

Imperial Sizing Charts



ROOTS® Meter Sizing Chart

LINE MOUNTED

MODEL	8C175*	11C175*	15C175*	2M175	3M175	5M175	7M175	11M175	16M175	23M175	38M175	56M175	102M125
RATING PSIG	800	1100	1500	2000	3000	5000	7000	11000	16000	23000	38000	56000	102000
*ALSO AVAILABLE IN 200 PSIG RATING													
CORRECTED CAPACITY AT METERING PRESSURE — IN MSCFH													
1	0.84	1.15	1.6	2.09	3.1	5.2	7.3	11.5	16.7	24.0	39.7	58.5	106.6
3	0.95	1.30	1.8	2.60	3.5	5.9	8.3	13.0	18.9	27.2	44.9	66.2	120.5
5	1.05	1.45	2.0	2.63	4.0	6.6	9.2	14.5	21.1	30.3	50.0	73.8	134.3
10	1.33	1.82	2.5	3.31	5.0	8.3	11.6	18.2	26.5	38.1	62.9	92.7	168.9
15	1.60	2.20	3.0	3.89	6.0	10.0	14.0	22.0	31.9	45.9	75.8	111.8	203.6
20	1.87	2.57	3.5	4.67	7.0	11.7	16.3	25.7	37.4	53.7	88.7	130.8	238.2
25	2.14	2.94	4.0	5.35	8.0	13.4	18.7	29.4	42.8	61.5	101.7	149.8	272.9
30	2.41	3.32	4.5	6.03	9.0	15.1	21.1	33.2	48.2	69.3	114.5	168.8	307.4
40	2.96	4.06	5.5	7.35	11.1	18.5	25.9	40.6	59.1	84.9	140.3	206.8	376.7
50	3.50	4.81	6.6	8.74	13.1	21.9	30.6	48.1	70.0	100.6	166.1	244.8	445.9
60	4.04	5.56	7.6	10.10	15.2	25.3	35.4	55.6	80.8	116.2	191.9	282.9	515.2
70	4.58	6.30	8.6	11.50	17.2	28.7	40.1	63.0	91.7	131.8	217.7	320.9	584.5
80	5.31	7.02	9.6	12.80	19.2	32.0	44.9	70.5	102.5	147.4	243.5	358.9	653.7
90	5.67	7.80	10.6	14.20	21.3	35.4	49.6	78.0	113.4	163.0	269.3	396.9	723.0
100	6.21	8.54	11.7	15.50	23.3	38.8	54.4	85.4	124.3	178.6	295.1	434.9	792.1
110	6.75	9.31	12.7	16.93	25.4	42.3	59.2	93.1	135.4	194.2	320.9	472.9	861.4
120	7.30	10.06	13.7	18.25	27.4	45.6	63.9	100.4	146.0	209.9	346.7	510.9	930.6
125	7.57	10.40	14.2	18.90	28.4	47.3	66.2	104.1	151.4	217.7	359.6	530.0	965.3
135	8.11	11.16	15.3	20.33	30.5	50.8	71.1	111.8	162.6	233.8	386.2	568.0	
150	8.93	12.30	17.0	22.30	33.0	56.0	78.0	123.0	179.0	256.7	424.1	625.0	
175	10.30	14.10	19.0	25.70	39.0	64.0	90.0	141.0	205.0	295.7	488.6	720.2	
200	11.67	16.01	21.9										

HIGH PRESSURE METERS

MODEL	1M740	1M1480	3M740	3M1480	3.6M600	7M1440
RATING	1000	1000	3000	3000	3600	7000
CORRECTED CAPACITY AT METERING PRESSURE - IN MSCFH						
125	9.5	9.5	28.4	28.4	34.1	66.2
175	12.9	12.9	38.6	38.6	46.3	90.0
250	18.0	18.0	53.9	53.9	64.6	126
350	24.7	24.7	74.2	74.2	89.1	173
600	41.7	41.7	125	125	150	292
800	55.3	55.3	166	166	387	
1200	82.4	82.4	247	247	577	
1480		101	304	304		

SIZING INSTRUCTIONS

To select the proper meter size, use the Minimum Operating Pressure and the Maximum Instantaneous Hourly Flow Rate. Do not exceed meter's maximum allowable operating pressure.

To prevent oversizing of a meter, sizing should be based upon the total connected load giving consideration to the load diversity. When using this method to size a meter, a selected diversity factor times the total connected load will be used as the Maximum Instantaneous Flow Rate for sizing purposes.

A diversity factor of 0.85 is commonly used for a single application where two or more major appliances are in use (i.e. boilers, furnaces, space heaters, etc.)

As the number of appliances considered when determining a connected load increases, the diversity factor will typically decrease. For applications such as multiple ranges and water heaters, some examples of commonly used diversity factors are:

Qty	Factor	Qty	Factor*
0-5	1	6	0.9
7	0.85	8	0.83

*The diversity factors listed above are estimates. For proper sizing, consult your company or industry standards for determining accepted values.

ENERGY VALUE

	BTU/Cu. Ft.
Gas	1498
Acetylene	3200
Butane	1758
Ethane	1606
Ethylene	997
Methane	965/1055
Natural	2550
Propane	

Note: All capacities listed are Standard Cubic Feet per Hour (SCFH) and based upon Average Atmospheric Pressure (14.4 PSIA), Base Pressure (14.73 PSIA), and Base temperature (60 F). Tables do not take into account Supercompressibility. Please refer to RM-135 for further information on the Application of Temperature and/or Pressure Correction Factors in Gas Measurement.