

# CONVERSION FORMULAS & TABLES

## GAS PIPING

Capacity of Pipe of Different Diameters and Length, in Cu. Ft. Per Hr. with Press. Drop of 0.3 In. and Specific Gravity of 0.70.

Length of Pipe Feet	Diameter of Pipe - Inches						
	¼	1	1¼	1½	2	3	4
15	159	319	694	1130	2296	6019	12853
30	111	223	495	787	1648	4352	8982
45	91	184	403	648	1366	3611	7315
60	80	160	352	565	1195	3195	6297
75	71	143	320	505	1037	2778	5556
90	65	130	287	454	926	2500	5093
105	60	121	264	417	852	2269	4722
120	...	111	250	389	796	2130	4445
150	...	100	224	352	722	1935	4028
180	...	92	208	324	666	1805	3704
210	...	85	190	296	611	1648	3426
240	...	...	176	278	574	1555	3232
270	...	...	165	264	537	1463	3010
300	...	...	157	250	505	1380	2778
450	...	...	130	210	417	1139	2315
600	...	...	110	178	361	954	1972

Note: In using this table no allowance for ordinary number of fittings is necessary. When Specific Gravity is not 0.70, multiply by:  $\sqrt{0.70}$

Sp. of Gas  
For Pressure drops other than 0.3, multiply by:  
 $\sqrt{\text{Press. Drop, In. of Water} / 0.3}$

METER CAPACITY		
At ½ pressure drop in cubic feet per hour		
No.	Make	Capacity
5	Light Tin	150
10	Light Tin	300
20	Light Tin	450
1A	Sprague	175
2	Sprague	305
3	Sprague	400
5	Sprague	856
5B	Metric	165
10B	Metric	250
20B	Metric	350
30B	Metric	550
60B	Metric	950
1	Ironclad	165

## GAS RATE - CUBIC FEET PER HOUR

Seconds for one Revolution	SIZE OF TEST DIAL				
	¼ cu. ft.	½ cu. ft.	1 cu. ft.	2 cu. ft.	5 cu. ft.
10	90	180	360	720	1800
11	82	164	327	655	1636
12	75	150	300	600	1500
13	69	138	277	555	1385
14	64	129	257	514	1286
15	60	120	240	480	1200
16	56	113	225	450	1125
17	53	106	212	424	1059
18	50	100	200	400	1000
19	47	95	189	379	947
20	45	90	180	360	900
21	43	86	171	343	857
22	41	82	164	327	818
23	39	78	157	313	783
24	37	75	150	300	750
25	36	72	144	288	720
26	34	69	138	277	692
27	33	67	133	267	667
28	32	64	129	257	643
29	31	62	124	248	621
30	30	60	120	240	600
31	...	...	116	232	581
32	28	56	113	225	563
33	...	...	109	218	545
34	26	53	106	212	529
35	...	...	103	206	514
36	25	50	100	200	500
37	...	...	97	195	486
38	23	47	95	189	474
39	...	...	92	185	462
40	22	45	90	180	450
41	...	...	...	176	439
42	21	43	86	172	429
43	...	...	...	167	419
44	...	41	82	164	409
45	20	40	80	160	400
46	...	...	78	157	391
47	19	38	76	153	383
48	...	...	75	150	375
49	...	...	...	147	367

## RESIDENTIAL DUCT SIZING GUIDE

The following duct sizes are based on a friction drop of .10 inches per 100 feet of lineal duct. This "Equal-Friction" method of duct sizing should be adequate for normal residential furnace heating and air conditioning applications. Larger air volumes or higher static pressures should be dealt with on an individual job basis.

## RECTANGULAR AND ROUND DUCT

Air Volume CFM	Duct Height Inches					Equivalent Round Duct"	Air Volume CFM
	4"	6"	8"	10"	12"		
50	6 x 4					5	50
75	6 x 4					6	75
100	8 x 4	6 x 6				6	100
125	10 x 4	6 x 6				7	125
150	10 x 4	8 x 6				7	150
175	12 x 4	8 x 6				8	175
200	14 x 4	8 x 6				8	200
225	16 x 4	10 x 6				8	220
250	16 x 4	10 x 6				9	250
275		12 x 6	8 x 8			9	275
300		12 x 6	8 x 8			9	300
400		14 x 6	10 x 8			10	400
500		18 x 6	12 x 8	10 x 10		11	500
600		20 x 6	14 x 8	12 x 10		12	600
700		24 x 6	16 x 8	12 x 10		12	700
800		26 x 6	18 x 8	14 x 10	12 x 12	13	800
900		30 x 6	20 x 8	16 x 10	12 x 12	14	900
1000			22 x 8	16 x 10	14 x 12	14	1000
1100			24 x 8	18 x 10	16 x 12	15	1100
1200			26 x 8	20 x 10	16 x 12	15	1200
1300			28 x 8	20 x 10	18 x 12	16	1300
1400			30 x 8	22 x 10	18 x 12	16	1400
1500				24 x 10	20 x 12	16	1500
1600				24 x 10	20 x 12	17	1600
1700				26 x 10	22 x 12	17	1700
1800				28 x 10	22 x 12	18	1800
1900				30 x 10	22 x 12	18	1900
2000					24 x 12	18	2000

