# **POTTORFF**°

## **Application**

The ECV-245 offers exceptional protection against winddriven rain under the most severe conditions. The ECV-245 incorporates vertical blades and is available in a wide array of anodized and painted finishes including custom color matching.

### **Standard Construction**

**Material:** Mill finish 6063-T5 extruded aluminum. **Frame:** 2" deep  $\times$  0.060" thick (51  $\times$  1.5) channel. **Blades:** 0.060" (1.5) thick horizontal chevron style.

Screen: 1/2"  $\times$  0.063" (12.7  $\times$  1.6) expanded and flattened

aluminum.

Mullion: Visible.

Sill Flashing: Closed end.

Minimum Size: 6" × 12" (152 × 305)

**Maximum Size:** Single section:  $60" \times 96"$  (1524 × 2439)

Multiple section: Unlimited

# **Options**

- ☐ Factory finish:
  - ☐ High Performance 70% Fluoropolymer (Kynar®)
  - ☐ Baked Enamel
  - ☐ Clear Anodize
  - ☐ Integral Color Anodize
  - ☐ Prime Coat
- ☐ Flange frame:
  - ☐ 1<sup>1</sup>/<sub>2</sub>" (38) flange
  - ☐ Custom-size flange☐ Stucco flange☐
  - ☐ Glazing frame
- ☐ Alternate bird or insect screens.
- ☐ Insulated or non-insulated blank-off panels.
- ☐ Filter racks.
- ☐ Hinged frame.
- ☐ Head flashing.
- ☐ Installation hardware:
  - ☐ Clip angles
  - ☐ Continuous angles
- ☐ Burglar bars:
  - ☐ Shipped loose ☐ Shipped mounted
- ☐ Frame closure.

## Ratings

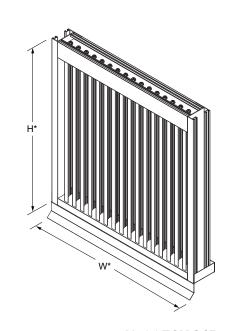
Free Area: [48"  $\times$  48" (1219  $\times$  1219) unit]: 6.6 ft<sup>2</sup> (0.61 m<sup>2</sup>)

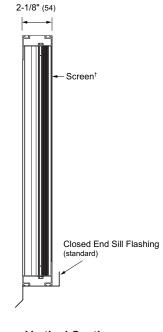
Performance @ Beginning Point of Water Penetration

Free Area Velocity: 1250 fpm (6.35 m/s)
Air Volume Delivered: 8299 cfm (3.92 m³/s)
Pressure Loss: 0.42 in.wg. (104 Pa)

Velocity @ 0.15 in.wg. Pressure Loss: 758 fpm (3.85 m/s)

Design Load: 20 psf

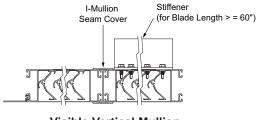




Model ECV-245 (standard)

\*Louver dimensions furnished approximately 1/2" (13) undersize.



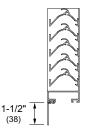


Flashing

(standard)

Visible Vertical Mullion

Horizontal Mullion (standard)



Flange Frame (optional)

# Certified Ratings:

Information is subject to change without notice or obligation.

Pottorff certifies that the model ECV-245 shown herein is licensed to bear the AMCA seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings seal applies to air performance, water penetration and wind-driven rain ratings.



WATER

AIR

WIND

NOTE: Dimensions in parentheses ( ) are millimeters.

# Free Area (ft²)

Width (Inches)

		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Ī	12	0.27	0.46	0.64	0.83	1.01	1.20	1.39	1.57	1.76	1.94	2.13	2.32	2.50	2.69	2.87	3.06	3.25	3.43	3.62
	18	0.44	0.74	1.05	1.35	1.65	1.96	2.26	2.57	2.87	3.17	3.48	3.78	4.08	4.39	4.69	4.99	5.30	5.60	5.90
	24	0.61	1.03	1.45	1.87	2.30	2.72	3.14	3.56	3.98	4.40	4.82	5.24	5.66	6.08	6.51	6.93	7.35	7.77	8.19
	30	0.78	1.32	1.86	2.40	2.94	3.47	4.01	4.55	5.09	5.63	6.17	6.71	7.24	7.78	8.32	8.86	9.40	9.94	10.48
	36	0.95	1.61	2.26	2.92	3.58	4.23	4.89	5.54	6.20	6.86	7.51	8.17	8.82	9.48	10.14	10.79	11.45	12.10	12.76
	42	1.12	1.90	2.67	3.44	4.22	4.99	5.76	6.54	7.31	8.08	8.86	9.63	10.41	11.18	11.95	12.73	13.50	14.27	15.05
	48	1.29	2.18	3.08	3.97	4.86	5.75	6.64	7.53	8.42	9.31	10.20	11.09	11.99	12.88	13.77	14.66	15.55	16.44	17.33
َ [	54	1.46	2.47	3.48	4.49	5.50	6.51	7.52	8.52	9.53	10.54	11.55	12.56	13.57	14.57	15.58	16.59	17.60	18.61	19.62
	60	1.63	2.76	3.89	5.01	6.14	7.26	8.39	9.52	10.64	11.77	12.89	14.02	15.15	16.27	17.40	18.52	19.65	20.78	21.90
፟ [	66	1.80	3.05	4.29	5.54	6.78	8.02	9.27	10.51	11.75	13.00	14.24	15.48	16.73	17.97	19.21	20.46	21.70	22.95	24.19
Ĭ [	72	1.98	3.34	4.70	6.06	7.42	8.78	10.14	11.50	12.86	14.22	15.59	16.95	18.31	19.67	21.03	22.39	23.75	25.11	26.47
	78	2.15	3.62	5.10	6.58	8.06	9.54	11.02	12.50	13.97	15.45	16.93	18.41	19.89	21.37	22.85	24.32	25.80	27.28	28.76
	84	2.32	3.91	5.51	7.10	8.70	10.30	11.89	13.49	15.08	16.68	18.28	19.87	21.47	23.07	24.66	26.26	27.85	29.45	31.05
	90	2.49	4.20	5.91	7.63	9.34	11.05	12.77	14.48	16.20	17.91	19.62	21.34	23.05	24.76	26.48	28.19	29.90	31.62	33.33
	96	2.66	4.49	6.32	8.15	9.98	11.81	13.64	15.47	17.31	19.14	20.97	22.80	24.63	26.46	28.29	30.12	31.95	33.79	35.62
	102	2.83	4.78	6.73	8.67	10.62	12.57	14.52	16.47	18.42	20.37	22.31	24.26	26.21	28.16	30.11	32.06	34.00	35.95	37.90
	108	3.00	5.06	7.13	9.20	11.26	13.33	15.39	17.46	19.53	21.59	23.66	25.73	27.79	29.86	31.92	33.99	36.06	38.12	40.19
	114	3.17	5.35	7.54	9.72	11.90	14.09	16.27	18.45	20.64	22.82	25.00	27.19	29.37	31.56	33.74	35.92	38.11	40.29	42.47
ſ	120	3.34	5.64	7.94	10.24	12.54	14.84	17.15	19.45	21.75	24.05	26.35	28.65	30.95	33.25	35.55	37.86	40.16	42.46	44.76

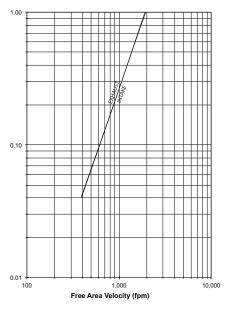


#### Certified Ratings:

Pottorific eritifies that the model ECV-245 shown herein is licensed to bear the AMCA seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings seal applies to air performance, water penetration and wind-driven rain ratings.

#### **Pressure Loss**

(Data corrected to standard air density)



# **Selection Criteria**

Follow the steps listed below to calculate the louver size needed to satisfy the required air volume while minimizing the adverse effects of water penetration and pressure loss.

- 1. Determine the Free Area Velocity (FAV) at the maximum allowable pressure loss using the *Pressure Loss* chart to the left. While job conditions vary, typically, the maximum allowable pressure loss should not exceed 0.15 in.wg., and the FAV for 0.15 in.wg. pressure loss is listed on the front page of this sheet.
- 2. <u>Intake Applications</u> If the FAV at the Beginning Point of Water Penetration (shown below) is less than the FAV from step 1, then use the FAV at the Beginning Point of Water Penetration in step 3, otherwise use the FAV from step 1.

**Exhaust Applications** Use the FAV from step 1 in step 3.

 $\textbf{3.} \ \textbf{Calculate the total louver square footage required using the following equation}.$ 

**4.** Using the *Free Area* chart above, select a louver width and height that yields a free area ft² greater than or equal to the required louver size calculated in step 3.

#### **Water Penetration**

Beginning Point of Water Penetration = 1250 fpm

0.30

0.25

0.20

0.15

0.10

0.00

1100

1150

1200

1250

1300

Louver Test Size = 48" x 48" (1219 x 1219)

Pressure loss tested in accordance with Figure 5.5 of AMCA Standard 500-L.

#### Water Penetration

AMCA defines the beginning point of water penetration as the free area velocity at the intersection of a simple linear regression of test data and the line of 0.01 ounces of water per square foot of free area and is measured through a 48" × 48" louver during a 15 minute period. The AMCA water penetration test provides a method for comparing louver models and designs as to their efficiency in resisting the penetration of rainfall under specific lab conditions. Pottorff recommends that intake louvers are selected with a reasonable margin of safety below the beginning point of water penetration in order to avoid unwanted penetration during severe storm conditions.

# Wind Driven Rain Performance — AMCA 500-L Wind Driven Rain Test

Test louver Core Area₁=10.77 sq. ft.

Wind <u>Velocity</u>	<u>Rainfall</u>	<u>Airflow</u>	Core <u>Velocity</u>	Effectiveness <u>Ratio</u>	Wind Class <sub>2</sub>	Discharge <u>Class</u> ₃
29 mph	3 in/hr	6371 cfm	592 fpm	99.6%	Α	3
50 mph	8 in/hr	4300 cfm	399 fpm	99.3%	Α	3

Wind	I Driven Rain₂	Discharge Loss <sub>3</sub>				
Class	Effectiveness	Class	Coefficient			
Α	1.000 to 0.99	1	0.4 to 1.000			
В	0.989 to 0.95	2	0.3 to 0.399			
С	0.949 to 0.80	3	0.2 to 0.299			
D	0.799 to 0.00	4	0.0 to 0.199			

#### NOTES

1. Core Area is the open area of the louver face (face area less louver frame). 2. Wind Driven Rain Penetration Classes. 3. Discharge Loss Coefficient is calculated by dividing the louvers' actual airflow rate by the theoretical airflow rate for an unobstructed opening. The higher the coefficient the lower the resistance to air flow.

Information is correct at time of printing. However, we reserve the right to make changes without notice.

NOTE: Dimensions in parentheses ( ) are millimeters.