

## ECV-645

(standard)

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

## Ratings

**Free Area:** [48" × 48" (1219 × 1219) unit]: 8.4 ft<sup>2</sup> (0.78m<sup>2</sup>)  
52.6%

### Performance @ Beginning Point of Water Penetration

**Free Area Velocity:** 1,250 fpm (6.35 m/s)

**Air Volume Delivered:** 10,525 cfm (4.97 m<sup>3</sup>/s)

**Pressure Loss:** 0.47 in.wg. (116 Pa)

**Velocity @ 0.15 in.wg. Pressure Loss:** 698 fpm (3.54 m/s)

**AMCA 540 (impact resistant, Enhanced protection) listed**  
**AMCA 550 (high velocity rain resistant) listed**

**Std. Design Load:** 150 psf



### Certified Ratings:

Pottorff certifies that the model ECV-645 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.

The ECV-645 is engineered and tested to withstand extreme loads, debris impact, and cyclic fatigue associated with the severe weather effects of hurricanes while maintaining maximum water infiltration resistance. For installation, the ECV-645 offers a continuous angle option. The ECV-645 is AMCA 540 and 550 listed, making it ideally suited for use in hurricane-prone and wind-borne debris regions as per the International Building Code

## Standard Construction

**Material:** Mill finish 6063-T6 extruded aluminum

**Frame:** 6" deep x 0.081" thick (152 x 2) channel

**Blades:** 0.050" (1) thick vertical chevron style

**Screen:** 1/2" × 0.063" (12.7 × 1.6) expanded and flattened aluminum

**Mullion:** Visible

**Minimum Size:** 12" × 12" (305 × 305)

**Maximum Size:**

Single section: 60" × 120" (1524 × 3048)

120" × 60" (3048 × 1524)

Multiple section: Unlimited

**Shipping Weight (approximate):** 12 lbs/ft<sup>2</sup> (59 kg/m<sup>2</sup>)

## Options

### ■ Factory finish:

- High Performance Fluoropolymer ■ Prime Coat
- Baked Enamel ■ Clear Anodize ■ Integral Color Anodize

### ■ Frame Options:

- 1-1/2" (38) flange frame

### ■ Installation Hardware

- Continuous angles

### ■ Alternate bird or insect screens

### ■ Insulated or non-insulated blank-off panels

### ■ Filter racks

### ■ Head and/or sill flashing

### ■ Frame closure

### ■ Burglar bars

### ■ Net OD (actual size)



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**NOTE:** Dimensions in parentheses ( ) are millimeters.  
Information is subject to change without notice or obligation.

# PERFORMANCE

## ECV-645

Extruded Aluminum Louver  
6" deep • Vertical Blade

### Free Area (ft<sup>2</sup>)

		Width (Inches)																		
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height (Inches)	12	0.3	0.4	0.6	0.8	0.9	1.1	1.3	1.5	1.6	1.8	2.0	2.1	2.3	2.5	2.7	2.8	3.0	3.2	3.3
	18	0.5	0.8	1.1	1.5	1.8	2.1	2.5	2.8	3.1	3.5	3.8	4.1	4.5	4.8	5.1	5.4	5.8	6.1	6.4
	24	0.7	1.2	1.7	2.2	2.7	3.2	3.7	4.1	4.6	5.1	5.6	6.1	6.6	7.1	7.6	8.1	8.5	9.0	9.5
	30	1.0	1.6	2.2	2.9	3.6	4.2	4.9	5.5	6.1	6.8	7.4	8.1	8.7	9.4	10.0	10.7	11.3	12.0	12.6
	36	1.2	2.0	2.8	3.6	4.4	5.2	6.0	6.8	7.6	8.4	9.2	10.1	10.9	11.7	12.5	13.3	14.1	14.9	15.7
	42	1.4	2.4	3.3	4.3	5.3	6.3	7.2	8.2	9.1	10.1	11.1	12.1	13.0	14.0	14.9	15.9	16.8	17.8	18.8
	48	1.7	2.8	3.9	5.0	6.2	7.3	8.4	9.5	10.6	11.8	12.9	14.0	15.2	16.3	17.4	18.5	19.6	20.7	21.9
	54	1.9	3.2	4.4	5.7	7.1	8.3	9.6	10.9	12.1	13.4	14.7	16.0	17.3	18.6	19.8	21.1	22.4	23.7	25.0
	60	2.1	3.6	5.0	6.4	7.9	9.4	10.8	12.2	13.6	15.1	16.5	18.0	19.4	20.9	22.3	23.7	25.2	26.6	28.1
	66	2.3	3.9	5.4	7.0	8.6	10.1	11.7	13.2	14.8										
	72	2.6	4.3	6.0	7.7	9.5	11.2	12.9	14.6	16.3										
	78	2.8	4.7	6.5	8.4	10.3	12.2	14.1	15.9	17.8										
	84	3.0	5.0	7.1	9.1	11.2	13.2	15.2	17.3	19.3										
90	3.3	5.4	7.6	9.8	12.1	14.3	16.4	18.6	20.8											
96	3.5	5.8	8.2	10.5	13.0	15.3	17.6	20.0	22.3											
102	3.7	6.2	8.7	11.2	13.8	16.3	18.8	21.3	23.8											
108	4.0	6.6	9.3	11.9	14.7	17.3	20.0	22.6	25.3											
114	4.2	7.0	9.8	12.6	15.6	18.4	21.2	24.0	26.8											
120	4.4	7.4	10.4	13.3	16.4	19.4	22.4	25.3	28.3											



**HIGH VELOCITY RAIN  
RESISTANT WITH BLADES  
FULLY OPEN AND  
IMPACT RESISTANT LOUVER**  
*Enhanced Protection Level E*

See www.AMCA.org for all certified or listed products

This label does not signify  
AMCA airflow performance  
certification.

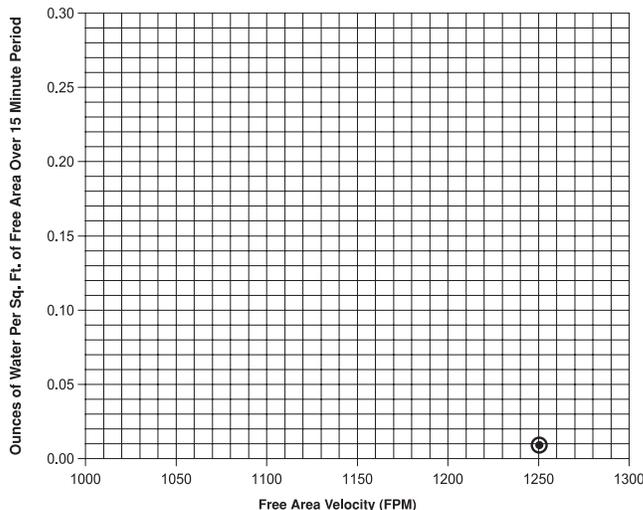
#### Listings:

Pottorff certifies that the model ECV-645 shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested windborne debris impact resistant louvers rated for 'Enhanced Protection' and +/- 150 psf with a minimum blade span of 12" and a maximum unsupported blade span of 60", and to high velocity wind driven rain (HWDR) resistant louvers tested in the fully open position that permits airflow through the louver.

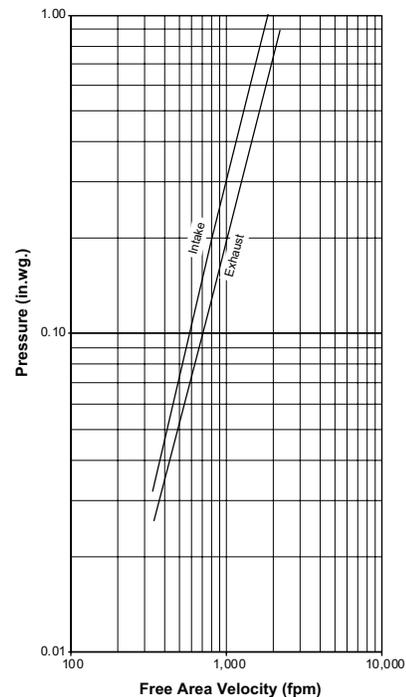
### Water Penetration

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 measured through a 48" x 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. We recommend 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.

**Beginning Point of Water Penetration = 1,250 fpm**



### Pressure Loss



Louver Test Size = 48" x 48" (1219 x 1219)  
Pressure loss tested in accordance with Figure 5.5 of AMCA  
Standard 500-L. Data corrected to standard air density.

# PERFORMANCE

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6" deep • Vertical Blade

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

Wind Velocity	Rainfall	Airflow cfm (m <sup>3</sup> /s)	Core Velocity <sup>1</sup> fpm (m/s)	Free Area Velocity <sup>2</sup> fpm (m/s)	Effectiveness Ratio	Wind-Driven Rain Penetration Class
50 mph	8 in/hr	10,154 (4.8)	943 (4.8)	1,638 (8.3)	100.0%	A

**NOTE:**

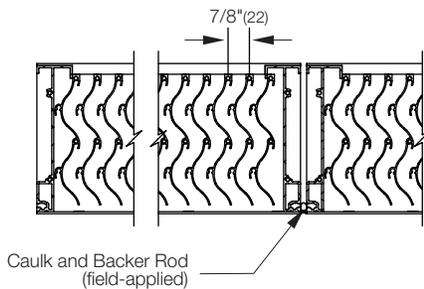
1. Core area is the open area of the louver face (face area less louver frame). Core velocity is the airflow divided by core area. Test louver core area is 10.77 ft<sup>2</sup> (1 m<sup>2</sup>).

2. Free area velocity is the airflow divided by free area. Test louver free area is 6.2 ft<sup>2</sup> (0.58 m<sup>2</sup>).

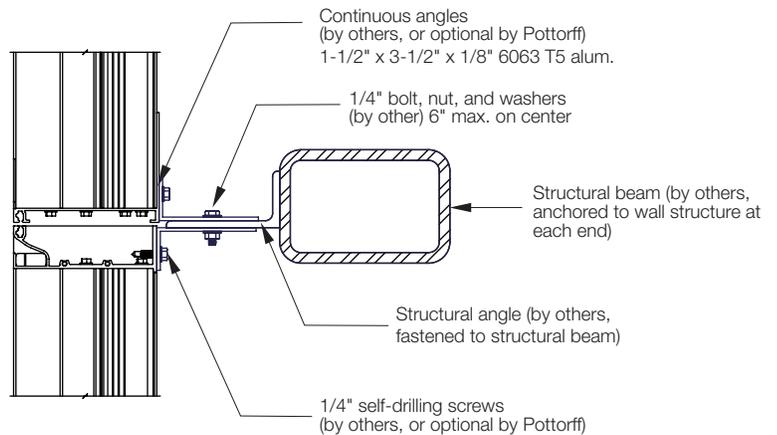
**Wind Driven Rain**

Class	Effectiveness
A	99% and above
B	95% to 98.9%
C	80% to 94.9%
D	below 80%

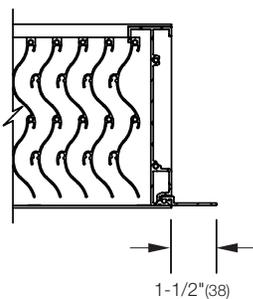
## Attributes



**Visible Vertical Mullion**  
(standard)



**Horizontal Mullion**  
(standard)



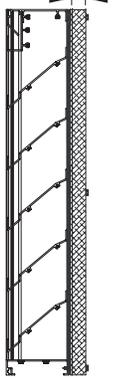
**Flange Frame**  
(optional)

# Supplemental Options

## ECV-645

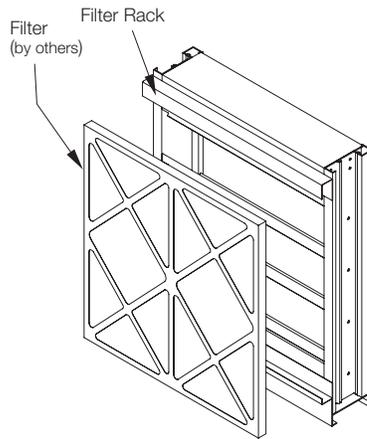
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Insulation Thickness

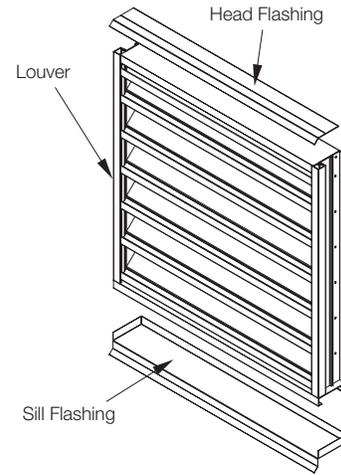


### Blank-Off Options

Non-Insulated and Gasketed  
1" Insulated (4.25 R-value)  
2" Insulated (8.75 R-value)



### Filter Rack



### Flashing Options

Head and Sill Available