POTTORFF®

model **EFJ-937**
extruded aluminum louver
9" deep • 37°J-blade with vertical blade rear section

Application

The EFJ-937 dual-module louver is engineered and tested to withstand extreme loads, debris impact, and cyclic fatigue associated with the severe weather effects of hurricanes. The front (exterior) side of the louver features horizontal J-style blades for a pleasing architectural appearance. The interior side features vertical chevron blades which provide superior resistance to wind-driven rain. Both installation options for the EFJ-937 feature minimal required hardware. The EFJ-937 is AMCA 540 and 550 listed, making it ideally suited for use in hurricane-prone and wind-borne debris regions per the International Building Code.

Standard Construction

Material: Mill finish extruded aluminum.

Frame: 9" deep × 0.125" thick (232 × 3) channel.

Blades: Front: 37° × 0.081" (2.1) thick horizontal J style.
Rear: 0.060" (1.5) thick vertical chevron.

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)
Multiple section: Unlimited width × 120" (3048)

Installation Hardware: Standard continuous angles and associated fasteners (anchors to substrate by others - refer to installation instructions)

Options

- ☐ Factory finish:
  - ☐ High Performance Fluoropolymer - 100% resin Newlar®/ 70% resin Kynar®
  - ☐ Baked Enamel
  - ☐ Clear or Color Anodized, Class 1
  - ☐ Prime Coat
- ☐ 1 1/2" (38) flange frame.
- ☐ Alternate bird or insect screens.
- ☐ Insulated or non-insulated blank-off panels.
- ☐ Filter racks.
- ☐ Head flashing.
- ☐ Full sleeve and retaining angles (eliminates need for anchors to substrate; 1 1/2" (38) flange frame required).
- ☐ Burglar bars:
  - ☐ Shipped loose ☐ Shipped mounted

Ratings

Free Area: [48" × 48" (1219 × 1219) unit]: 8.6 ft² (0.80 m²)
53.9%

Performance @ Beginning Point of Water Penetration

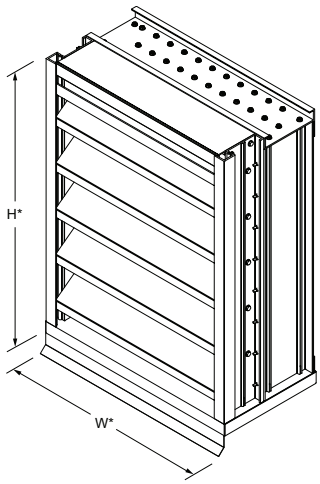
Free Area Velocity: Above 1250 fpm (6.35 m/s)
Air Volume Delivered: Above 10775 cfm (5.09 m³/s)
Pressure Loss: 0.48 in.wg. (121 Pa)

Velocity @ 0.15 in.wg. Pressure Loss: 705 fpm (3.58 m/s)

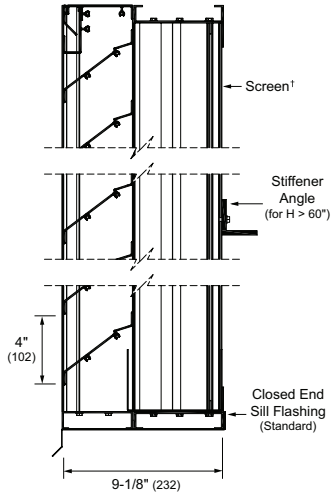
AMCA 540 (impact resistant) listed

AMCA 550 (high velocity rain resistant) listed

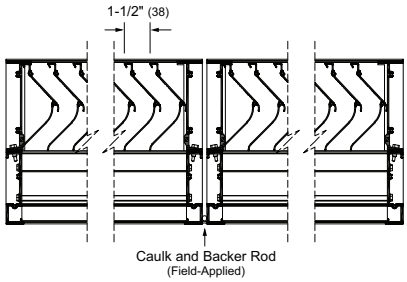
Design Load: 130 psf



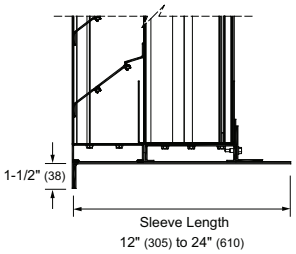
Model **EFJ-937**
(standard)
*Louver dimensions furnished approximately 1/2" (13) undersize.



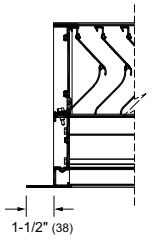
Vertical Section
†Screen adds approximately 3/16" (5) to louver depth.



Visible Vertical Mullion
(standard)



Sleeve
(optional)



Flange Frame
(optional)

Certified Ratings:
Pottorff certifies that the model EFJ-937 shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests 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.

HIGH VELOCITY
RAIN RESISTANT
AND IMPACT RESISTANT
LOUVER
Enhanced Protection
See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow or performance certification.

Certified Ratings:
Pottorff certifies that the model EFJ-937 shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to wind-borne debris impact resistant louvers and high velocity wind- driven rain resistant louvers.

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses ( ) are millimeters.

Free Area (ft^2)

Width (Inches)

Height (Inches)	12	18	24	30	36	42	48	54	60
12	**0.2**	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4
18	0.4	**0.7**	1.1	1.4	1.7	2.0	2.3	2.6	3.0
24	0.7	1.1	**1.6**	2.1	2.6	3.1	3.6	4.1	4.6
30	0.9	1.6	2.2	**2.9**	3.5	4.2	4.8	5.5	6.2
36	1.1	2.0	2.8	3.6	**4.4**	5.3	6.1	6.9	7.8
42	1.4	2.4	3.4	4.4	5.4	**6.4**	7.4	8.4	9.4
48	1.6	2.8	3.9	5.1	6.3	7.4	**8.6**	9.8	11.0
54	1.8	3.2	4.5	5.8	7.2	8.5	9.9	**11.2**	12.6
60	2.1	3.6	5.1	6.6	8.1	9.6	11.1	12.6	**14.2**
66	2.3	4.0	5.7	7.3	9.0	10.7	12.4	14.1	15.8
72	2.5	4.4	6.2	8.1	9.9	11.8	13.7	15.5	17.4
78	2.7	4.8	6.8	8.8	10.9	12.9	14.9	16.9	19.0
84	3.0	5.2	7.4	9.6	11.8	14.0	16.2	18.4	20.6
90	3.2	5.6	8.0	10.3	12.7	15.1	17.4	19.8	22.2
96	3.4	6.0	8.5	11.1	13.6	16.1	18.7	21.2	23.7
102	3.7	6.4	9.1	11.8	14.5	17.2	19.9	22.6	25.4
108	3.9	6.8	9.7	12.6	15.4	18.3	21.2	24.1	26.9
114	4.1	7.2	10.2	13.3	16.3	19.4	22.5	25.5	28.6
120	4.4	7.6	10.8	14.0	17.3	20.5	23.7	26.9	30.1

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.

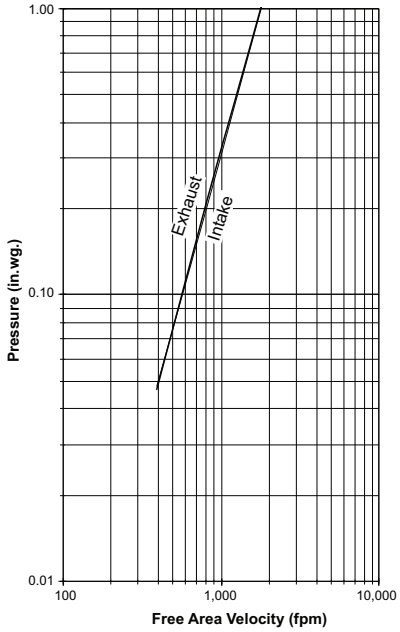
1. Determine the Free Area Velocity (FAV) at the maximum allowable pressure loss using the *Pressure Loss* chart to the left. While job conditions vary, typically, the maximum allowable pressure loss should not exceed 0.15 in.wg., and the FAV for 0.15 in.wg. pressure loss is listed on the front page of this sheet.
2. **Intake Applications** 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.
3. Calculate the total louver square footage required using the following equation.

   _____ cfm ÷ _____ fpm = _____ ft^2

   Required Air Volume | FAV | Required Louver (Free-Area) Size in ft^2
4. Using the *Free Area* chart above, select a louver width and height that yields a free area ft^2 greater than or equal to the required louver size calculated in step 3.

Pressure Loss (Data corrected to standard air density)

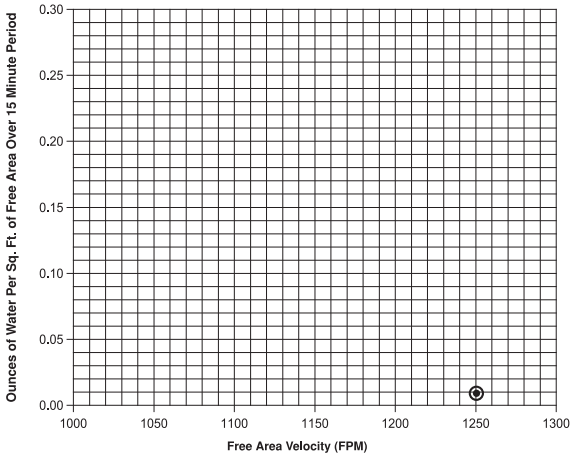


Louver Test Size = 48" x 48" (1219 x 1219)

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

Water Penetration

Beginning Point of Water Penetration = Above 1250 fpm



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" × 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.

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

Test louver Core Area[1] is 39 3/8" × 39 3/8".

Wind Velocity	Rainfall	Airflow	Core Velocity	Effectiveness Ratio	Water Penetration Class	Discharge Class
29 mph	3 in/hr	10640 cfm	988 fpm	100%	A	3
50 mph	8 in/hr	9599 cfm	892 fpm	99.0%	A	3

Wind Driven Rain Class	Effectiveness	Discharge Loss Class	Coefficient [2]
A	1.000 to 0.99	1	0.4 to 1.000
B	0.989 to 0.95	2	0.3 to 0.399
C	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**. 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.

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