763	12.712	9.703	7.334	5.425	3.879	2.638	1.661	0.923	0.407	0.101
188	30.899	784.833	23.500	16.810	12.740	9.721	7.346	5.433	3.885	2.641	1.663	0.924	0.407	0.101
189	30.860	783.847	23.625	16.857	12.767	9.739	7.358	5.442	3.891	2.645	1.665	0.925	0.408	0.101
190	30.822	782.888	23.750	16.902	12.794	9.757	7.370	5.450	3.896	2.648	1.667	0.926	0.408	0.102
191	30.786	781.956	23.875	16.947	12.820	9.774	7.381	5.458	3.902	2.652	1.669	0.928	0.409	0.102
192	30.750	781.050	24.000	16.991	12.846	9.790	7.393	5.465	3.907	2.655	1.671	0.929	0.409	0.102
193	30.715	780.170	24.125	17.034	12.871	9.806	7.404	5.473	3.912	2.659	1.673	0.930	0.410	0.102
194	30.682	779.315	24.250	17.076	12.895	9.822	7.414	5.480	3.917	2.662	1.675	0.931	0.410	0.102
195	30.649	778.486	24.375	17.117	12.919	9.838	7.425	5.487	3.921	2.665	1.677	0.932	0.411	0.102
196	30.617	777.681	24.500	17.157	12.942	9.853	7.435	5.494	3.926	2.668	1.679	0.933	0.411	0.102
197	30.587	776.900	24.625	17.197	12.964	9.867	7.445	5.501	3.931	2.671	1.681	0.934	0.411	0.102
198	30.557	776.143	24.750	17.235	12.986	9.881	7.454	5.507	3.935	2.674	1.683	0.935	0.412	0.102



True Radius Sweep Chart

Sweep #	Radius(in)	Radius(mm)	30.0	27.5	25.0	22.5	20.0	17.5	15.0	12.5	10.0	7.5	5.0	2.5
199	30.528	775.410	24.875	17.273	13.008	9.895	7.464	5.514	3.939	2.676	1.684	0.936	0.412	0.103
200	30.500	774.700	25.000	17.309	13.029	9.909	7.473	5.520	3.943	2.679	1.686	0.937	0.413	0.103
201	30.473	774.013	25.125	17.345	13.049	9.922	7.482	5.526	3.947	2.682	1.688	0.937	0.413	0.103
202	30.447	773.348	25.250	17.379	13.068	9.934	7.490	5.532	3.951	2.684	1.689	0.938	0.413	0.103
203	30.421	772.706	25.375	17.413	13.088	9.947	7.498	5.537	3.955	2.687	1.691	0.939	0.414	0.103
204	30.397	772.085	25.500	17.446	13.106	9.959	7.506	5.543	3.959	2.689	1.692	0.940	0.414	0.103
205	30.373	771.486	25.625	17.478	13.124	9.970	7.514	5.548	3.962	2.691	1.693	0.941	0.414	0.103
206	30.351	770.908	25.750	17.509	13.141	9.981	7.522	5.553	3.966	2.694	1.695	0.941	0.415	0.103
207	30.329	770.352	25.875	17.539	13.158	9.992	7.529	5.558	3.969	2.696	1.696	0.942	0.415	0.103
208	30.308	769.815	26.000	17.568	13.174	10.002	7.536	5.563	3.972	2.698	1.697	0.943	0.415	0.103
209	30.287	769.299	26.125	17.596	13.190	10.012	7.543	5.567	3.975	2.700	1.698	0.943	0.416	0.103
210	30.268	768.804	26.250	17.623	13.205	10.022	7.549	5.572	3.978	2.702	1.700	0.944	0.416	0.103
211	30.249	768.327	26.375	17.649	13.219	10.031	7.555	5.576	3.981	2.704	1.701	0.945	0.416	0.103
212	30.231	767.871	26.500	17.674	13.233	10.040	7.561	5.580	3.984	2.705	1.702	0.945	0.416	0.104
213	30.214	767.433	26.625	17.699	13.247	10.049	7.567	5.584	3.986	2.707	1.703	0.946	0.417	0.104
214	30.197	767.015	26.750	17.722	13.260	10.057	7.573	5.588	3.989	2.709	1.704	0.946	0.417	0.104
215	30.182	766.615	26.875	17.744	13.272	10.065	7.578	5.591	3.991	2.710	1.705	0.947	0.417	0.104
216	30.167	766.233	27.000	17.766	13.284	10.072	7.583	5.595	3.994	2.712	1.706	0.947	0.417	0.104
217	30.152	765.870	27.125	17.786	13.295	10.080	7.588	5.598	3.996	2.713	1.707	0.948	0.417	0.104
218	30.139	765.525	27.250	17.806	13.306	10.086	7.592	5.601	3.998	2.714	1.707	0.948	0.418	0.104
219	30.126	765.197	27.375	17.825	13.316	10.093	7.597	5.604	4.000	2.716	1.708	0.949	0.418	0.104
220	30.114	764.886	27.500	17.842	13.326	10.099	7.601	5.607	4.002	2.717	1.709	0.949	0.418	0.104
221	30.102	764.593	27.625	17.859	13.335	10.105	7.605	5.610	4.004	2.718	1.710	0.949	0.418	0.104
222	30.091	764.317	27.750	17.875	13.344	10.110	7.608	5.612	4.005	2.719	1.710	0.950	0.418	0.104
223	30.081	764.057	27.875	17.890	13.352	10.116	7.612	5.614	4.007	2.720	1.711	0.950	0.418	0.104
224	30.071	763.814	28.000	17.904	13.359	10.120	7.615	5.617	4.008	2.721	1.711	0.950	0.419	0.104
225	30.063	763.588	28.125	17.917	13.367	10.125	7.618	5.619	4.010	2.722	1.712	0.951	0.419	0.104
226	30.054	763.377	28.250	17.930	13.373	10.129	7.621	5.621	4.011	2.723	1.712	0.951	0.419	0.104
227	30.047	763.182	28.375	17.941	13.379	10.133	7.623	5.622	4.012	2.724	1.713	0.951	0.419	0.104
228	30.039	763.003	28.500	17.951	13.385	10.137	7.626	5.624	4.013	2.724	1.713	0.951	0.419	0.104
229	30.033	762.839	28.625	17.961	13.390	10.140	7.628	5.625	4.014	2.725	1.714	0.952	0.419	0.104
230	30.027	762.690	28.750	17.970	13.395	10.143	7.630	5.627	4.015	2.726	1.714	0.952	0.419	0.104
231	30.022	762.557	28.875	17.978	13.399	10.146	7.632	5.628	4.016	2.726	1.714	0.952	0.419	0.104
232	30.017	762.438	29.000	17.985	13.403	10.148	7.633	5.629	4.017	2.726	1.715	0.952	0.419	0.104
233	30.013	762.334	29.125	17.991	13.406	10.150	7.635	5.630	4.017	2.727	1.715	0.952	0.419	0.104
234	30.010	762.244	29.250	17.996	13.409	10.152	7.636	5.631	4.018	2.727	1.715	0.952	0.419	0.104
235	30.007	762.169	29.375	18.000	13.411	10.153	7.637	5.631	4.018	2.728	1.715	0.952	0.420	0.104
236	30.004	762.108	29.500	18.004	13.413	10.155	7.638	5.632	4.019	2.728	1.715	0.952	0.420	0.104
237	30.002	762.060	29.625	18.007	13.415	10.156	7.639	5.632	4.019	2.728	1.716	0.953	0.420	0.104
238	30.001	762.027	29.750	18.009	13.416	10.156	7.639	5.633	4.019	2.728	1.716	0.953	0.420	0.104
239	30.000	762.007	29.875	18.010	13.417	10.157	7.639	5.633	4.019	2.728	1.716	0.953	0.420	0.104
240	30.000	762.000	30.000	18.010	13.417	10.157	7.639	5.633	4.019	2.728	1.716	0.953	0.420	0.104

$R=(X^2 + Y^2)/2Y$

