

## Wind-Driven Rain Louver Vertical Blade

### Application and Design

EVH-501 is a Wind-Driven Rain louver designed to protect air intake and exhaust openings in building exterior walls that are sensitive to direct water penetration. Design incorporates a drainable head member and vertical rain resistant blades to provide maximum resistance to wind driven rain in even the most extreme weather conditions. The EVH-501 is an **AMCA CERTIFIED LOUVER** enabling designers to select and apply with confidence.



### Standard Construction

**Frame** . . . . . Heavy gauge extruded 6063-T5 aluminum, 5 in. x 0.081 in. nominal wall thickness

**Blades** . . . . . Vertical rain resistant style, heavy gauge extruded 6063-T5 aluminum, 0.060 in. nominal wall thickness, positioned on approximately 1.5 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

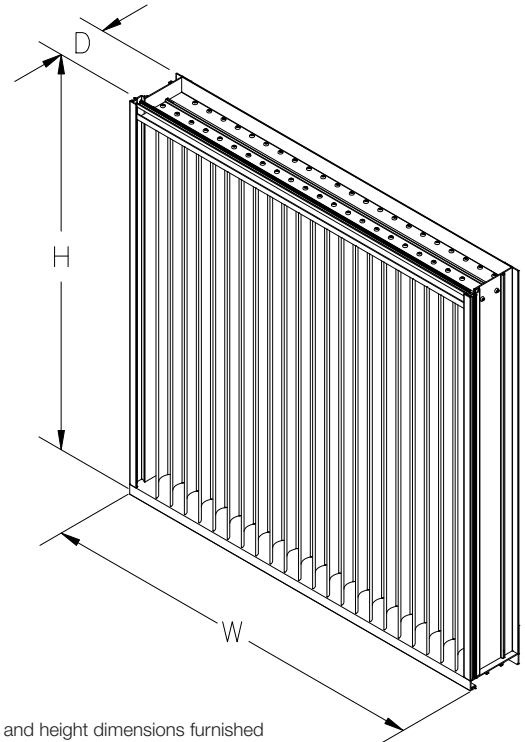
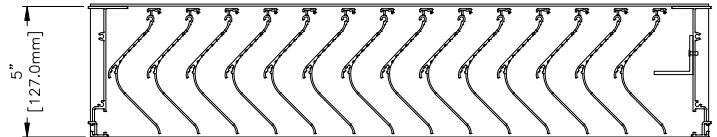
**Minimum Size** . . . 12 in. W x 12 in. H

**Maximum Single**

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

### Options (at additional cost)

- A variety of bird and insect screens
- Blank-off panel
- Clip angles
- Extended sill
- Filter rack
- Flanged frame (*head and jamb only*)
- Security bars
- A variety of architectural finishes including:
  - Clear anodize
  - Integral color anodize
  - Baked enamel
  - Kynar



\*Width and height dimensions furnished approximately 1/4 inch under size.

# PERFORMANCE DATA

# EVH-501

## Wind-Driven Rain Performance

## Wind-Driven Rain Louver Extruded Aluminum

75 mm/h (3 in./hr) Rainfall & 13 m/s (29 mph) Wind Velocity					202 mm/h (8 in./hr) Rainfall & 22 m/s (50 mph) Wind Velocity					Water Penetration	
Free Area Velocity		Ventilation Air Core Velocity		Water Penetration		Free Area Velocity		Ventilation Air Core Velocity		Water Penetration	
(fpm)	(m/s)	(fpm)	(m/s)	Class	Effective	(fpm)	(m/s)	(fpm)	(m/s)	Class	Effective
0	0	0	0.0			0	0	0	0.0		
167	0.9	98	0.5			167	0.9	98	0.5		
335	1.7	197	1.0			335	1.7	197	1.0		
502	2.6	295	1.5			502	2.6	295	1.5		
669	3.4	394	2.0			669	3.4	394	2.0		
837	4.3	492	2.5			837	4.2	492	2.5		
1004	5.1	591	3.0			1004	5.1	591	3.0		
1172	6.0	689	3.5			1173	6.0	690	3.5	A	99.7
1339	6.8	787	4.0			1338	6.8	787	4.0	A	99.5
1506	7.7	776	4.5			1500	7.6	882	4.5	A	99.3
1685	8.6	991	5.0	A	100	1655	8.4	973	4.9	B	98.7

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

Discharge Loss Coefficient Class (Intake) = 2

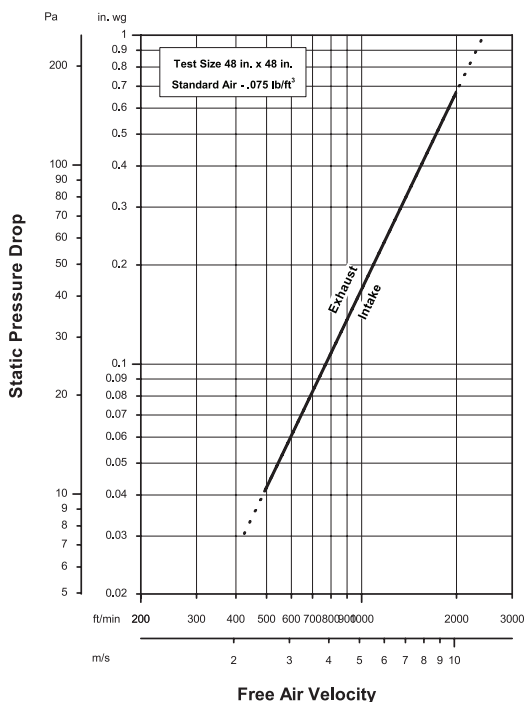
Weather louvers shall be classified by their ability to reject simulated rain. The table shows different classifications based on the maximum simulated rain penetration per square meter (square feet) of louver. Water penetration rating at a given louver face velocity is determined by the water penetration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

Greenheck Fan Corporation certifies that the EVH-501 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.



## Airflow Resistance

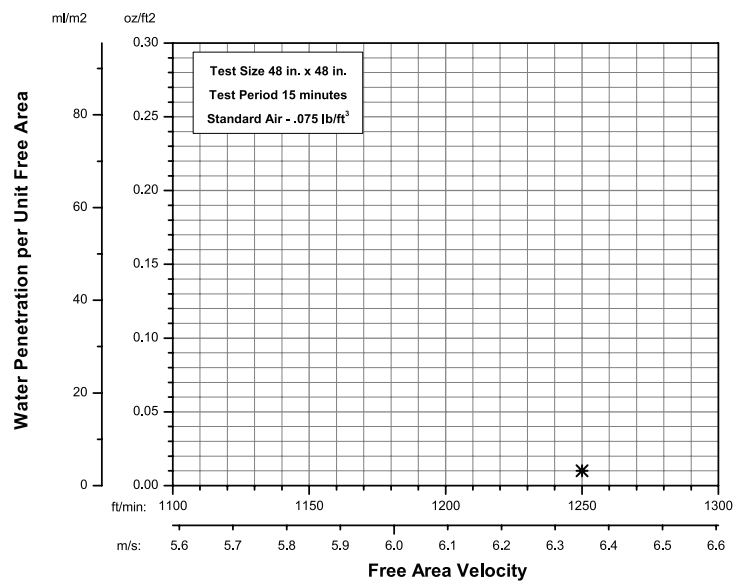
(Standard Air - .075 lb./ft.<sup>3</sup>; Test Size - 48 in. x 48in.)



Model EVH-501 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. (Test Figure 5.5)

## Water Penetration

(Standard Air - .075 lb./ft.<sup>3</sup>; Test Size - 48 in. x 48 in.; Test Duration - 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-501 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-501**  
Wind-Driven Rain Louver  
Extruded Aluminum

## Free Area Chart (sq. ft.)

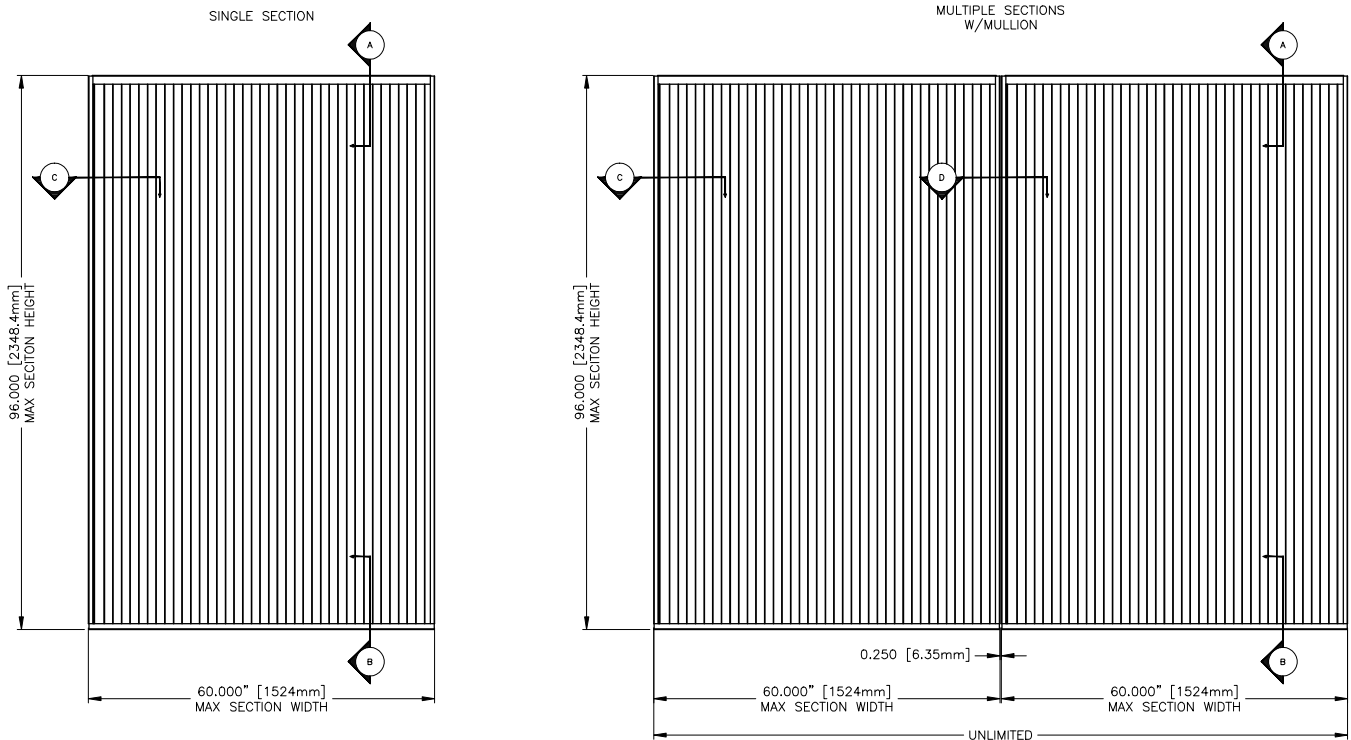
Louver Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	<b>48</b>	54	60
12	0.24	0.43	0.62	0.81	1.00	1.19	1.38	1.56	1.75
18	0.46	0.82	1.17	1.53	1.89	2.24	2.60	2.95	3.31
24	0.68	1.20	1.72	2.25	2.77	3.30	3.82	4.34	4.87
30	0.89	1.58	2.28	2.97	3.66	4.35	5.04	5.73	6.43
36	1.11	1.97	2.83	3.69	4.55	5.41	6.27	7.12	7.98
42	1.33	2.35	3.38	4.41	5.43	6.46	7.49	8.51	9.54
<b>48</b>	1.54	2.74	3.93	5.13	6.32	7.52	<b>8.71</b>	9.90	11.10
54	1.70	3.02	4.35	5.67	6.99	8.31	9.63	10.95	12.27
60	1.92	3.41	4.90	6.39	7.87	9.36	10.85	12.34	13.83
66	2.14	3.79	5.45	7.10	8.76	10.42	12.07	13.73	15.38
72	2.35	4.18	6.00	7.82	9.65	11.47	13.29	15.12	16.94
78	2.57	4.56	6.55	8.54	10.53	12.53	14.52	16.51	18.50
84	2.79	4.95	7.10	9.26	11.42	13.58	15.74	17.90	20.06
90	3.00	5.33	7.66	9.98	12.31	14.64	16.96	19.29	21.61
96	3.22	5.71	8.21	10.70	13.20	15.69	18.18	20.68	23.17

## Core Area Chart (sq. ft.)

Louver Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	<b>48</b>	54	60
12	0.66	1.04	1.43	1.81	2.20	2.59	2.97	3.36	3.74
18	1.09	1.72	2.36	2.99	3.63	4.26	4.90	5.53	6.17
24	1.51	2.40	3.28	4.17	5.05	5.94	6.83	7.71	8.60
30	1.94	3.08	4.21	5.35	6.48	7.62	8.75	9.89	11.02
36	2.37	3.75	5.14	6.52	7.91	9.29	10.68	12.06	13.45
42	2.79	4.43	6.06	7.70	9.34	10.97	12.61	14.24	15.88
<b>48</b>	3.22	5.11	6.99	8.88	10.76	12.65	<b>14.53</b>	16.42	18.30
54	3.65	5.78	7.92	10.05	12.19	14.33	16.46	18.60	20.73
60	4.08	6.46	8.85	11.23	13.62	16.00	18.39	20.77	23.16
66	4.50	7.14	9.77	12.41	15.04	17.68	20.31	22.95	25.59
72	4.93	7.81	10.70	13.59	16.47	19.36	22.24	25.13	28.01
78	5.36	8.49	11.63	14.76	17.90	21.03	24.17	27.30	30.44
84	5.78	9.17	12.55	15.94	19.33	22.71	26.10	29.48	32.87
90	6.21	9.85	13.48	17.12	20.75	24.39	28.02	31.66	35.29
96	6.64	10.52	14.41	18.29	22.18	26.06	29.95	33.84	37.72

## Maximum Size and Installation Information

Maximum single section size for model EVH-501 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.



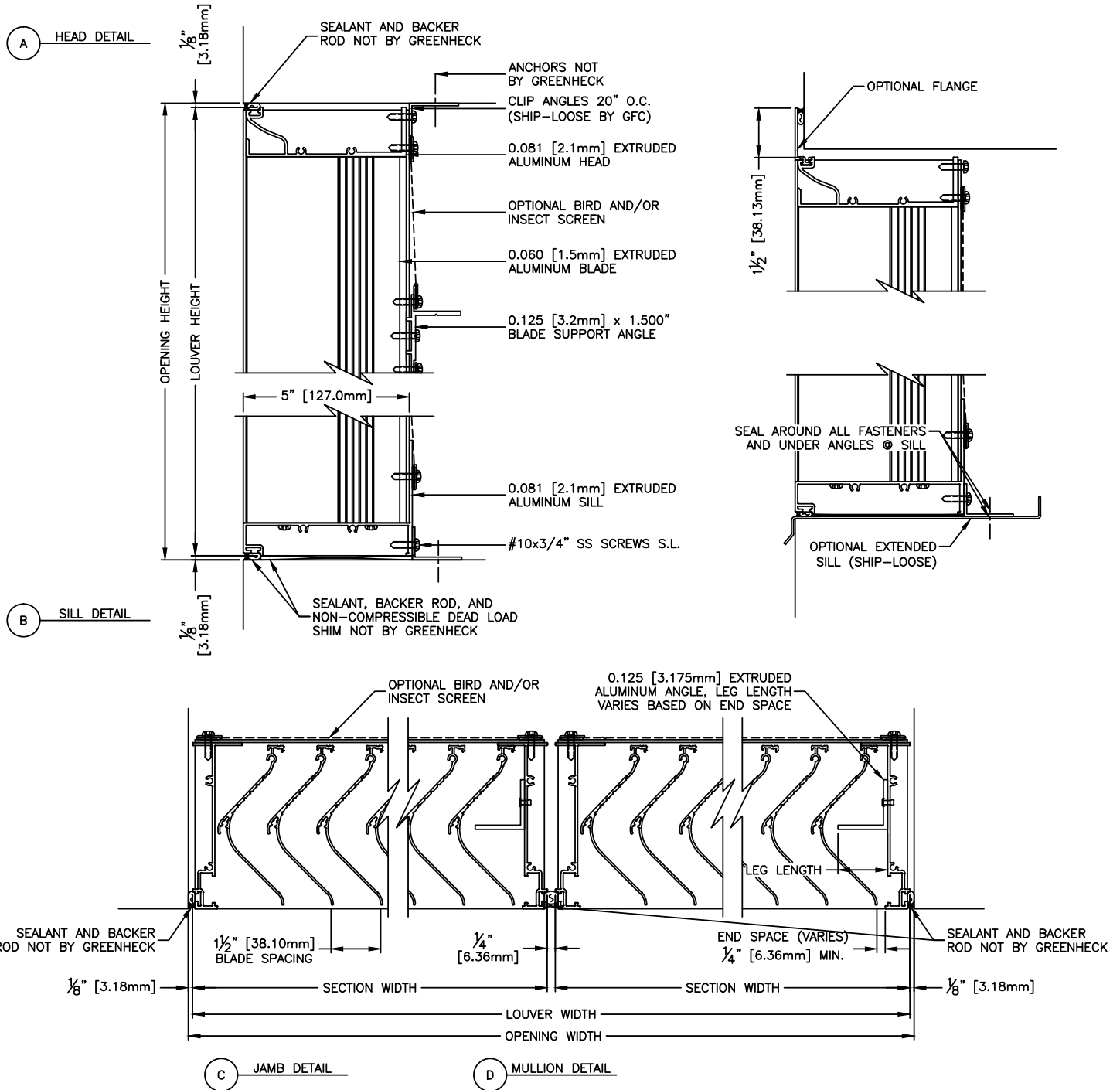
**Minimum Single Section Size**  
12 in. W x 12 in. H

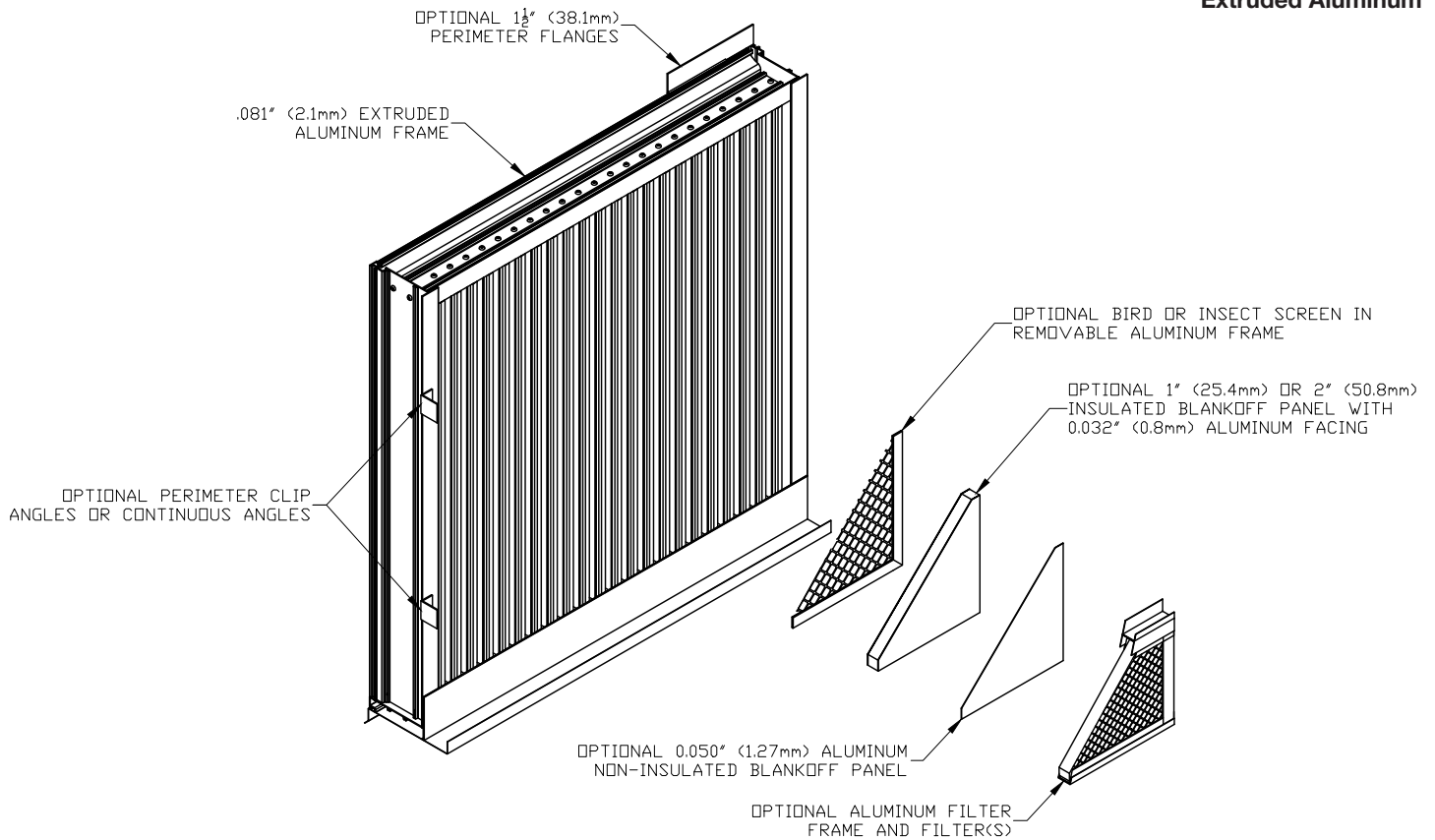
**Maximum Single Section Size**  
60 in. W x 96 in. H

# PRODUCT DETAILS

# EVH-501

Wind-Driven Rain Louver  
Extruded Aluminum





## FINISHES

Finish Type	Description/Application	Color Selection	Standard Warranty (Aluminum)
<b>AAMA 2605</b> 100% Fluoropolymer (FEVE) 2-Coat 70% Kynar® (PVDF) 3-Coat 70% Kynar® (PVDF) 4-Coat 70% Kynar® (PVDF)	<b>"Best."</b> The premier finish for extruded aluminum. Tough, long-lasting coating has superior color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.	<b>Standard Colors:</b> Any of the 27 standard colors shown can be furnished in 70% or 50% Kynar®, 100% Fluoropolymer or Baked Enamel.  <b>Mica Colors:</b> Greenheck offers 6 standard Mica colors for 70% Kynar® or 100% Fluoropolymer.  <b>Custom Colors:</b> Custom color matching is available. Consult your Greenheck representative for cost and/or lead-time implications if a custom color is required.	10 Years (20 Years Optional)
<b>AAMA 2604</b> 50% Kynar® / Acroflur®	<b>"Better."</b> Tough, long-lasting coating has excellent color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.		5 Years
<b>AAMA 2603</b> Baked Enamel	<b>"Good."</b> Provides good adhesion and resistance to weathering, corrosion and chemical stain.		1 Year
<b>AA-M10C22A42</b> 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
<b>AA-M10C22A41</b> Clear Anodize 215 R-1	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	5 years
<b>AA-M10C22A31</b> Clear Anodize 204	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	1 Year
<b>Prime Coat</b>	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
<b>Mill</b>	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](http://www.greenheck.com) for complete information on standard and extended paint warranties. Paint finish warranties are not applicable to steel products.

