

Air Measurement Set-Up

1 ON/ ESC	2 HOLD	3 REC/ ENTER
4 UNIT/ ZERO	5 C / F	6 FUNCTION
←	↑	↓

Air Velocity Measurement (fpm, mph, knot, Km/h, M/S)

1. Power on the meter by pressing button **1** (ON)
2. Select meter function by pressing button **6** (Function)
3. Press button **4** (Unit/Zero) to select the unit of measure you want.
4. Face meter into air source (Allow time for reading to stabilize, it may fluctuate some).
5. When measuring, if viewing the meter is difficult, use the hold feature. Press button **2** while measuring and then view reading.
6. Multiple readings should be taken over the face of the area and then averaged to obtain a more accurate measurement.

Air Volume Measurement (cfm, cmm)

1. Power on the meter by pressing button **1** (ON)
2. Select meter function by pressing button **6** (Function) until the display shows CMM or CFM.
3. To change from CMM to CFM or CFM to CMM. Press button **4**.

See Chart On Reverse Side.

Area Set

Note:

This input should represent the "Free Area" of the register, grille or diffuser. This data should be entered in square feet. (This is the actual opening area the air has to flow through, not the overall size of the vent) There are many factors that vary the free vs. actual area, but for an approximation a multiplier in the range of .6 to .7 might be used to convert overall area to a free area for input. To get exact free area values contact the vent manufacturer for design specifications.

Example:

- Grille size 6" X 12"
- Free area multiplier .65
- 1 sq ft=144 sq inches
- 6 X 12 X .65=46.8 sq inches
- Now divide by 144 to convert to sq ft=.325 sq ft

Note:

Meter only accepts 2 decimal places so we will use .33 sq ft

4. Area size is set by pressing button **5** (Area-Set).
5. Then use button **5** to increase digit value, button **6** to decrease digit value, or button **4** to select another digit place.
- 5a. When area selection is completed press **3** to **ENTER** the selection.
6. To exit area size, press button **1**. The meter is now ready to take an air volume measurement.
7. When measuring if viewing the meter is difficult, use the hold feature. Press button **2** while measuring and then view reading.
8. Multiple readings should be taken over the face of the area and then averaged to obtain a more accurate measurement.

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Free Area Calculation in sq. ft.

Dimensions (H/W) in inches

Note: Free area in this chart is based on 0.65 of face area

Rectangular

H (in)	2	4	5	6	8	9
W (in) 2	0.018	0.036	0.045	0.054	0.072	0.081
4	0.036	0.072	0.090	0.108	0.144	0.163
5	0.045	0.090	0.113	0.135	0.181	0.203
6	0.054	0.108	0.135	0.163	0.217	0.244
8	0.072	0.144	0.181	0.217	0.289	0.325
9	0.081	0.163	0.203	0.244	0.325	0.366
10	0.090	0.181	0.226	0.271	0.361	0.406
12	0.108	0.217	0.271	0.325	0.433	0.488
14	0.126	0.253	0.316	0.379	0.506	0.569
15	0.135	0.271	0.339	0.406	0.542	0.609
16	0.144	0.289	0.361	0.433	0.578	0.650
18	0.163	0.325	0.406	0.488	0.650	0.731
20	0.181	0.361	0.451	0.542	0.722	0.813
21	0.190	0.379	0.474	0.569	0.758	0.853
22	0.199	0.397	0.497	0.596	0.794	0.894
24	0.217	0.433	0.542	0.650	0.867	0.975

Rectangular

H (in)	10	12	14	16	18	20
W (in) 2	0.090	0.108	0.126	0.144	0.163	0.181
4	0.181	0.217	0.253	0.289	0.325	0.361
5	0.226	0.271	0.316	0.361	0.406	0.451
6	0.271	0.325	0.379	0.433	0.488	0.542
8	0.361	0.433	0.506	0.578	0.650	0.722
9	0.406	0.488	0.569	0.650	0.731	0.813
10	0.451	0.542	0.632	0.722	0.813	0.903
12	0.542	0.650	0.758	0.867	0.975	1.083
14	0.632	0.758	0.885	1.011	1.138	1.264
15	0.677	0.813	0.948	1.083	1.219	1.354
16	0.722	0.867	1.011	1.156	1.300	1.444
18	0.813	0.975	1.138	1.300	1.463	1.625
20	0.903	1.083	1.264	1.444	1.625	1.806
21	0.948	1.138	1.327	1.517	1.706	1.896
22	0.993	1.192	1.390	1.589	1.788	1.986
24	1.083	1.300	1.517	1.733	1.950	2.167

Rectangular

H (in)	21	22	24
W (in) 2	0.190	0.199	0.217
4	0.379	0.397	0.433
5	0.474	0.497	0.542
6	0.569	0.596	0.650
8	0.758	0.794	0.867
9	0.853	0.894	0.975
10	0.948	0.993	1.083
12	1.138	1.192	1.300
14	1.327	1.390	1.517
15	1.422	1.490	1.625
16	1.517	1.589	1.733
18	1.706	1.788	1.950
20	1.896	1.986	2.167
21	1.991	2.085	2.275
22	2.085	2.185	2.383
24	2.275	2.383	2.600

Circular

Diameter	sq. ft.
6	0.128
8	0.227
10	0.355
12	0.510
14	0.695
16	0.908
18	1.149

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