

floor area served		duct cross section area		duct diameter	1:1 square	1:2 rectangle			1:4 short	1:4 rect long
no of 235 s.f. areas served	furtherst 235 s.f. served from fan	28.26	area of	6 inch round	5.316013544	3.758989226	7.51797845		2.658006772	10.6320271
2	470	56.52	area of	8.485 inch round	7.517978452	5.316013544	10.6320271		3.758989226	15.0359569
3	705	84.78	area of	10.39 inch round	9.207605552	6.510760324	13.0215206		4.603802776	18.4152111
4	940	113.04	area of	12 inch round	10.63202709	7.517978452	15.0359569		5.316013544	21.2640542
5	1175	141.3	area of	13.42 inch round	11.88696765	8.405355436	16.8107109		5.943483827	23.7739353
6	1410	169.56	area of	14.7 inch round	13.02152065	9.207605552	18.4152111		6.510760324	26.0430413
7	1645	197.82	area of	15.87 inch round	14.0648498	9.945350673	19.8907013		7.032424902	28.1296996
8	1880	226.08	area of	16.97 inch round	15.0359569	10.63202709	21.2640542		7.517978452	30.0719138
9	2115	254.34	area of	18 inch round	15.94804063	11.27696768	22.5539354		7.974020316	31.8960813
10	2350	282.6	area of	18.97 inch round	16.81071087	11.88696765	23.7739353		8.405355436	33.6214217
11	2585	310.86	area of	19.9 inch round	17.63122231	12.46715685	24.9343137		8.815611153	35.2624446
12	2820	339.12	area of	20.78 inch round	18.4152111	13.02152065	26.0430413		9.207605552	36.8304222
13	3055	367.38	area of	21.63 inch round	19.16715941	13.5532284	27.1064568		9.583579707	38.3343188
14	3290	395.64	area of	22.45 inch round	19.89070135	14.0648498	28.1296996		9.945350673	39.7814027
15	3525	423.9	area of	23.24 inch round	20.58883192	14.55850267	29.1170053		10.29441596	41.1776638
16	3760	452.16	area of	24 inch round	21.26405418	15.0359569	30.0719138		10.63202709	42.5281084
17	3995	480.42	area of	24.74 inch round	21.91848535	15.49870962	30.9974192		10.95924267	43.8369707
18	4230	508.68	area of	25.46 inch round	22.55393536	15.94804063	31.8960813		11.27696768	45.1078707
19	4465	536.94	area of	26.15 inch round	23.17196582	16.38505417	32.7701083		11.58598291	46.3439316
20	4700	565.2	area of	26.83 inch round	23.77393531	16.81071087	33.6214217		11.88696765	47.5478706
21	4935	593.46	area of	27.5 inch round	24.36103446	17.22585266	34.4517053		12.18051723	48.7220689
22	5170	621.72	area of	28.14 inch round	24.93431371	17.63122231	35.2624446		12.46715685	49.8686274
23	5405	649.98	area of	28.77 inch round	25.49470533	18.02747903	36.0549581		12.74735267	50.9894107
24	5640	678.24	area of	29.39 inch round	26.0430413	18.4152111	36.8304222		13.02152065	52.0860826
25	5875	706.5	area of	30 inch round	26.58006772	18.79494613	37.5898923		13.29003386	53.1601354
26	6110	734.76	area of	30.59 inch round	27.1064568	19.16715941	38.3343188		13.5532284	54.2129136
27	6345	763.02	area of	31.18 inch round	27.62281666	19.53228097	39.0645619		13.81140833	55.2456333
28	6580	791.28	area of	31.75 inch round	28.12969961	19.89070135	39.7814027		14.0648498	56.2593992
29	6815	819.54	area of	32.31 inch round	28.62760905	20.24277649	40.485553		14.31380453	57.2552181
30	7050	847.8	area of	32.86 inch round	29.11700534	20.58883192	41.1776638		14.55850267	58.2340107
31	7285	876.06	area of	33.41 inch round	29.59831076	20.92916625	41.8583325		14.79915538	59.1966215
32	7520	904.32	area of	33.94 inch round	30.07191381	21.26405418	42.5281084		15.0359569	60.1438276
33	7755	932.58	area of	34.47 inch round	30.53817283	21.5937491	43.1874982		15.26908642	61.0763457
34	7990	960.84	area of	34.99 inch round	30.99741925	21.91848535	43.8369707		15.49870962	61.9948385
35	8225	989.1	area of	35.5 inch round	31.44996025	22.23848016	44.4769603		15.72498013	62.8999205
36	8460	1017.36	area of	36 inch round	31.89608126	22.55393536	45.1078707		15.94804063	63.7921625
37	8695	1045.62	area of	36.5 inch round	32.336048	22.86503881	45.7300776		16.168024	64.672096
38	8930	1073.88	area of	36.99 inch round	32.77010833	23.17196582	46.3439316		16.38505417	65.5402167
39	9165	1102.14	area of	37.47 inch round	33.19849394	23.47488019	46.9497604		16.59924697	66.3969879
40	9400	1130.4	area of	37.95 inch round	33.62142174	23.77393531	47.5478706		16.81071087	67.2428435
41	9635	1158.66	area of	38.42 inch round	34.03909517	24.06927502	48.13855		17.01954759	68.0781903
42	9870	1186.92	area of	38.88 inch round	34.45170533	24.36103446	48.7220689		17.22585266	68.9034107
43	10105	1215.18	area of	39.34 inch round	34.85943201	24.64934076	49.2986815		17.429716	69.718864
44	10340	1243.44	area of	39.8 inch round	35.26244461	24.93431371	49.8686274		17.63122231	70.5248892

floor area served		duct cross section area		duct diameter		1:1 square	1:2 rectangle		1:4 short	1:4 rect long
45	10575	1271.7	area of	40.25	inch round	35.66090296	25.21606631	50.4321326	17.83045148	71.3218059
46	10810	1299.96	area of	40.69	inch round	36.05495805	25.49470533	50.9894107	18.02747903	72.1099161
47	11045	1328.22	area of	41.13	inch round	36.44475271	25.77033178	51.5406636	18.22237635	72.8895054
48	11280	1356.48	area of	41.57	inch round	36.83042221	26.0430413	52.0860826	18.4152111	73.6608444
49	11515	1384.74	area of	42	inch round	37.21209481	26.31292458	52.6258492	18.6060474	74.4241896
50	11750	1413	area of	42.43	inch round	37.58989226	26.58006772	53.1601354	18.79494613	75.1797845
51	11985	1441.26	area of	42.85	inch round	37.96393025	26.84455252	53.689105	18.98196512	75.9278605
52	12220	1469.52	area of	43.27	inch round	38.33431883	27.1064568	54.2129136	19.16715941	76.6686377
53	12455	1497.78	area of	43.68	inch round	38.70116277	27.36585464	54.7317093	19.35058139	77.4023255
54	12690	1526.04	area of	44.09	inch round	39.06456195	27.62281666	55.2456333	19.53228097	78.1291239
55	12925	1554.3	area of	44.5	inch round	39.4246116	27.87741021	55.7548204	19.7123058	78.8492232
56	13160	1582.56	area of	44.9	inch round	39.78140269	28.12969961	56.2593992	19.89070135	79.5628054
57	13395	1610.82	area of	45.3	inch round	40.13502211	28.3797463	56.7594926	20.06751106	80.2700442
58	13630	1639.08	area of	45.69	inch round	40.48555298	28.62760905	57.2552181	20.24277649	80.971106
59	13865	1667.34	area of	46.09	inch round	40.83307483	28.87334411	57.7466882	20.41653741	81.6661497
60	14100	1695.6	area of	46.48	inch round	41.17766385	29.11700534	58.2340107	20.58883192	82.353277
61	14335	1723.86	area of	46.86	inch round	41.51939306	29.35864438	58.7172888	20.75969653	83.0387861
62	14570	1752.12	area of	47.24	inch round	41.8583325	29.59831076	59.1966215	20.92916625	83.716665
63	14805	1780.38	area of	47.62	inch round	42.19454941	29.83605202	59.672104	21.09727471	84.3890988
64	15040	1808.64	area of	48	inch round	42.52810835	30.07191381	60.1438276	21.26405418	85.0562167
65	15275	1836.9	area of	48.37	inch round	42.85907139	30.30594001	60.61188	21.42953569	85.7181428
66	15510	1865.16	area of	48.74	inch round	43.18749819	30.53817283	61.0763457	21.5937491	86.3749964
67	15745	1893.42	area of	49.11	inch round	43.5134462	30.76865288	61.5373058	21.7567231	87.0268924
68	15980	1921.68	area of	49.48	inch round	43.8369707	30.99741925	61.9948385	21.91848535	87.6739414
69	16215	1949.94	area of	49.84	inch round	44.15812496	31.2245096	62.4490192	22.07906248	88.3162499
70	16450	1978.2	area of	50.2	inch round	44.47696033	31.44996025	62.8999205	22.23848016	88.9539207
71	16685	2006.46	area of	50.56	inch round	44.79352632	31.67380621	63.3476124	22.39676316	89.5870526
72	16920	2034.72	area of	50.91	inch round	45.10787071	31.89608126	63.7921625	22.55393536	90.2157414
73	17155	2062.98	area of	51.26	inch round	45.42003963	32.11681802	64.233636	22.71001982	90.8400793
74	17390	2091.24	area of	51.61	inch round	45.73007763	32.336048	64.672096	22.86503881	91.4601553
75	17625	2119.5	area of	51.96	inch round	46.03802776	32.55380162	65.1076032	23.01901388	92.0760555
76	17860	2147.76	area of	52.31	inch round	46.34393164	32.77010833	65.5402167	23.17196582	92.6878633
77	18095	2176.02	area of	52.65	inch round	46.64782953	32.98499659	65.9699932	23.32391477	93.2956591
78	18330	2204.28	area of	52.99	inch round	46.94976038	33.19849394	66.3969879	23.47488019	93.8995208
79	18565	2232.54	area of	53.33	inch round	47.2497619	33.41062705	66.8212541	23.62488095	94.4995238
80	18800	2260.8	area of	53.67	inch round	47.54787061	33.62142174	67.2428435	23.77393531	95.0957412
81	19035	2289.06	area of	54	inch round	47.8441219	33.83090303	67.6618061	23.92206095	95.6882438
82	19270	2317.32	area of	54.33	inch round	48.13855004	34.03909517	68.0781903	24.06927502	96.2771001
83	19505	2345.58	area of	54.66	inch round	48.4311883	34.24602167	68.4920433	24.21559415	96.8623766
84	19740	2373.84	area of	54.99	inch round	48.72206892	34.45170533	68.9034107	24.36103446	97.4441378
85	19975	2402.1	area of	55.32	inch round	49.0112232	34.65616828	69.3123366	24.5056116	98.0224464
86	20210	2430.36	area of	55.64	inch round	49.29868152	34.85943201	69.718864	24.64934076	98.597363
87	20445	2458.62	area of	55.96	inch round	49.58447338	35.06151737	70.1230347	24.79223669	99.1689468
88	20680	2486.88	area of	56.28	inch round	49.86862741	35.26244461	70.5248892	24.93431371	99.7372548
89	20915	2515.14	area of	56.6	inch round	50.15117147	35.46223343	70.9244669	25.07558574	100.302343
90	21150	2543.4	area of	56.92	inch round	50.43213261	35.66090296	71.3218059	25.21606631	100.864265

floor area served		duct cross section area		duct diameter		1:1 square	1:2 rectangle		1:4 short	1:4 rect long
91	21385	2571.66	area of	57.24	inch round	50.71153715	35.8584718	71.7169436	25.35576857	101.423074
92	21620	2599.92	area of	57.55	inch round	50.98941067	36.05495805	72.1099161	25.49470533	101.978821
93	21855	2628.18	area of	57.86	inch round	51.26577806	36.25037931	72.5007586	25.63288903	102.531556
94	22090	2656.44	area of	58.17	inch round	51.54066356	36.44475271	72.8895054	25.77033178	103.081327
95	22325	2684.7	area of	58.48	inch round	51.81409075	36.63809493	73.2761899	25.90704537	103.628181
96	22560	2712.96	area of	58.79	inch round	52.08608259	36.83042221	73.6608444	26.0430413	104.172165
97	22795	2741.22	area of	59.09	inch round	52.35666147	37.02175036	74.0435007	26.17833073	104.713323
98	23030	2769.48	area of	59.4	inch round	52.62584916	37.21209481	74.4241896	26.31292458	105.251698
99	23265	2797.74	area of	59.7	inch round	52.89366692	37.40147056	74.8029411	26.44683346	105.787334
100	23500	2826	area of	60	inch round	53.16013544	37.58989226	75.1797845	26.58006772	106.320271
101	23735	2854.26	area of	60.3	inch round	53.42527492	37.77737418	75.5547484	26.71263746	106.85055
102	23970	2882.52	area of	60.6	inch round	53.68910504	37.96393025	75.9278605	26.84455252	107.37821
103	24205	2910.78	area of	60.89	inch round	53.95164502	38.14957405	76.2991481	26.97582251	107.90329
104	24440	2939.04	area of	61.19	inch round	54.21291359	38.33431883	76.6686377	27.1064568	108.425827
105	24675	2967.3	area of	61.48	inch round	54.47292906	38.51817753	77.0363551	27.23646453	108.945858
106	24910	2995.56	area of	61.77	inch round	54.73170927	38.70116277	77.4023255	27.36585464	109.463419
107	25145	3023.82	area of	62.06	inch round	54.98927168	38.8832869	77.7665738	27.49463584	109.978543
108	25380	3052.08	area of	62.35	inch round	55.24563331	39.06456195	78.1291239	27.62281666	110.491267
109	25615	3080.34	area of	62.64	inch round	55.5008108	39.24499968	78.4899994	27.7504054	111.001622
110	25850	3108.6	area of	62.93	inch round	55.75482042	39.4246116	78.8492232	27.87741021	111.509641
111	26085	3136.86	area of	63.21	inch round	56.00767805	39.60340894	79.2068179	28.00383902	112.015356
112	26320	3165.12	area of	63.5	inch round	56.25939921	39.78140269	79.5628054	28.12969961	112.518798
113	26555	3193.38	area of	63.78	inch round	56.50999912	39.95860358	79.9172072	28.25499956	113.019998
114	26790	3221.64	area of	64.06	inch round	56.7594926	40.13502211	80.2700442	28.3797463	113.518985
115	27025	3249.9	area of	64.34	inch round	57.00789419	40.31066856	80.6213371	28.5039471	114.015788
116	27260	3278.16	area of	64.62	inch round	57.2552181	40.48555298	80.971106	28.62760905	114.510436
117	27495	3306.42	area of	64.9	inch round	57.50147824	40.65968519	81.3193704	28.75073912	115.002956
118	27730	3334.68	area of	65.18	inch round	57.74668822	40.83307483	81.6661497	28.87334411	115.493376
119	27965	3362.94	area of	65.45	inch round	57.99086135	41.00573131	82.0114626	28.99543067	115.981723
120	28200	3391.2	area of	65.73	inch round	58.23401068	41.17766385	82.3553277	29.11700534	116.468021
121	28435	3419.46	area of	66	inch round	58.47614898	41.34888148	82.697763	29.23807449	116.952298
122	28670	3447.72	area of	66.27	inch round	58.71728877	41.51939306	83.0387861	29.35864438	117.434578
123	28905	3475.98	area of	66.54	inch round	58.95744228	41.68920724	83.3784145	29.47872114	117.914885
124	29140	3504.24	area of	66.81	inch round	59.19662153	41.8583325	83.716665	29.59831076	118.393243
125	29375	3532.5	area of	67.08	inch round	59.43483827	42.02677718	84.0535544	29.71741913	118.869677
126	29610	3560.76	area of	67.35	inch round	59.67210404	42.19454941	84.3890988	29.83605202	119.344208
127	29845	3589.02	area of	67.62	inch round	59.90843012	42.36165719	84.7233144	29.95421506	119.81686
128	30080	3617.28	area of	67.88	inch round	60.14382761	42.52810835	85.0562167	30.07191381	120.287655
129	30315	3645.54	area of	68.15	inch round	60.37830736	42.69391057	85.3878211	30.18915368	120.756615
130	30550	3673.8	area of	68.41	inch round	60.61188002	42.85907139	85.7181428	30.30594001	121.22376
131	30785	3702.06	area of	68.67	inch round	60.84455604	43.02359818	86.0471964	30.42227802	121.689112
132	31020	3730.32	area of	68.93	inch round	61.07634567	43.18749819	86.3749964	30.53817283	122.152691
133	31255	3758.58	area of	69.2	inch round	61.30725895	43.35077854	86.7015571	30.65362948	122.614518
134	31490	3786.84	area of	69.46	inch round	61.53730576	43.5134462	87.0268924	30.76865288	123.074612
135	31725	3815.1	area of	69.71	inch round	61.76649577	43.67550801	87.351016	30.88324789	123.532992
136	31960	3843.36	area of	69.97	inch round	61.99483849	43.8369707	87.6739414	30.99741925	123.989677

floor area served		duct cross section area		duct diameter		1:1 square	1:2 rectangle			1:4 short	1:4 rect long
137	32195	3871.62	area of	70.23	inch round	62.22234325	43.99784086	87.9956817		31.11117163	124.444687
138	32430	3899.88	area of	70.48	inch round	62.44901921	44.15812496	88.3162499		31.2245096	124.898038
139	32665	3928.14	area of	70.74	inch round	62.67487535	44.31782937	88.6356587		31.33743767	125.349751
140	32900	3956.4	area of	70.99	inch round	62.89992051	44.47696033	88.9539207		31.44996025	125.799841
141	33135	3984.66	area of	71.25	inch round	63.12416336	44.63552397	89.2710479		31.56208168	126.248327
142	33370	4012.92	area of	71.5	inch round	63.34761243	44.79352632	89.5870526		31.67380621	126.695225
143	33605	4041.18	area of	71.75	inch round	63.57027607	44.95097329	89.9019466		31.78513804	127.140552
144	33840	4069.44	area of	72	inch round	63.79216253	45.10787071	90.2157414		31.89608126	127.584325
145	34075	4097.7	area of	72.25	inch round	64.01327987	45.26422428	90.5284486		32.00663994	128.02656
146	34310	4125.96	area of	72.5	inch round	64.23363605	45.42003963	90.8400793		32.11681802	128.467272
147	34545	4154.22	area of	72.75	inch round	64.45323886	45.57532227	91.1506445		32.22661943	128.906478
148	34780	4182.48	area of	72.99	inch round	64.67209599	45.73007763	91.4601553		32.336048	129.344192
149	35015	4210.74	area of	73.24	inch round	64.89021498	45.88431104	91.7686221		32.44510749	129.78043
150	35250	4239	area of	73.48	inch round	65.10760324	46.03802776	92.0760555		32.55380162	130.215206
151	35485	4267.26	area of	73.73	inch round	65.32426808	46.19123293	92.3824659		32.66213404	130.648536
152	35720	4295.52	area of	73.97	inch round	65.5421666	46.34393164	92.6878633		32.77010833	131.08433
153	35955	4323.78	area of	74.22	inch round	65.75545605	46.49612887	92.9922577		32.87772802	131.510912
154	36190	4352.04	area of	74.46	inch round	65.96999318	46.64782953	93.2956591		32.98499659	131.939986
155	36425	4380.3	area of	74.7	inch round	66.18383488	46.79903845	93.5980769		33.09191744	132.36767
156	36660	4408.56	area of	74.94	inch round	66.39698788	46.94976038	93.8995208		33.19849394	132.793976
157	36895	4436.82	area of	75.18	inch round	66.60945879	47.1	94.2		33.30472939	133.218918
158	37130	4465.08	area of	75.42	inch round	66.8212541	47.2497619	94.4995238		33.41062705	133.642508
159	37365	4493.34	area of	75.66	inch round	67.03238024	47.39905062	94.7981012		33.51619012	134.06476
160	37600	4521.6	area of	75.89	inch round	67.24284349	47.54787061	95.0957412		33.62142174	134.485687
161	37835	4549.86	area of	76.13	inch round	67.45265006	47.69622627	95.3924525		33.72632503	134.9053
162	38070	4578.12	area of	76.37	inch round	67.66180607	47.8441219	95.6882438		33.83090303	135.323612
163	38305	4606.38	area of	76.6	inch round	67.87031752	47.99156176	95.9831235		33.93515876	135.740635
164	38540	4634.64	area of	76.84	inch round	68.07819034	48.13855004	96.2771001		34.03909517	136.156381
165	38775	4662.9	area of	77.07	inch round	68.28543036	48.28509087	96.5701817		34.14271518	136.570861
166	39010	4691.16	area of	77.3	inch round	68.49204333	48.4311883	96.8623766		34.24602167	136.984087
167	39245	4719.42	area of	77.54	inch round	68.69803491	48.57684634	97.1536927		34.34901745	137.39607
168	39480	4747.68	area of	77.77	inch round	68.90341066	48.72206892	97.4441378		34.45170533	137.806821
169	39715	4775.94	area of	78	inch round	69.10817607	48.86685994	97.7337199		34.55408804	138.216352
170	39950	4804.2	area of	78.23	inch round	69.31233656	49.0112232	98.0224464		34.65616828	138.624673
171	40185	4832.46	area of	78.46	inch round	69.51589746	49.1551625	98.310325		34.75794873	139.031795
172	40420	4860.72	area of	78.69	inch round	69.71886402	49.29868152	98.597363		34.85943201	139.437728
173	40655	4888.98	area of	78.92	inch round	69.92124141	49.44178395	98.8835679		34.9606207	139.842483
174	40890	4917.24	area of	79.15	inch round	70.12303473	49.58447338	99.1689468		35.06151737	140.246069
175	41125	4945.5	area of	79.37	inch round	70.32424902	49.72675336	99.4535067		35.16212451	140.648498
176	41360	4973.76	area of	79.6	inch round	70.52488922	49.86862741	99.7372548		35.26244461	141.049778
177	41595	5002.02	area of	79.82	inch round	70.72496023	50.01009898	100.020198		35.36248012	141.44992
178	41830	5030.28	area of	80.05	inch round	70.92446686	50.15117147	100.302343		35.46223343	141.848934
179	42065	5058.54	area of	80.27	inch round	71.12341387	50.29184825	100.583696		35.56170693	142.246828
180	42300	5086.8	area of	80.5	inch round	71.32180592	50.43213261	100.864265		35.66090296	142.643612
181	42535	5115.06	area of	80.72	inch round	71.51964765	50.57202784	101.144056		35.75982383	143.039295
182	42770	5143.32	area of	80.94	inch round	71.7169436	50.71153715	101.423074		35.8584718	143.433887

floor area served		duct cross section area		duct diameter		1:1 square	1:2 rectangle			1:4 short	1:4 rect long
183	43005	5171.58	area of	81.17	inch round	71.91369828	50.85066371	101.701327		35.95684914	143.827397
184	43240	5199.84	area of	81.39	inch round	72.1099161	50.98941067	101.978821		36.05495805	144.219832
185	43475	5228.1	area of	81.61	inch round	72.30560144	51.1277811	102.255562		36.15280072	144.611203
186	43710	5256.36	area of	81.83	inch round	72.50075862	51.26577806	102.531556		36.25037931	145.001517
187	43945	5284.62	area of	82.05	inch round	72.69539188	51.40340456	102.806809		36.34769594	145.390784
188	44180	5312.88	area of	82.27	inch round	72.88950542	51.54066356	103.081327		36.44475271	145.779011
189	44415	5341.14	area of	82.49	inch round	73.08310338	51.67755799	103.355116		36.54155169	146.166207
190	44650	5369.4	area of	82.7	inch round	73.27618986	51.81409075	103.628181		36.63809493	146.55238
191	44885	5397.66	area of	82.92	inch round	73.46876887	51.95026468	103.900529		36.73438444	146.937538
192	45120	5425.92	area of	83.14	inch round	73.66084442	52.08608259	104.172165		36.83042221	147.321689
193	45355	5454.18	area of	83.35	inch round	73.85242041	52.22154728	104.443095		36.9262102	147.704841
194	45590	5482.44	area of	83.57	inch round	74.04350073	52.35666147	104.713323		37.02175036	148.087001
195	45825	5510.7	area of	83.79	inch round	74.2340892	52.49142787	104.982856		37.1170446	148.468178
196	46060	5538.96	area of	84	inch round	74.42418962	52.62584916	105.251698		37.21209481	148.848379
197	46295	5567.22	area of	84.21	inch round	74.61380569	52.75992798	105.519856		37.30690285	149.227611
198	46530	5595.48	area of	84.43	inch round	74.80341112	52.89366692	105.787334		37.40147056	149.605882
199	46765	5623.74	area of	84.64	inch round	74.99159953	53.02706856	106.054137		37.49579976	149.983199
200	47000	5652	area of	84.85	inch round	75.17978452	53.16013544	106.320271		37.58989226	150.359569
201	47235	5680.26	area of	85.06	inch round	75.36749963	53.29287007	106.58574		37.68374981	150.734999
202	47470	5708.52	area of	85.28	inch round	75.55474836	53.42527492	106.85055		37.77737418	151.109497
203	47705	5736.78	area of	85.49	inch round	75.74153418	53.55735244	107.114705		37.87076709	151.483068
204	47940	5765.04	area of	85.7	inch round	75.9278605	53.68910504	107.37821		37.96393025	151.855721
205	48175	5793.3	area of	85.91	inch round	76.11373069	53.82053511	107.64107		38.05686535	152.227461
206	48410	5821.56	area of	86.12	inch round	76.29914809	53.95164502	107.90329		38.14957405	152.598296
207	48645	5849.82	area of	86.32	inch round	76.484116	54.08243708	108.164874		38.242058	152.968232
208	48880	5878.08	area of	86.53	inch round	76.66863766	54.21291359	108.425827		38.33431883	153.337275
209	49115	5906.34	area of	86.74	inch round	76.85271628	54.34307684	108.686154		38.42635814	153.705433
210	49350	5934.6	area of	86.95	inch round	77.03635505	54.47292906	108.945858		38.51817753	154.07271
211	49585	5962.86	area of	87.16	inch round	77.21955711	54.60247247	109.204945		38.60977855	154.439114
212	49820	5991.12	area of	87.36	inch round	77.40232555	54.73170927	109.463419		38.70116277	154.804651
213	50055	6019.38	area of	87.57	inch round	77.58466343	54.86064163	109.721283		38.79233172	155.169327
214	50290	6047.64	area of	87.77	inch round	77.7665738	54.98927168	109.978543		38.8832869	155.533148
215	50525	6075.9	area of	87.98	inch round	77.94805963	55.11760154	110.235203		38.97402981	155.896119
216	50760	6104.16	area of	88.18	inch round	78.12912389	55.24563331	110.491267		39.06456195	156.258248
217	50995	6132.42	area of	88.39	inch round	78.30976951	55.373336905	110.746738		39.15488475	156.619539
218	51230	6160.68	area of	88.59	inch round	78.48999936	55.5008108	111.001622		39.24499968	156.979999
219	51465	6188.94	area of	88.79	inch round	78.66981632	55.6279606	111.255921		39.33490816	157.339633
220	51700	6217.2	area of	88.99	inch round	78.8492232	55.75482042	111.509641		39.4246116	157.698446
221	51935	6245.46	area of	89.2	inch round	79.02822281	55.88139225	111.762785		39.5141114	158.056446
222	52170	6273.72	area of	89.4	inch round	79.20681789	56.00767805	112.015356		39.60340894	158.413636
223	52405	6301.98	area of	89.6	inch round	79.38501118	56.13367973	112.267359		39.69250559	158.770022
224	52640	6330.24	area of	89.8	inch round	79.56280538	56.25939921	112.518798		39.78140269	159.125611
225	52875	6358.5	area of	90	inch round	79.74020316	56.38483839	112.769677		39.87010158	159.480406
226	53110	6386.76	area of	90.2	inch round	79.91720716	56.50999912	113.019998		39.95860358	159.834414
227	53345	6415.02	area of	90.4	inch round	80.09381999	56.63488324	113.269766		40.04690999	160.18764
228	53580	6443.28	area of	90.6	inch round	80.27004423	56.7594926	113.518985		40.13502211	160.540088

floor area served		duct cross section area		duct diameter		1:1 square	1:2 rectangle			1:4 short	1:4 rect long
229	53815	6471.54	area of	90.8	inch round	80.44588243	56.88382899	113.767658		40.22294122	160.891765
230	54050	6499.8	area of	90.99	inch round	80.62133713	57.00789419	114.015788		40.31066856	161.242674
231	54285	6528.06	area of	91.19	inch round	80.79641081	57.13168998	114.26338		40.39820541	161.592822
232	54520	6556.32	area of	91.39	inch round	80.97110596	57.2552181	114.510436		40.48555298	161.942212
233	54755	6584.58	area of	91.59	inch round	81.14542501	57.37848029	114.756961		40.5727125	162.29085
234	54990	6612.84	area of	91.78	inch round	81.31937039	57.50147824	115.002956		40.65968519	162.638741
235	55225	6641.1	area of	91.98	inch round	81.49294448	57.62421366	115.248427		40.74647224	162.985889
236	55460	6669.36	area of	92.17	inch round	81.66614966	57.74668822	115.493376		40.83307483	163.332299
237	55695	6697.62	area of	92.37	inch round	81.83898826	57.86890357	115.737807		40.91949413	163.677977
238	55930	6725.88	area of	92.56	inch round	82.01146261	57.99086135	115.981723		41.00573131	164.022925
239	56165	6754.14	area of	92.76	inch round	82.183575	58.11256319	116.225126		41.0917875	164.36715
240	56400	6782.4	area of	92.95	inch round	82.3553277	58.23401068	116.468021		41.17766385	164.710655
241	56635	6810.66	area of	93.15	inch round	82.52672294	58.35520542	116.710411		41.26336147	165.053446
242	56870	6838.92	area of	93.34	inch round	82.69776297	58.47614898	116.952298		41.34888148	165.395526
243	57105	6867.18	area of	93.53	inch round	82.86844997	58.59684292	117.193686		41.43422498	165.7369
244	57340	6895.44	area of	93.72	inch round	83.03878612	58.71728877	117.434578		41.51939306	166.075722
245	57575	6923.7	area of	93.91	inch round	83.20877358	58.83748805	117.674976		41.60438679	166.417547
246	57810	6951.96	area of	94.11	inch round	83.37841447	58.95744228	117.914885		41.68920724	166.756829
247	58045	6980.22	area of	94.3	inch round	83.54771092	59.07715294	118.154306		41.77385546	167.095422
248	58280	7008.48	area of	94.49	inch round	83.71666501	59.19662153	118.393243		41.8583325	167.43333
249	58515	7036.74	area of	94.68	inch round	83.8852788	59.31584948	118.631699		41.9426394	167.770558
250	58750	7065	area of	94.87	inch round	84.05355436	59.43483827	118.869677		42.02677718	168.107109
251	58985	7093.26	area of	95.06	inch round	84.22149369	59.55358931	119.107179		42.11074685	168.442987
252	59220	7121.52	area of	95.25	inch round	84.38909882	59.67210404	119.344208		42.19454941	168.778198
253	59455	7149.78	area of	95.44	inch round	84.55637173	59.79038384	119.580768		42.27818586	169.112743
254	59690	7178.04	area of	95.62	inch round	84.72331438	59.90843012	119.81686		42.36165719	169.446629
255	59925	7206.3	area of	95.81	inch round	84.88992873	60.02624426	120.052489		42.44496437	169.779857
256	60160	7234.56	area of	96	inch round	85.0562167	60.14382761	120.287655		42.52810835	170.112433
257	60395	7262.82	area of	96.19	inch round	85.22218021	60.26118154	120.522363		42.61109011	170.44436
258	60630	7291.08	area of	96.37	inch round	85.38782115	60.37830736	120.756615		42.69391057	170.775642
259	60865	7319.34	area of	96.56	inch round	85.55314138	60.49520642	120.990413		42.77657069	171.106283
260	61100	7347.6	area of	96.75	inch round	85.71814277	60.61188002	121.22376		42.85907139	171.436286
261	61335	7375.86	area of	96.93	inch round	85.88282715	60.72832947	121.456659		42.94141358	171.765654
262	61570	7404.12	area of	97.12	inch round	86.04719635	60.84455604	121.689112		43.02359818	172.094393
263	61805	7432.38	area of	97.3	inch round	86.21125217	60.96056102	121.921122		43.10562608	172.422504
264	62040	7460.64	area of	97.49	inch round	86.37499638	61.07634567	122.152691		43.18749819	172.749993
265	62275	7488.9	area of	97.67	inch round	86.53843077	61.19191123	122.383822		43.26921538	173.076862
266	62510	7517.16	area of	97.86	inch round	86.70155708	61.30725895	122.614518		43.35077854	173.403114
267	62745	7545.42	area of	98.04	inch round	86.86437705	61.42239005	122.84478		43.43218852	173.728754
268	62980	7573.68	area of	98.22	inch round	87.0268924	61.53730576	123.074612		43.5134462	174.053785
269	63215	7601.94	area of	98.41	inch round	87.18910482	61.65200727	123.304015		43.59455241	174.37821
270	63450	7630.2	area of	98.59	inch round	87.35101602	61.76649577	123.532992		43.67550801	174.702032
271	63685	7658.46	area of	98.77	inch round	87.51262766	61.88077246	123.761545		43.75631383	175.025255
272	63920	7686.72	area of	98.95	inch round	87.6739414	61.99483849	123.989677		43.8369707	175.347883
273	64155	7714.98	area of	99.14	inch round	87.83495887	62.10869504	124.21739		43.91747944	175.669918
274	64390	7743.24	area of	99.32	inch round	87.99568171	62.22234325	124.444687		43.99784086	175.991363

floor area served		duct cross section area		duct diameter	1:1 square	1:2 rectangle			1:4 short	1:4 rect long
275	64625	7771.5	area of	99.5 inch round	88.15611153	62.33578427	124.671569	44.07805576	176.312223	
276	64860	7799.76	area of	99.68 inch round	88.31624992	62.44901921	124.898038	44.15812496	176.6325	
277	65095	7828.02	area of	99.86 inch round	88.47609847	62.5620492	125.124098	44.23804923	176.952197	
278	65330	7856.28	area of	100 inch round	88.63565874	62.67487535	125.349751	44.31782937	177.271317	
279	65565	7884.54	area of	100.2 inch round	88.79493229	62.78749876	125.574998	44.39746614	177.589865	
280	65800	7912.8	area of	100.4 inch round	88.95392066	62.89992051	125.799841	44.47696033	177.907841	
281	66035	7941.06	area of	100.6 inch round	89.11262537	63.01214169	126.024283	44.55631268	178.225251	
282	66270	7969.32	area of	100.8 inch round	89.27104794	63.12416336	126.248327	44.63552397	178.542096	
283	66505	7997.58	area of	100.9 inch round	89.42918987	63.23598659	126.471973	44.71459493	178.85838	
284	66740	8025.84	area of	101.1 inch round	89.58705264	63.34761243	126.695225	44.79352632	179.174105	
285	66975	8054.1	area of	101.3 inch round	89.74463772	63.45904191	126.918084	44.87231886	179.489275	
286	67210	8082.36	area of	101.5 inch round	89.90194659	63.57027607	127.140552	44.95097329	179.803893	
287	67445	8110.62	area of	101.6 inch round	90.05898067	63.68131594	127.362632	45.02949034	180.117961	
288	67680	8138.88	area of	101.8 inch round	90.21574142	63.79216253	127.584325	45.10787071	180.431483	
289	67915	8167.14	area of	102 inch round	90.37223025	63.90281684	127.805634	45.18611512	180.74446	
290	68150	8195.4	area of	102.2 inch round	90.52844857	64.01327987	128.02656	45.26422428	181.056897	
291	68385	8223.66	area of	102.4 inch round	90.68439778	64.12355262	128.247105	45.34219889	181.368796	
292	68620	8251.92	area of	102.5 inch round	90.84007926	64.23363605	128.467272	45.42003963	181.680159	
293	68855	8280.18	area of	102.7 inch round	90.99549439	64.34353114	128.687062	45.4977472	181.990989	
294	69090	8308.44	area of	102.9 inch round	91.15064454	64.45323886	128.906478	45.57532227	182.301289	
295	69325	8336.7	area of	103.1 inch round	91.30553105	64.56276016	129.12552	45.65276552	182.611062	
296	69560	8364.96	area of	103.2 inch round	91.46015526	64.67209599	129.344192	45.73007763	182.920311	
297	69795	8393.22	area of	103.4 inch round	91.6145185	64.78124729	129.562495	45.80725925	183.229037	
298	70030	8421.48	area of	103.6 inch round	91.76862209	64.89021498	129.78043	45.88431104	183.537244	
299	70265	8449.74	area of	103.7 inch round	91.92246733	64.99899999	129.998	45.96123366	183.844935	
300	70500	8478	area of	103.9 inch round	92.07605552	65.10760324	130.215206	46.03802776	184.152111	
301	70735	8506.26	area of	104.1 inch round	92.22938794	65.21602564	130.432051	46.11469397	184.458776	
302	70970	8534.52	area of	104.3 inch round	92.38246587	65.32426808	130.648536	46.19123293	184.764932	
303	71205	8562.78	area of	104.4 inch round	92.53529057	65.43233146	130.864663	46.26764528	185.070581	
304	71440	8591.04	area of	104.6 inch round	92.68786328	65.54021666	131.080433	46.34393164	185.375727	
305	71675	8619.3	area of	104.8 inch round	92.84018526	65.64792457	131.295849	46.42009263	185.680371	
306	71910	8647.56	area of	105 inch round	92.99225774	65.75545605	131.510912	46.49612887	185.984515	
307	72145	8675.82	area of	105.1 inch round	93.14408194	65.86281197	131.725624	46.57204097	186.288164	
308	72380	8704.08	area of	105.3 inch round	93.29565906	65.96999318	131.939986	46.64782953	186.591318	
309	72615	8732.34	area of	105.5 inch round	93.44699032	66.07700054	132.154001	46.72349516	186.893981	
310	72850	8760.6	area of	105.6 inch round	93.5980769	66.18383488	132.36767	46.79903845	187.196154	
311	73085	8788.86	area of	105.8 inch round	93.74891999	66.29049706	132.580994	46.87446	187.49784	
312	73320	8817.12	area of	106 inch round	93.89952077	66.39698788	132.793976	46.94976038	187.799042	
313	73555	8845.38	area of	106.2 inch round	94.04988038	66.50330819	133.006616	47.02494019	188.099761	
314	73790	8873.64	area of	106.3 inch round	94.2	66.60945879	133.218918	47.1	188.4	
315	74025	8901.9	area of	106.5 inch round	94.34988076	66.71544049	133.430881	47.17494038	188.699762	
316	74260	8930.16	area of	106.7 inch round	94.49952381	66.8212541	133.642508	47.2497619	188.999048	
317	74495	8958.42	area of	106.8 inch round	94.64893026	66.92690042	133.853801	47.32446513	189.297861	
318	74730	8986.68	area of	107 inch round	94.79810125	67.03238024	134.06476	47.39905062	189.596202	
319	74965	9014.94	area of	107.2 inch round	94.94703787	67.13769433	134.275389	47.47351893	189.894076	
320	75200	9043.2	area of	107.3 inch round	95.09574123	67.24284349	134.485687	47.54787061	190.191482	

floor area served		duct cross section area		duct diameter		1:1 square	1:2 rectangle			<i>1:4 short</i>	<i>1:4 rect long</i>
321	75435	9071.46	area of	107.5	inch round	95.24421242	67.34782847	134.695657		<i>47.62210621</i>	<i>190.488425</i>
322	75670	9099.72	area of	107.7	inch round	95.39245253	67.45265006	134.9053		<i>47.69622627</i>	<i>190.784905</i>
323	75905	9127.98	area of	107.8	inch round	95.54046263	67.55730901	135.114618		<i>47.77023132</i>	<i>191.080925</i>
324	76140	9156.24	area of	108	inch round	95.68824379	67.66180607	135.323612		<i>47.8441219</i>	<i>191.376488</i>
325	76375	9184.5	area of	108.2	inch round	95.83579707	67.76614199	135.532284		<i>47.91789853</i>	<i>191.671594</i>
326	76610	9212.76	area of	108.3	inch round	95.98312352	67.87031752	135.740635		<i>47.99156176</i>	<i>191.966247</i>
327	76845	9241.02	area of	108.5	inch round	96.13022418	67.97433339	135.948667		<i>48.06511209</i>	<i>192.260448</i>
328	77080	9269.28	area of	108.7	inch round	96.27710008	68.07819034	136.156381		<i>48.13855004</i>	<i>192.5542</i>
329	77315	9297.54	area of	108.8	inch round	96.42375226	68.18188909	136.363778		<i>48.21187613</i>	<i>192.847505</i>
330	77550	9325.8	area of	109	inch round	96.57018173	68.28543036	136.570861		<i>48.28509087</i>	<i>193.140363</i>
331	77785	9354.06	area of	109.2	inch round	96.71638951	68.38881487	136.77763		<i>48.35819476</i>	<i>193.432779</i>
332	78020	9382.32	area of	109.3	inch round	96.8623766	68.49204333	136.984087		<i>48.4311883</i>	<i>193.724753</i>
333	78255	9410.58	area of	109.5	inch round	97.00814399	68.59511644	137.190233		<i>48.50407199</i>	<i>194.016288</i>
334	78490	9438.84	area of	109.7	inch round	97.15369267	68.69803491	137.39607		<i>48.57684634</i>	<i>194.307385</i>
335	78725	9467.1	area of	109.8	inch round	97.29902363	68.80079941	137.601599		<i>48.64951182</i>	<i>194.598047</i>
336	78960	9495.36	area of	110	inch round	97.44413784	68.90341066	137.806821		<i>48.72206892</i>	<i>194.888276</i>
337	79195	9523.62	area of	110.1	inch round	97.58903627	69.00586932	138.011739		<i>48.79451813</i>	<i>195.178073</i>
338	79430	9551.88	area of	110.3	inch round	97.73371987	69.10817607	138.216352		<i>48.86685994</i>	<i>195.46744</i>
339	79665	9580.14	area of	110.5	inch round	97.8781896	69.2103316	138.420663		<i>48.9390948</i>	<i>195.756379</i>
340	79900	9608.4	area of	110.6	inch round	98.02244641	69.31233656	138.624673		<i>49.0112232</i>	<i>196.044893</i>
341	80135	9636.66	area of	110.8	inch round	98.16649123	69.41419163	138.828383		<i>49.08324561</i>	<i>196.332982</i>
342	80370	9664.92	area of	111	inch round	98.31032499	69.51589746	139.031795		<i>49.1551625</i>	<i>196.62065</i>
343	80605	9693.18	area of	111.1	inch round	98.45394863	69.61745471	139.234909		<i>49.22697431</i>	<i>196.907897</i>
344	80840	9721.44	area of	111.3	inch round	98.59736305	69.71886402	139.437728		<i>49.29868152</i>	<i>197.194726</i>
345	81075	9749.7	area of	111.4	inch round	98.74056917	69.82012604	139.640252		<i>49.37028458</i>	<i>197.481138</i>
346	81310	9777.96	area of	111.6	inch round	98.8835679	69.92124141	139.842483		<i>49.44178395</i>	<i>197.767136</i>
347	81545	9806.22	area of	111.8	inch round	99.02636013	70.02221076	140.044422		<i>49.51318006</i>	<i>198.05272</i>
348	81780	9834.48	area of	111.9	inch round	99.16894675	70.12303473	140.246069		<i>49.58447338</i>	<i>198.337894</i>
349	82015	9862.74	area of	112.1	inch round	99.31132866	70.22371394	140.447428		<i>49.65566433</i>	<i>198.622657</i>
350	82250	9891	area of	112.2	inch round	99.45350673	70.32424902	140.648498		<i>49.72675336</i>	<i>198.907013</i>
351	82485	9919.26	area of	112.4	inch round	99.59548183	70.42464057	140.849281		<i>49.79774091</i>	<i>199.190964</i>