# GREENHECK

# EVH-302

## Wind-Driven Rain Louver
## Vertical Blade

### Application and Design

EVH-302 is a High Velocity Wind Driven Rain louver designed to protect intake and exhaust openings in building exterior walls. EVH-302 is tested in accordance with AMCA 500-L Air Performance, Water Penetration and Wind Driven Rain. EVH-302 is tested in accordance with AMCA 540 Test Method for Louvers Impacted by Wind Borne Debris (Basic Protections, Missile Level D). EVH-302 is tested in accordance with AMCA 550 Test Method for High Velocity Wind Driven Rain Resistant Louvers. EVH-302 is licensed to bear the AMCA seal allowing design professionals to select and apply with confidence.

amca INTERNATIONAL LISTED

HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND IMPACT RESISTANT LOUVER
*Basic Protection Level D*
® See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

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AIR PERFORMANCE
WIND DRIVEN RAIN
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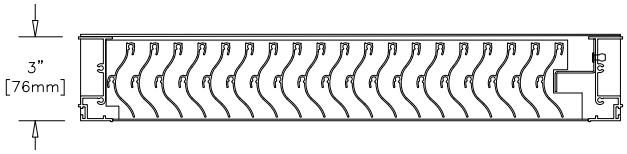



### Standard Construction

**Jambs** . . . . . .Heavy gauge extruded 6005-T5 aluminum, 3 in. x 0.081 in. nominal wall thickness

**Head/Sill** . . . . . .Heavy gauge extruded 6005-T5 aluminum, 3 in. x 0.062 in. nominal wall thickness

**Blades** . . . . . .Vertical rain resistant style**,** heavy gauge extruded 6005-T5 aluminum, 0.050 in. nominal wall thickness, positioned on approximately 7/8 in. blade spacing

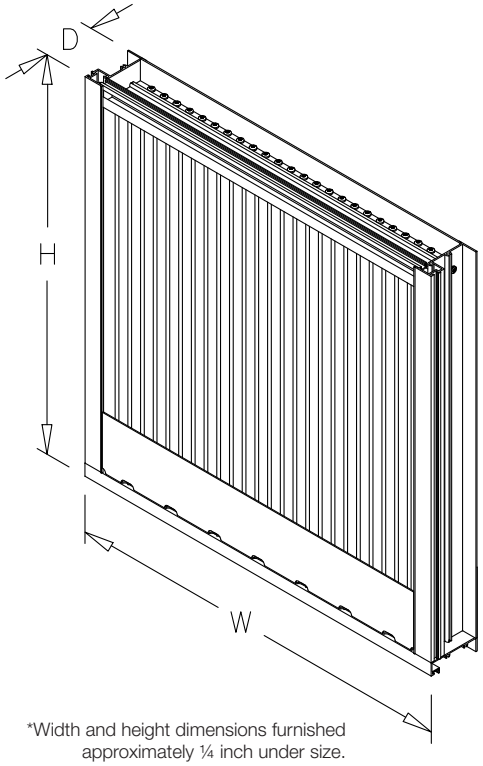
**Construction** . . . .Mechanically fastened

**Birdscreen**. . . . . .3/4 in. x 0.051 in. flattened expanded aluminum in removable frame, inside mount (rear)

**Finish**. . . . . .Mill

**Minimum Size** . . .12 in. W x 12 in. H

**Maximum Single Section Size** . . . .60 in. W x 96 in. H




*Width and height dimensions furnished approximately ¼ inch under size.

### Options *(at additional cost)*

- A variety of bird and insect screens
- Extended Sill, with optional End Dam
- Blank-off panel
- Clip angles
- Filter rack
- Flanged frame
- Security bars
- A variety of architectural finishes including:
  - Clear anodize
  - Integral color anodize
  - Baked enamel
  - Kynar

# PERFORMANCE DATA

# EVH-302

**Wind-Driven Rain Louver**
**Extruded Aluminum**

## Wind-Driven Rain Performance

| 75mm/h (3 in/hr) Rainfall & 13 m/s (29 mph) Wind Velocity | | | | 200mm/h (8 in/hr) Rainfall & 22 m/s (50 mph) Wind Velocity | | | |
|---|---|---|---|---|---|---|---|
| Ventilation Air Core Velocity m/s (fpm) | Free Area Ventilation Rate (fpm) | Water Pen. Effectivness % | Water Pen. Classification | Ventilation Air Core Velocity m/s (fpm) | Free Area Ventilation Rate (fpm) | Water Pen. Effectivness % | Water Pen. Classification |
| 0.0 (0) | 0.0 (0) | | | 0.0 (0) | 0.0 (0) | | |
| 0.5 (98) | 0.8 (161) | | | 0.5 (98) | 0.8 (161) | | |
| 1.0 (197) | 1.6 (324) | | | 1.0 (197) | 1.6 (324) | | |
| 1.5 (295) | 2.5 (486) | | | 1.5 (295) | 2.5 (486) | | |
| 2.0 (394) | 3.3 (649) | | | 2.0 (394) | 3.3 (649) | | |
| 2.5 (492) | 4.1 (810) | | | 2.5 (492) | 4.1 (810) | | |
| 3.0 (591) | 4.9 (973) | | | 3.0 (591) | 4.9 (973) | | |
| 3.5 (689) | 5.8 (1134) | | | 3.5 (695) | 5.8 (1144) | 99.6 | A |
| 4.0 (788) | 6.6 (1297) | 100.0 | A | 3.9 (776) | 6.5 (1277) | 99.4 | A |
| 4.5 (882) | 7.4 (1452) | 99.9 | A | 4.5 (886) | 7.4 (1458) | 99.4 | A |
| 5.0 (983) | 8.2 (1618) | 99.8 | A | 5.0 (978) | 8.2 (1610) | 97.3 | B |

Discharge Loss Coefficient Class (Intake) = 2

Weather louvers shall be classified by their ability to reject simulated rain. The table shows different classifications based on the maximum simulated rain penetration per square meter (square feet) of louver. Water penetration rating at a given louver face velocity is determined by the water penetration while the louver is subjected to a selected simulated rainfall rate and wind velocity.

| Discharge Loss Coefficient Classifications | |
|---|---|
| Class | Discharge Loss Coefficient |
| 1 | 0.4 and Above |
| 2 | 0.3 to 0.399 |
| 3 | 0.2 to 0.299 |
| 4 | 0.199 and Below |

| Wind-driven Rain Penetration Classes | |
|---|---|
| Class | Effectiveness |
| A | 1 to 0.99 |
| B | 0.989 to 0.95 |
| C | 0.949 to 0.80 |
| D | Below 0.80 |

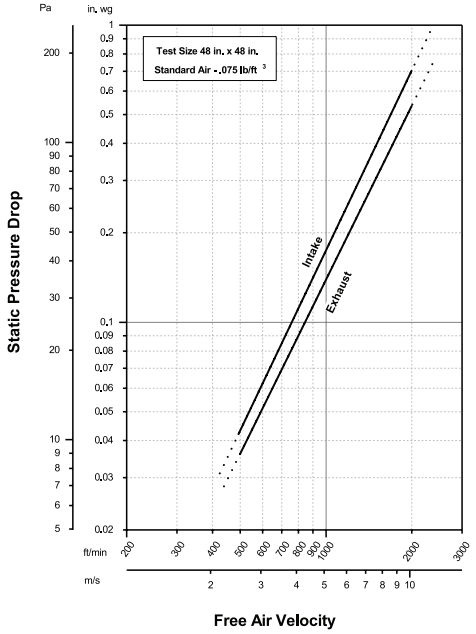
Greenheck Fan Corporation certifies that the EVH-302 louvers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance, water penetration, and wind-driven rain ratings.

HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND IMPACT RESISTANT LOUVER
*Basic Protection Level D*
See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

Greenheck Fan Corporation certifies that the EVH-302 louvers shown herein are approved to bear the AMCA Listing Label. The Ratings shown are based on tests and procedures performance in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant and High Velocity Wind-Driven Rain Resistant Louvers.

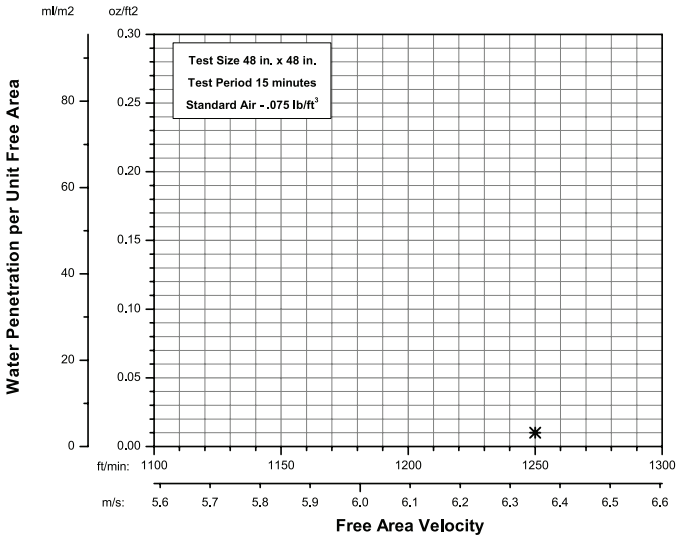
## Airflow Resistance (Standard Air - .075 lb/ft³)




Model EVH-302 resistance to airflow (pressure drop) varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information. (Tested to AMCA Figure 5.5)

## Water Penetration

**Test Size 48 in. x 48 in. Test Duration of 15 min.**




The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The beginning point of water penetration is defined as that velocity where the water penetration curve projects through 0.01 oz. of water (penetration) per sq. ft. of louver free area. *__The beginning point of water penetration for Model EVH-302 is above 1250 fpm free area velocity.__ These performance ratings do not guarantee a louver to be weather-proof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers.

# PERFORMANCE DATA

# EVH-302

**Wind-Driven Rain Louver**
**Extruded Aluminum**

## Free Area Chart (sq. ft.)

| Louver Height Inches | Louver Width in Inches | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 12 | 0.21 | 0.36 | 0.51 | 0.66 | 0.82 | 0.95 | 1.10 | 1.25 | 1.40 |
| 18 | 0.43 | 0.75 | 1.06 | 1.37 | 1.69 | 1.96 | 2.27 | 2.58 | 2.90 |
| 24 | 0.66 | 1.13 | 1.61 | 2.08 | 2.56 | 2.97 | 3.44 | 3.92 | 4.39 |
| 30 | 0.88 | 1.52 | 2.15 | 2.79 | 3.43 | 3.98 | 4.61 | 5.25 | 5.89 |
| 36 | 1.10 | 1.90 | 2.70 | 3.50 | 4.30 | 4.99 | 5.79 | 6.59 | 7.39 |
| 42 | 1.33 | 2.29 | 3.25 | 4.21 | 5.17 | 6.00 | 6.96 | 7.92 | 8.88 |
| 48 | 1.55 | 2.67 | 3.80 | 4.92 | 6.04 | 7.01 | **8.13** | 9.25 | 10.38 |
| 54 | 1.70 | 2.93 | 4.16 | 5.40 | 6.63 | 7.68 | 8.92 | 10.15 | 11.38 |
| 60 | 1.92 | 3.32 | 4.71 | 6.10 | 7.50 | 8.69 | 10.09 | 11.48 | 12.88 |
| 66 | 2.15 | 3.70 | 5.26 | 6.81 | 8.37 | 9.70 | 11.26 | 12.82 | 14.37 |
| 72 | 2.37 | 4.09 | 5.80 | 7.52 | 9.24 | 10.71 | 12.43 | 14.15 | 15.87 |
| 78 | 2.59 | 4.47 | 6.35 | 8.23 | 10.11 | 11.72 | 13.60 | 15.48 | 17.36 |
| 84 | 2.82 | 4.86 | 6.90 | 8.94 | 10.98 | 12.73 | 14.78 | 16.82 | 18.86 |
| 90 | 3.04 | 5.24 | 7.45 | 9.65 | 11.85 | 13.74 | 15.95 | 18.15 | 20.36 |
| 96 | 3.26 | 5.63 | 7.99 | 10.36 | 12.73 | 14.75 | 17.12 | 19.49 | 21.85 |

## Core Area Chart (sq. ft.)

| Louver Height Inches | Louver Width in Inches | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 12 | 0.40 | 0.66 | 0.91 | 1.17 | 1.43 | 1.68 | 1.94 | 2.19 | 2.45 |
| 18 | 0.80 | 1.31 | 1.81 | 2.32 | 2.82 | 3.33 | 3.83 | 4.34 | 4.84 |
| 24 | 1.20 | 1.95 | 2.71 | 3.46 | 4.22 | 4.97 | 5.73 | 6.49 | 7.24 |
| 30 | 1.59 | 2.60 | 3.60 | 4.61 | 5.62 | 6.62 | 7.63 | 8.63 | 9.64 |
| 36 | 1.99 | 3.24 | 4.50 | 5.76 | 7.01 | 8.27 | 9.52 | 10.78 | 12.04 |
| 42 | 2.38 | 3.89 | 5.40 | 6.90 | 8.41 | 9.91 | 11.42 | 12.93 | 14.43 |
| 48 | 2.78 | 4.54 | 6.29 | 8.05 | 9.80 | 11.56 | **13.32** | 15.07 | 16.83 |
| 54 | 3.18 | 5.18 | 7.19 | 9.20 | 11.20 | 13.21 | 15.21 | 17.22 | 19.23 |
| 60 | 3.57 | 5.83 | 8.09 | 10.34 | 12.60 | 14.85 | 17.11 | 19.37 | 21.62 |
| 66 | 3.97 | 6.48 | 8.98 | 11.49 | 13.99 | 16.50 | 19.01 | 21.51 | 24.02 |
| 72 | 4.36 | 7.12 | 9.88 | 12.63 | 15.39 | 18.15 | 20.90 | 23.66 | 26.42 |
| 78 | 4.76 | 7.77 | 10.77 | 13.78 | 16.79 | 19.79 | 22.80 | 25.81 | 28.81 |
| 84 | 5.16 | 8.41 | 11.67 | 14.93 | 18.18 | 21.44 | 24.70 | 27.95 | 31.21 |
| 90 | 5.55 | 9.06 | 12.57 | 16.07 | 19.58 | 23.09 | 26.59 | 30.10 | 33.61 |
| 96 | 5.95 | 9.71 | 13.46 | 17.22 | 20.98 | 24.73 | 28.49 | 32.25 | 36.01 |

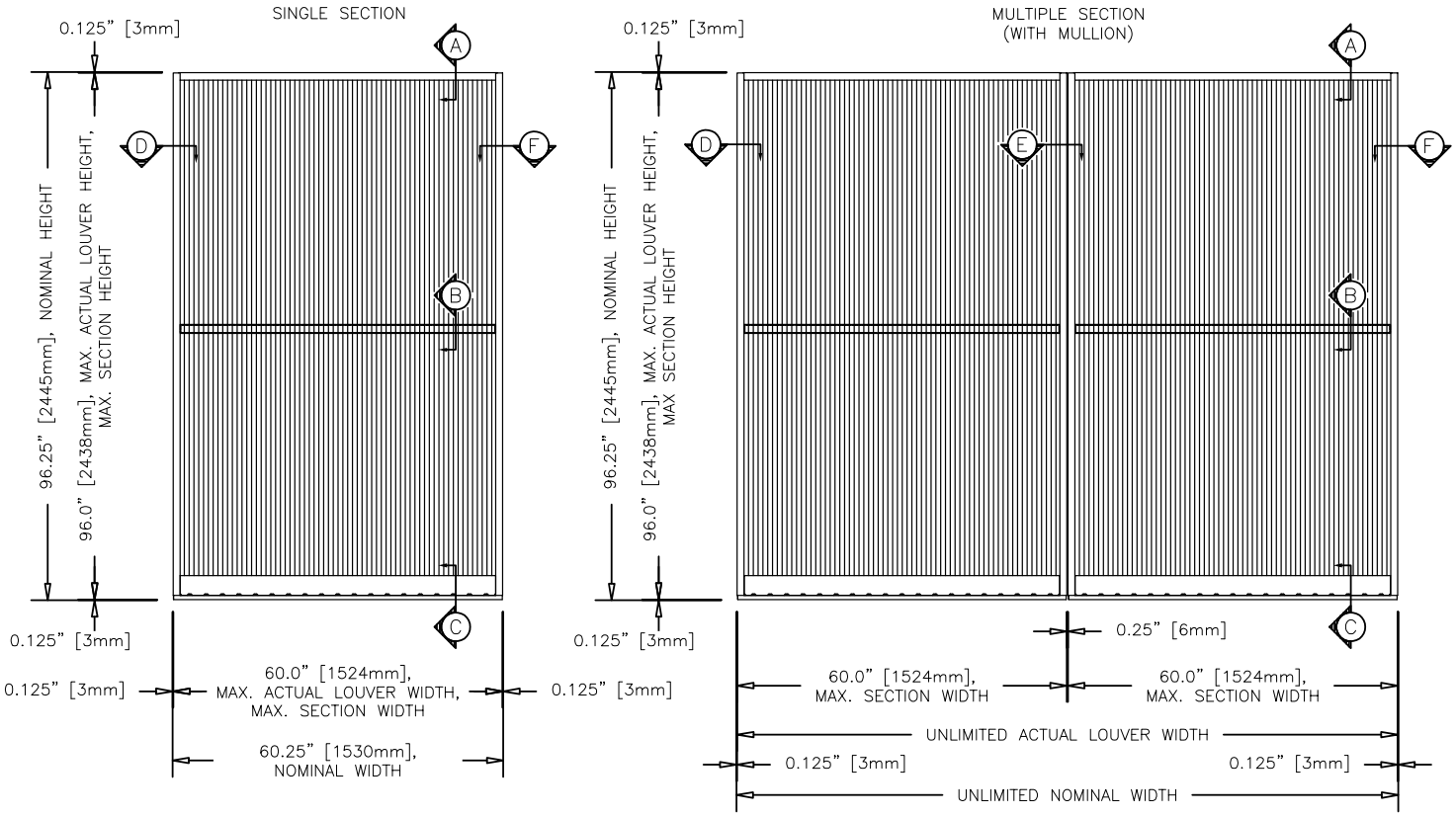
# INSTALLATION DETAILS

# EVH-302

**Wind-Driven Rain Louver**
**Extruded Aluminum**

## Maximum Size and Installation Information

Maximum single section size for model EVH-302 is 60 in. W x 96 in. H. Larger openings require field assembly of multiple louver sections to make up the overall opening size. Individual louver sections are designed to withstand a 25 PSF wind load (please consult Greenheck if the louvers must withstand higher wind-loads). Structural reinforcing members may be required to adequately support and install multiple louver sections within a large opening. Structural reinforcing members along with any associated installation hardware is not provided by Greenheck unless indicated otherwise by Greenheck. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blank off panels are not subject to structural analysis unless indicated otherwise by Greenheck. Additional information on louver installation may be found in AMCA Publication #501, Louver Application Manual.

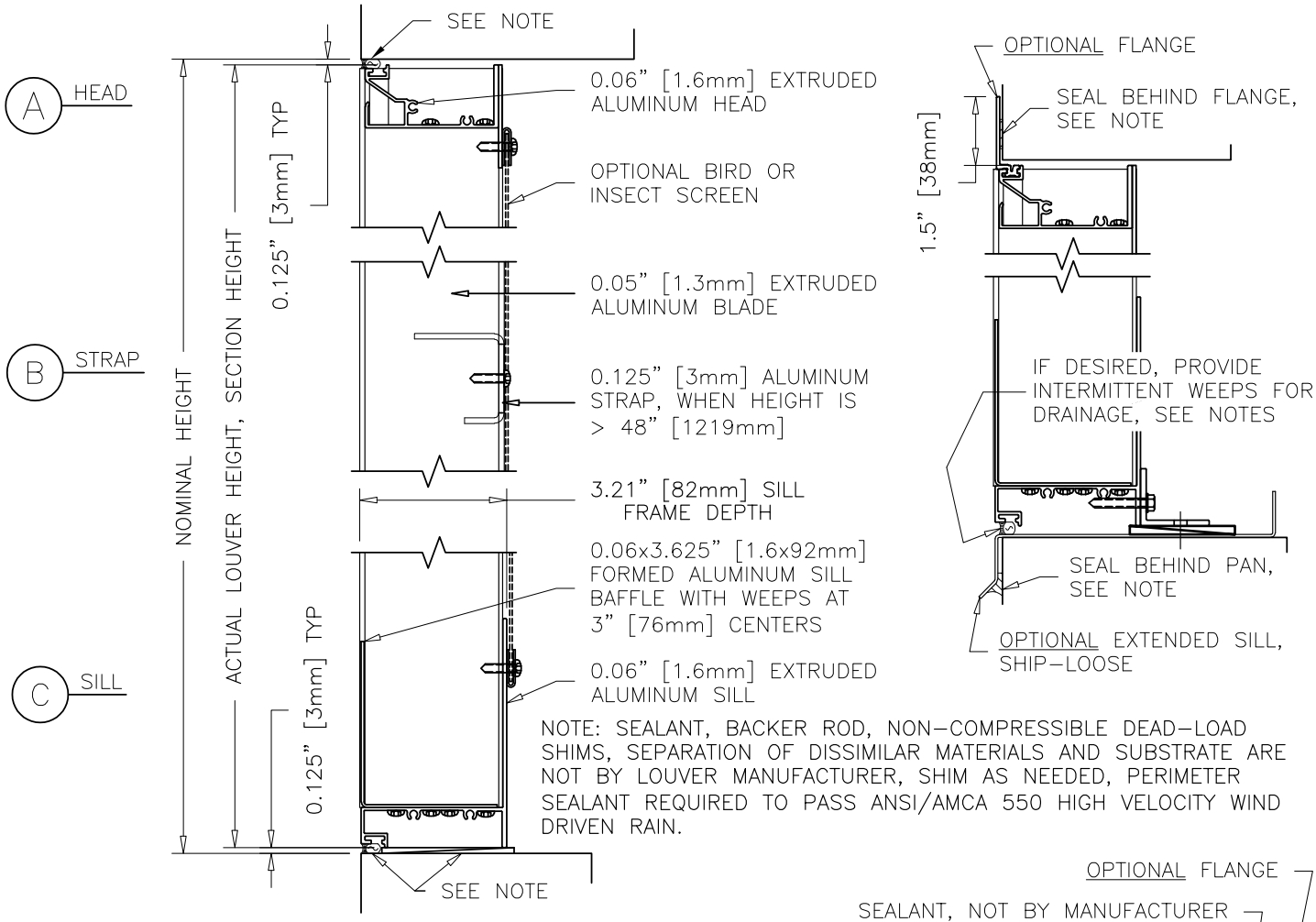



| Minimum Single Section Size | Maximum Single Section Size |
|---|---|
| 12 in. W x 12 in. H | 60 in. W x 96 in. H |

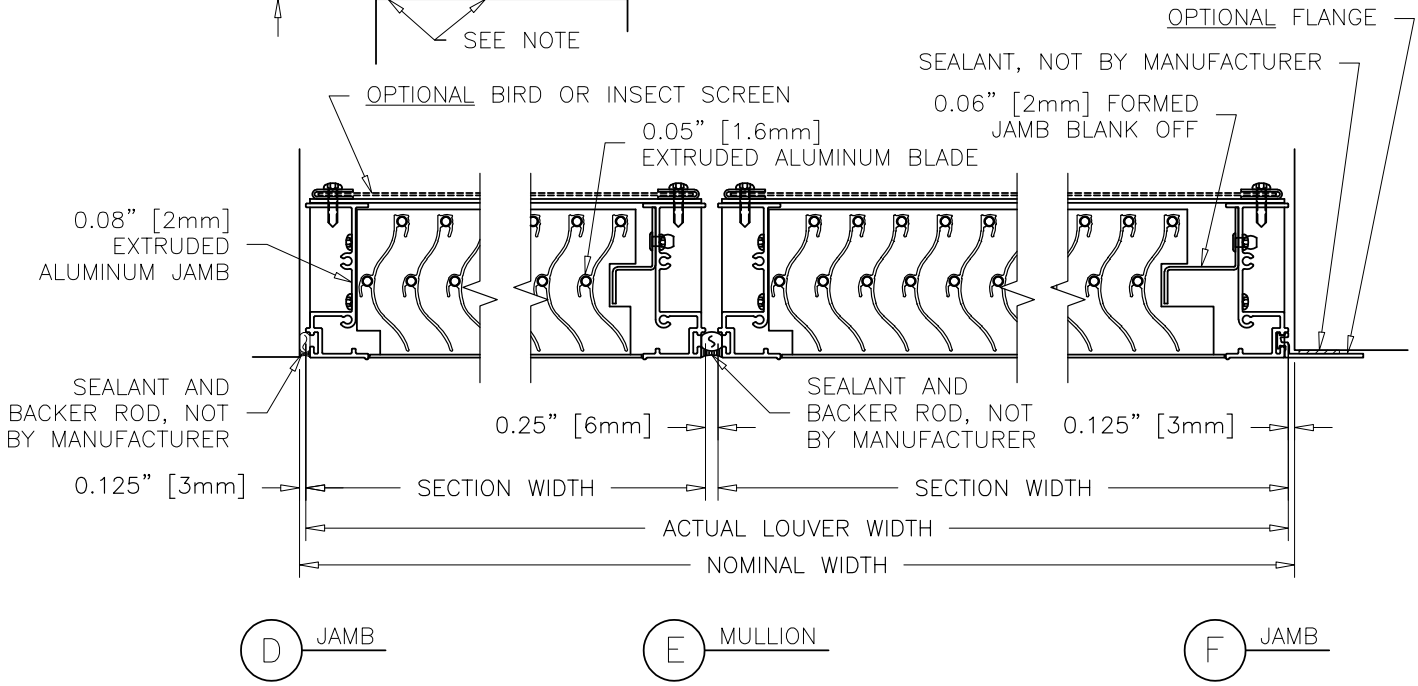
# PRODUCT DETAILS

# EVH-302

**Wind-Driven Rain Louver**
**Extruded Aluminum**



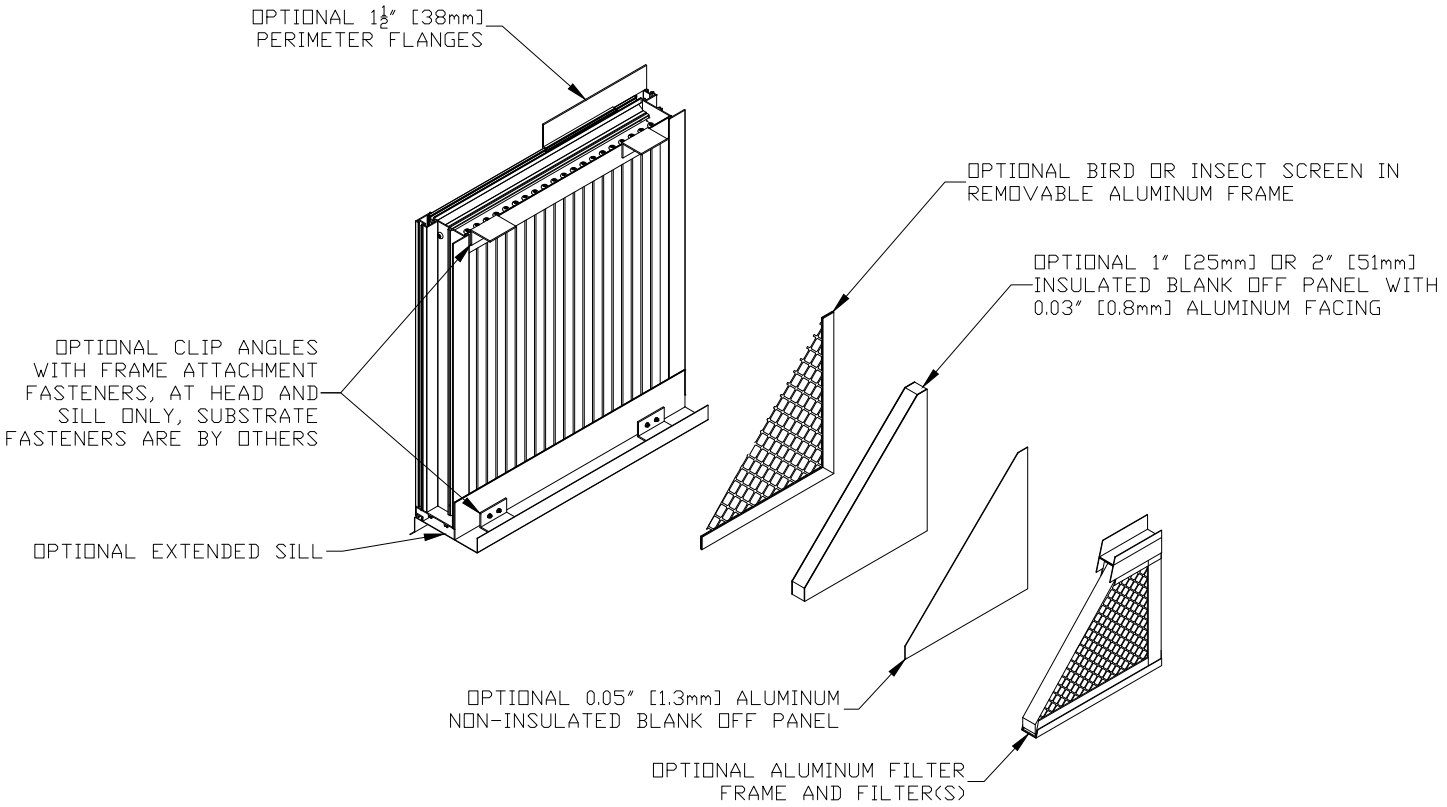

NOTE: SEALANT, BACKER ROD, NON-COMPRESSIBLE DEAD-LOAD SHIMS, SEPARATION OF DISSIMILAR MATERIALS AND SUBSTRATE ARE NOT BY LOUVER MANUFACTURER, SHIM AS NEEDED, PERIMETER SEALANT REQUIRED TO PASS ANSI/AMCA 550 HIGH VELOCITY WIND DRIVEN RAIN.



# OPTION DRAWINGS

# EVH-302

**Wind-Driven Rain Louver**
**Extruded Aluminum**




# FINISHES

| Finish Type | Description/Application | Color Selection | Standard Warranty (Aluminum) |
|---|---|---|---|
| **AAMA 2605**<br>100% Fluoropolymer (FEVE)<br>2-Coat 70% Kynar® (PVDF)<br>3-Coat 70% Kynar® (PVDF)<br>4-Coat 70% Kynar® (PVDF) | ***"Best."*** The premier finish for extruded aluminum. Tough, long-lasting coating has superior color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering. | **Standard Colors:**<br>Any of the 27 standard colors shown can be furnished in 70% or 50% Kynar®, 100% Fluoropolymer or Baked Enamel.<br><br>**Mica Colors:**<br>Greenheck offers 6 standard Mica colors for 70% Kynar® or 100% Fluoropolymer.<br><br>**Custom Colors:**<br>Custom color matching is available. Consult your Greenheck representative for cost and/or lead-time implications if a custom color is required. | 10 Years<br>(20 Years Optional) |
| **AAMA 2604**<br>50% Kynar® / Acroflur® | ***"Better."*** Tough, long-lasting coating has excellent color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering. | | 5 Years |
| **AAMA 2603**<br>Baked Enamel | ***"Good."*** Provides good adhesion and resistance to weathering, corrosion and chemical stain. | | 1 Year |
| **AA-M10C22A42**<br>Integral Color Anodize | "Two-step" anodizing is produced by following the normal anodizing step with a second, colorfast process. | Light, Medium, Dark or Extra Dark Bronze; Champagne; Black | 5 years |
| **AA-M10C22A41**<br>Clear Anodize 215 R-1 | Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. | Clear | 5 years |
| **AA-M10C22A31**<br>Clear Anodize 204 | Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. | Clear | 1 Year |
| **Prime Coat** | Louvers or architectural products shall be cleaned, pre-treated and receive a prime coat finish suitable for field painting. Greenheck does not recommend prime coat or field painting of materials. | | n/a |
| **Mill** | Materials may be supplied in natural aluminum or galvanized steel finish when normal weathering is acceptable and there is no concern for color or color change. | | n/a |

*Finishes meet or exceed AAMA 2605, AAMA 2604, and AAMA 2603 requirements. Please consult www.greenheck.com for complete information on standard and extended paint warranties. Paint finish warranties are not applicable to steel products.*

GREENHECK®

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EVH-302
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