

## Lathemaster 6" and 8" inch Rotary Table and Dividing Plates

1. The following tables were developed for the Lathemaster 6" & 8" rotary tables and the dividing plates supplied with them.

2. The rotary table has a gear ratio of 90:1

3. The plates have hole counts as follows:

Plate 1	15
	16
	17
	18
	19
	20
Plate 2	21
	23
	27
	29
	31
	33
Plate 3	37
	39
	41
	43
	47
	49

**Dividing Tables**

For the 6" & 8" Rotary table (90:1 ratio) and dividing plates sold by Lathemaster  
 All possibilities up to 300 divisions which have zero error

Other divisions can be approximated but will have some error (see Table 2)

No Div	Whole Turns	No. Holes	Total Holes In Ring
2	45	--	--
3	30	--	--
4	22	8	16
5	18	--	--
6	15	--	--
7	12	18	21
8	11	4	16
9	10	--	--
10	9	--	--
11	8	6	33
12	7	8	16
13	6	36	39
14	6	9	21
15	6	--	--
16	5	10	16
17	5	5	17
18	5	--	--
19	4	14	19
20	4	8	16
21	4	6	21
22	4	3	33
23	3	21	23
24	3	12	16
25	3	9	15
26	3	18	39
27	3	5	15
29	3	3	29
30	3	--	--
31	2	28	31
32	2	13	16
33	2	24	33
34	2	11	17
35	2	12	21
36	2	8	16
37	2	16	37
38	2	7	19
39	2	12	39
40	2	4	16
41	2	8	41
42	2	3	21
43	2	4	43
45	2	--	--

No Div	Whole Turns	No. Holes	Total Holes In Ring
46	1	22	23
47	1	43	47
48	1	14	16
49	1	41	49
50	1	12	15
51	1	13	17
54	1	10	15
57	1	11	19
58	1	16	29
60	1	8	16
62	1	14	31
63	1	9	21
65	1	15	39
66	1	12	33
69	1	7	23
70	1	6	21
72	1	4	16
74	1	8	37
75	1	3	15
78	1	6	39
80	1	2	16
81	1	2	18
82	1	4	41
85	1	1	17
86	1	2	43
87	1	1	29
90	1	--	--
93	0	30	31
94	0	45	47
95	0	18	19
96	0	15	16
98	0	45	49
99	0	30	33
100	0	18	20
102	0	15	17
105	0	18	21
108	0	15	18
110	0	27	33
111	0	30	37
114	0	15	19
115	0	18	23
117	0	30	39

Tables Courtesy of Lathemaster

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 All possibilities up to 300 divisions which have zero error

Other divisions can be approximated but will have some error (see Table 2)

No Div	Whole Turns	No. Holes	Total Holes In Ring
120	0	12	16
123	0	30	41
126	0	15	21
129	0	30	43
130	0	27	39
135	0	10	15
138	0	15	23
141	0	30	47
144	0	10	16
145	0	18	29
147	0	30	49
150	0	9	15
153	0	10	17
155	0	18	31
160	0	9	16
162	0	10	18
165	0	18	33
170	0	9	17
171	0	10	19
174	0	15	29
180	0	8	16
185	0	18	37
186	0	15	31
189	0	10	21
190	0	9	19
195	0	18	39
198	0	15	33
200	0	9	20
205	0	18	41
207	0	10	23
210	0	9	21
215	0	18	43
222	0	15	37
225	0	6	15
230	0	9	23
234	0	15	39
235	0	18	47
240	0	6	16
243	0	10	27
245	0	18	49
246	0	15	41
255	0	6	17
258	0	15	43

No Div	Whole Turns	No. Holes	Total Holes In Ring
261	0	10	29
270	0	5	15
279	0	10	31
282	0	15	47
285	0	6	19
288	0	5	16
290	0	9	29
294	0	15	49
297	0	10	33
300	0	6	20

Tables Courtesy of Lathemaster

**Dividing Tables**

For the 6" & 8" Rotary table (90:1 ratio) and dividing plates sold by Lathemaster

1. To divide circle into X parts, divide 90 by X
2. The result will be a number in the form A.BBBBBBBBBB
3. For each division turn the rotary table handle A times, and then....
4. Achieve the fractional part (BBBBBBBBBB) by using the table below

Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.0204081632	1	49
0.0212765957	1	47
0.0232558139	1	43
0.0243902439	1	41
0.0256410256	1	39
0.0270270270	1	37
0.0303030303	1	33
0.0322580645	1	31
0.0344827586	1	29
0.0370370370	1	27
0.0408163265	2	49
0.0425531914	2	47
0.0434782608	1	23
0.0465116279	2	43
0.0476190476	1	21
0.0487804878	2	41
0.0500000000	1	20
0.0512820512	2	39
0.0526315789	1	19
0.0540540540	2	37
0.0555555555	1	18
0.0588235294	1	17
0.0606060606	2	33
0.0612244897	3	49
0.0625000000	1	16
0.0638297872	3	47
0.0645161290	2	31
0.0666666666	1	15
0.0689655172	2	29
0.0697674418	3	43
0.0731707317	3	41
0.0740740740	2	27
0.0769230769	3	39
0.0810810810	3	37
0.0816326530	4	49
0.0851063829	4	47
0.0869565217	2	23
0.0909090909	3	33
0.0930232558	4	43
0.0952380952	2	21

Fraction of a Circle	No. Holes	Total Holes In Ring
0.0967741935	3	31
0.0975609756	4	41
0.1000000000	2	20
0.1020408163	5	49
0.1025641025	4	39
0.1034482758	3	29
0.1052631578	2	19
0.1063829787	5	47
0.1081081081	4	37
0.1111111111	2	18
0.1111111111	3	27
0.1162790697	5	43
0.1176470588	2	17
0.1212121212	4	33
0.1219512195	5	41
0.1224489795	6	49
0.1250000000	2	16
0.1276595744	6	47
0.1282051282	5	39
0.1290322580	4	31
0.1304347826	3	23
0.1333333333	2	15
0.1351351351	5	37
0.1379310344	4	29
0.1395348837	6	43
0.1428571428	3	21
0.1428571428	7	49
0.1463414634	6	41
0.1481481481	4	27
0.1489361702	7	47
0.1500000000	3	20
0.1515151515	5	33
0.1538461538	6	39
0.1578947368	3	19
0.1612903225	5	31
0.1621621621	6	37
0.1627906976	7	43
0.1632653061	8	49
0.1666666666	3	18
0.1702127659	8	47

Tables Courtesy of Lathemaster

**Dividing Tables**

For the 6" & 8" Rotary table (90:1 ratio) and dividing plates sold by Lathemaster

1. To divide circle into X parts, divide 90 by X
2. The result will be a number in the form A.BBBBBBBBBB
3. For each division turn the rotary table handle A times, and then....
4. Achieve the fractional part (BBBBBBBBBB) by using the table below

Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.1707317073	7	41
0.1724137931	5	29
0.1739130434	4	23
0.1764705882	3	17
0.1794871794	7	39
0.1818181818	6	33
0.1836734693	9	49
0.1851851851	5	27
0.1860465116	8	43
0.1875000000	3	16
0.1891891891	7	37
0.1904761904	4	21
0.1914893617	9	47
0.1935483870	6	31
0.1951219512	8	41
0.2000000000	3	15
0.2000000000	4	20
0.2040816326	10	49
0.2051282051	8	39
0.2068965517	6	29
0.2093023255	9	43
0.2105263157	4	19
0.2121212121	7	33
0.2127659574	10	47
0.2162162162	8	37
0.2173913043	5	23
0.2195121951	9	41
0.2222222222	4	18
0.2222222222	6	27
0.2244897959	11	49
0.2258064516	7	31
0.2307692307	9	39
0.2325581395	10	43
0.2340425531	11	47
0.2352941176	4	17
0.2380952380	5	21
0.2413793103	7	29
0.2424242424	8	33
0.2432432432	9	37
0.2439024390	10	41

Fraction of a Circle	No. Holes	Total Holes In Ring
0.2448979591	12	49
0.2500000000	4	16
0.2500000000	5	20
0.2553191489	12	47
0.2558139534	11	43
0.2564102564	10	39
0.2580645161	8	31
0.2592592592	7	27
0.2608695652	6	23
0.2631578947	5	19
0.2653061224	13	49
0.2666666666	4	15
0.2682926829	11	41
0.2702702702	10	37
0.2727272727	9	33
0.2758620689	8	29
0.2765957446	13	47
0.2777777777	5	18
0.2790697674	12	43
0.2820512820	11	39
0.2857142857	6	21
0.2857142857	14	49
0.2903225806	9	31
0.2926829268	12	41
0.2941176470	5	17
0.2962962962	8	27
0.2972972972	11	37
0.2978723404	14	47
0.3000000000	6	20
0.3023255813	13	43
0.3030303030	10	33
0.3043478260	7	23
0.3061224489	15	49
0.3076923076	12	39
0.3103448275	9	29
0.3125000000	5	16
0.3157894736	6	19
0.3170731707	13	41
0.3191489361	15	47
0.3225806451	10	31

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**Dividing Tables**

For the 6" & 8" Rotary table (90:1 ratio) and dividing plates sold by Lathemaster

1. To divide circle into X parts, divide 90 by X
2. The result will be a number in the form A.BBBBBBBBBB
3. For each division turn the rotary table handle A times, and then....
4. Achieve the fractional part (BBBBBBBBBB) by using the table below

Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.3243243243	12	37
0.3255813953	14	43
0.3265306122	16	49
0.3333333333	5	15
0.3333333333	6	18
0.3333333333	7	21
0.3333333333	9	27
0.3333333333	11	33
0.3333333333	13	39
0.3404255319	16	47
0.3414634146	14	41
0.3448275862	10	29
0.3469387755	17	49
0.3478260869	8	23
0.3488372093	15	43
0.3500000000	7	20
0.3513513513	13	37
0.3529411764	6	17
0.3548387096	11	31
0.3589743589	14	39
0.3617021276	17	47
0.3636363636	12	33
0.3658536585	15	41
0.3673469387	18	49
0.3684210526	7	19
0.3703703703	10	27
0.3720930232	16	43
0.3750000000	6	16
0.3783783783	14	37
0.3793103448	11	29
0.3809523809	8	21
0.3829787234	18	47
0.3846153846	15	39
0.3870967741	12	31
0.3877551020	19	49
0.3888888888	7	18
0.3902439024	16	41
0.3913043478	9	23
0.3939393939	13	33
0.3953488372	17	43

Fraction of a Circle	No. Holes	Total Holes In Ring
0.4000000000	6	15
0.4000000000	8	20
0.4042553191	19	47
0.4054054054	15	37
0.4074074074	11	27
0.4081632653	20	49
0.4102564102	16	39
0.4117647058	7	17
0.4137931034	12	29
0.4146341463	17	41
0.4186046511	18	43
0.4193548387	13	31
0.4210526315	8	19
0.4242424242	14	33
0.4255319148	20	47
0.4285714285	9	21
0.4285714285	21	49
0.4324324324	16	37
0.4347826086	10	23
0.4358974358	17	39
0.4375000000	7	16
0.4390243902	18	41
0.4418604651	19	43
0.4444444444	8	18
0.4444444444	12	27
0.4468085106	21	47
0.4482758620	13	29
0.4489795918	22	49
0.4500000000	9	20
0.4516129032	14	31
0.4545454545	15	33
0.4594594594	17	37
0.4615384615	18	39
0.4634146341	19	41
0.4651162790	20	43
0.4666666666	7	15
0.4680851063	22	47
0.4693877551	23	49
0.4705882352	8	17
0.4736842105	9	19

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4. Achieve the fractional part (BBBBBBBBBB) by using the table below

Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.4761904761	10	21
0.4782608695	11	23
0.4814814814	13	27
0.4827586206	14	29
0.4838709677	15	31
0.4848484848	16	33
0.4864864864	18	37
0.4871794871	19	39
0.4878048780	20	41
0.4883720930	21	43
0.4893617021	23	47
0.4897959183	24	49
0.5000000000	8	16
0.5000000000	9	18
0.5000000000	10	20
0.5102040816	25	49
0.5106382978	24	47
0.5116279069	22	43
0.5121951219	21	41
0.5128205128	20	39
0.5135135135	19	37
0.5151515151	17	33
0.5161290322	16	31
0.5172413793	15	29
0.5185185185	14	27
0.5217391304	12	23
0.5238095238	11	21
0.5263157894	10	19
0.5294117647	9	17
0.5306122448	26	49
0.5319148936	25	47
0.5333333333	8	15
0.5348837209	23	43
0.5365853658	22	41
0.5384615384	21	39
0.5405405405	20	37
0.5454545454	18	33
0.5483870967	17	31
0.5500000000	11	20
0.5510204081	27	49

Fraction of a Circle	No. Holes	Total Holes In Ring
0.5517241379	16	29
0.5531914893	26	47
0.5555555555	10	18
0.5555555555	15	27
0.5581395348	24	43
0.5609756097	23	41
0.5625000000	9	16
0.5641025641	22	39
0.5652173913	13	23
0.5675675675	21	37
0.5714285714	12	21
0.5714285714	28	49
0.5744680851	27	47
0.5757575757	19	33
0.5789473684	11	19
0.5806451612	18	31
0.5813953488	25	43
0.5853658536	24	41
0.5862068965	17	29
0.5882352941	10	17
0.5897435897	23	39
0.5918367346	29	49
0.5925925925	16	27
0.5945945945	22	37
0.5957446808	28	47
0.6000000000	9	15
0.6000000000	12	20
0.6046511627	26	43
0.6060606060	20	33
0.6086956521	14	23
0.6097560975	25	41
0.6111111111	11	18
0.6122448979	30	49
0.6129032258	19	31
0.6153846153	24	39
0.6170212765	29	47
0.6190476190	13	21
0.6206896551	18	29
0.6216216216	23	37
0.6250000000	10	16

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3. For each division turn the rotary table handle A times, and then....
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Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.6279069767	27	43
0.6296296296	17	27
0.6315789473	12	19
0.6326530612	31	49
0.6341463414	26	41
0.6363636363	21	33
0.6382978723	30	47
0.6410256410	25	39
0.6451612903	20	31
0.6470588235	11	17
0.6486486486	24	37
0.6500000000	13	20
0.6511627906	28	43
0.6521739130	15	23
0.6530612244	32	49
0.6551724137	19	29
0.6585365853	27	41
0.6595744680	31	47
0.6666666666	10	15
0.6666666666	12	18
0.6666666666	14	21
0.6666666666	18	27
0.6666666666	22	33
0.6666666666	26	39
0.6734693877	33	49
0.6744186046	29	43
0.6756756756	25	37
0.6774193548	21	31
0.6808510638	32	47
0.6829268292	28	41
0.6842105263	13	19
0.6875000000	11	16
0.6896551724	20	29
0.6923076923	27	39
0.6938775510	34	49
0.6956521739	16	23
0.6969696969	23	33
0.6976744186	30	43
0.7000000000	14	20
0.7021276595	33	47

Fraction of a Circle	No. Holes	Total Holes In Ring
0.7027027027	26	37
0.7037037037	19	27
0.7058823529	12	17
0.7073170731	29	41
0.7096774193	22	31
0.7142857142	15	21
0.7142857142	35	49
0.7179487179	28	39
0.7209302325	31	43
0.7222222222	13	18
0.7234042553	34	47
0.7241379310	21	29
0.7272727272	24	33
0.7297297297	27	37
0.7317073170	30	41
0.7333333333	11	15
0.7346938775	36	49
0.7368421052	14	19
0.7391304347	17	23
0.7407407407	20	27
0.7419354838	23	31
0.7435897435	29	39
0.7441860465	32	43
0.7446808510	35	47
0.7500000000	12	16
0.7500000000	15	20
0.7551020408	37	49
0.7560975609	31	41
0.7567567567	28	37
0.7575757575	25	33
0.7586206896	22	29
0.7619047619	16	21
0.7647058823	13	17
0.7659574468	36	47
0.7674418604	33	43
0.7692307692	30	39
0.7741935483	24	31
0.7755102040	38	49
0.7777777777	14	18
0.7777777777	21	27

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**Dividing Tables**

For the 6" & 8" Rotary table (90:1 ratio) and dividing plates sold by Lathemaster

1. To divide circle into X parts, divide 90 by X
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4. Achieve the fractional part (BBBBBBBBBB) by using the table below

Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.7804878048	32	41
0.7826086956	18	23
0.7837837837	29	37
0.7872340425	37	47
0.7878787878	26	33
0.7894736842	15	19
0.7906976744	34	43
0.7931034482	23	29
0.7948717948	31	39
0.7959183673	39	49
0.8000000000	12	15
0.8000000000	16	20
0.8048780487	33	41
0.8064516129	25	31
0.8085106382	38	47
0.8095238095	17	21
0.8108108108	30	37
0.8125000000	13	16
0.8139534883	35	43
0.8148148148	22	27
0.8163265306	40	49
0.8181818181	27	33
0.8205128205	32	39
0.8235294117	14	17
0.8260869565	19	23
0.8275862068	24	29
0.8292682926	34	41
0.8297872340	39	47
0.8333333333	15	18
0.8367346938	41	49
0.8372093023	36	43
0.8378378378	31	37
0.8387096774	26	31
0.8421052631	16	19
0.8461538461	33	39
0.8484848484	28	33
0.8500000000	17	20
0.8510638297	40	47
0.8518518518	23	27
0.8536585365	35	41

Fraction of a Circle	No. Holes	Total Holes In Ring
0.8571428571	18	21
0.8571428571	42	49
0.8604651162	37	43
0.8620689655	25	29
0.8648648648	32	37
0.8666666666	13	15
0.8695652173	20	23
0.8709677419	27	31
0.8717948717	34	39
0.8723404255	41	47
0.8750000000	14	16
0.8775510204	43	49
0.8780487804	36	41
0.8787878787	29	33
0.8823529411	15	17
0.8837209302	38	43
0.8888888888	16	18
0.8888888888	24	27
0.8918918918	33	37
0.8936170212	42	47
0.8947368421	17	19
0.8965517241	26	29
0.8974358974	35	39
0.8979591836	44	49
0.9000000000	18	20
0.9024390243	37	41
0.9032258064	28	31
0.9047619047	19	21
0.9069767441	39	43
0.9090909090	30	33
0.9130434782	21	23
0.9148936170	43	47
0.9183673469	45	49
0.9189189189	34	37
0.9230769230	36	39
0.9259259259	25	27
0.9268292682	38	41
0.9302325581	40	43
0.9310344827	27	29
0.9333333333	14	15

Tables Courtesy of Lathemaster

**Dividing Tables**

For the 6" & 8" Rotary table (90:1 ratio) and dividing plates sold by Lathemaster

1. To divide circle into X parts, divide 90 by X
2. The result will be a number in the form A.BBBBBBBBBB
3. For each division turn the rotary table handle A times, and then....
4. Achieve the fractional part (BBBBBBBBBB) by using the table below

Fractions of a circle possible with the dividing plates

Fraction of a Circle	No. Holes	Total Holes In Ring
0.9354838709	29	31
0.9361702127	44	47
0.9375000000	15	16
0.9387755102	46	49
0.9393939393	31	33
0.9411764705	16	17
0.9444444444	17	18
0.9459459459	35	37
0.9473684210	18	19
0.9487179487	37	39
0.9500000000	19	20
0.9512195121	39	41
0.9523809523	20	21
0.9534883720	41	43



Fraction of a Circle	No. Holes	Total Holes In Ring
0.9565217391	22	23
0.9574468085	45	47
0.9591836734	47	49
0.9629629629	26	27
0.9655172413	28	29
0.9677419354	30	31
0.9696969696	32	33
0.9729729729	36	37
0.9743589743	38	39
0.9756097560	40	41
0.9767441860	42	43
0.9787234042	46	47
0.9795918367	48	49