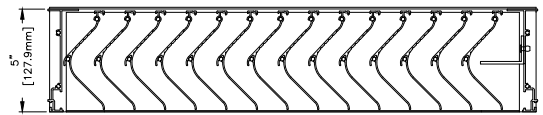


## Miami-Dade Qualified Wind-Driven Rain Louver

### Application and Design

EVH-501D is a Florida Product Approved and Miami-Dade Qualified stationary vertical blade wind driven rain extruded aluminum louver designed to protect air intake and exhaust openings in building exterior walls. EVH-501D is tested in accordance with AMCA 500-L Air Performance, Water Penetration and Wind Driven Rain. EVH-501D is tested in accordance with AMCA 540 Test Method for Louvers Impacted by Wind Borne Debris (Basic Protection, Missile Level D and Enhanced Protection, Missile Level E). EVH-501D is tested in accordance with AMCA 550 Test Method for High Velocity Wind Driven Rain Resistant Louvers. EVH-501D is licensed to bear the AMCA seal allowing design professionals to select and apply with confidence. EVH-501D is tested and qualified per the following Florida test protocols: TAS 201 (Large Missile Impact), TAS 202 (Uniform Static Air Pressure) and TAS 203 (Cyclic Wind Loading). Per Miami-Dade EVH-501D may be installed in locations where the room behind the louver is NOT designed to drain water penetrating into the room or the room will house non-water resistant or water proof equipment, components or supplies.



### Standard Construction

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

**Blades** . . . . . Vertical rain resistant design, heavy gauge extruded 6063-T5 aluminum, 0.063 in. nominal wall thickness, positioned on approximately 1.5 in. centers

**Construction** . . . . . Mechanically fastened

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

**Finish** . . . . . Mill

**Minimum Rough**

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

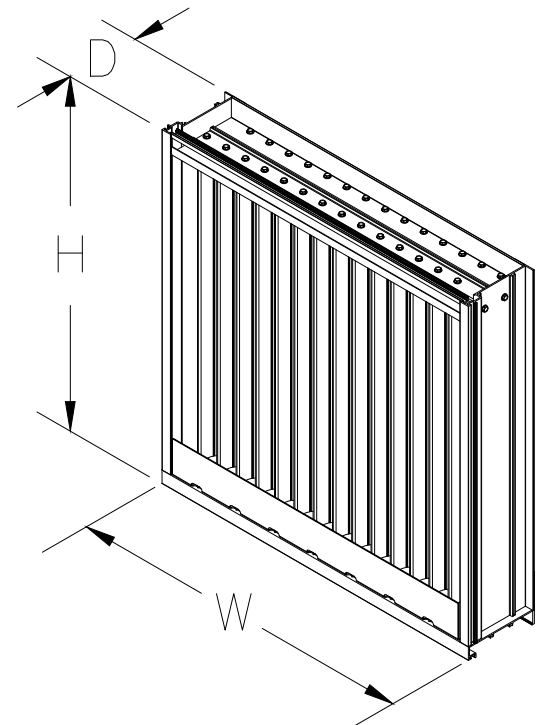
**Maximum Rough**

**Opening Size** . . . . . Unlimited W x Unlimited H

- Multi-wide assemblies are permitted without any additional reinforcing provided the rough opening height is 120 in. or less
- Multi-high assemblies are permitted provided suitable load bearing structure is provided (by others) at each louver section(s) head and sill condition so that the louvers section(s) may be installed in accordance with the instructions shown herein

**Maximum Single**

**Section Size** . . . . . 72 in. W x 120 in. H or 120 in. W x 72 in. H



### Options (at additional cost)

- A variety of bird and insect screens
- Blank-off panels
- Extended sill
- Filter racks
- Flanged frame
- Security bars
- A variety of architectural finishes including:  
Clear anodize  
Integral color anodize  
Baked enamel paint  
Kynar paint

\*Width and height dimensions furnished approximately 3/4 inch under size.

# PERFORMANCE DATA

# EVH-501D

Florida Product Approval No.: 19277.1  
 Miami-Dade, FL NOA No.: 20-0602.02 EXP. 8/6/2025  
 AMCA 540 and 550 Listed  
 Maximum Wind-load: 130 PSF

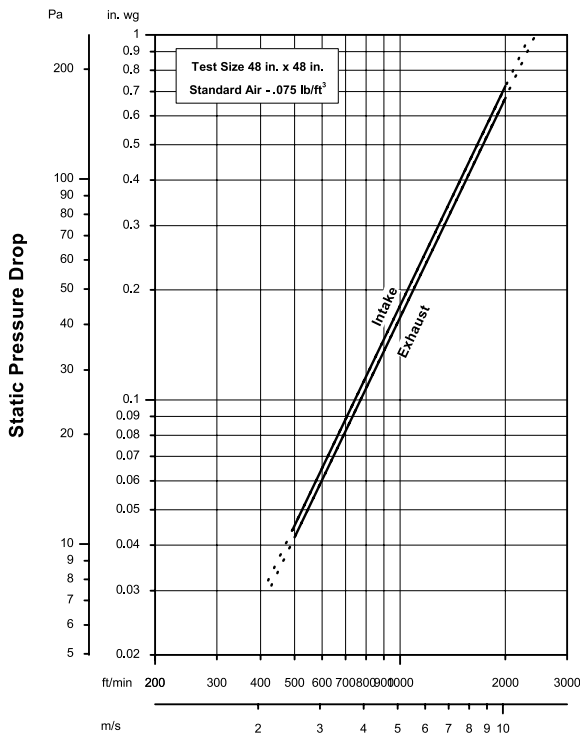
## Wind-Driven Rain Performance

Ventilation Air Core Velocity m/s (fpm)	75mm/h (3 in/hr) Rainfall & 13 m/s (29 mph) Wind Velocity		Ventilation Air Core Velocity m/s (fpm)	200mm/h (8 in/hr) Rainfall & 22 m/s (50 mph) Wind Velocity	
	Water Penetration Effectiveness %	Water Penetration Classification		Water Penetration Effectiveness %	Water Penetration Classification
0.0 (0)		A	0.0 (0)		A
0.5 (98)		A	0.5 (98)		A
1.0 (196)		A	1.0 (196)		A
1.5 (295)		A	1.5 (295)		A
2.0 (393)		A	2.0 (393)		A
2.5 (492)		A	2.5 (492)		A
3.0 (590)		A	3.0 (590)		A
3.5 (688)		A	3.5 (688)		A
4.0 (782)	100.0	A	4.0 (787)		A
4.4 (875)	99.9	A	4.4 (872)	100.0	A
5.0 (989)	99.8	A	5.0 (975)	99.9	A

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.

## Airflow Resistance (Standard Air - .075 lb/ft<sup>3</sup>)



Model EVH-501D 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 5.5-6.5)



Greenheck Fan Corporation certifies that the EVH-501D 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**  
*Enhanced Protection Level E*  
 See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

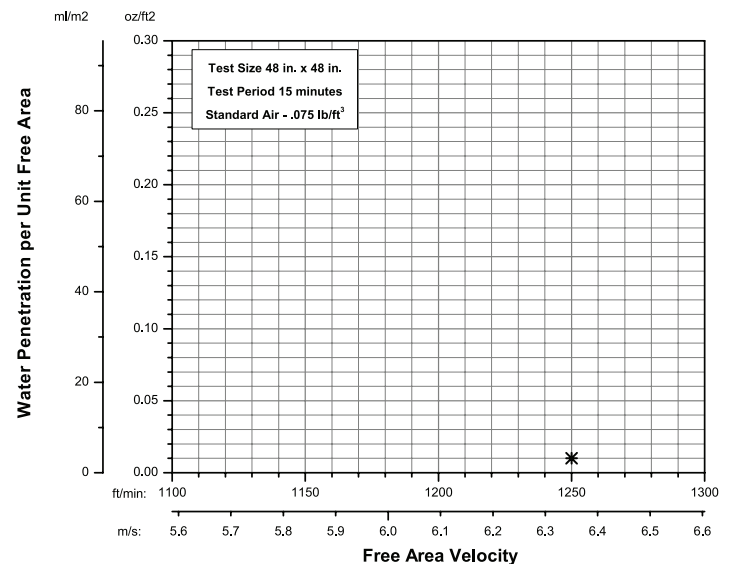
Greenheck Fan Corporation certifies that the EVH-501D louvers shown herein are approved to bear the AMCA Listing Label. The Ratings shown are based on tests and procedures performed in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant and High Velocity Rain Resistant Louvers.

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

## 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-501D 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-501D

Florida Product Approval No.: 19277.1  
 Miami-Dade, FL NOA No.: 20-0602.02 EXP. 8/6/2025  
 AMCA 540 and 550 Listed  
 Maximum Wind-load: 130 PSF

## Free Area Chart (sq. ft.)

Louver Height Inches	Louver Width in Inches																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.26	0.45	0.65	0.84	1.04	1.23	1.43	1.62	1.82	2.01	2.21	2.40	2.60	2.79	2.99	3.18	3.38	3.57	3.76
18	0.48	0.84	1.20	1.57	1.93	2.29	2.65	3.01	3.37	3.74	4.10	4.46	4.82	5.18	5.55	5.91	6.27	6.63	6.99
24	0.70	1.23	1.76	2.29	2.82	3.35	3.88	4.40	4.93	5.46	5.99	6.52	7.05	7.58	8.10	8.63	9.16	9.69	10.22
30	0.93	1.62	2.32	3.01	3.71	4.40	5.10	5.79	6.49	7.19	7.88	8.58	9.27	9.97	10.66	11.36	12.05	12.75	13.45
36	1.15	2.01	2.87	3.74	4.60	5.46	6.32	7.19	8.05	8.91	9.77	10.64	11.50	12.36	13.22	14.09	14.95	15.81	16.67
42	1.37	2.40	3.43	4.46	5.49	6.52	7.55	8.58	9.61	10.64	11.66	12.69	13.72	14.75	15.78	16.81	17.84	18.87	19.90
48	1.59	2.79	3.99	5.18	6.38	7.57	<b>8.77</b>	9.97	11.16	12.36	13.56	14.75	15.95	17.15	18.34	19.54	20.73	21.93	23.13
54	1.81	3.18	4.54	5.90	7.27	8.63	9.99	11.36	12.72	14.08	15.45	16.81	18.17	19.54	20.90	22.26	23.63	24.99	26.35
60	2.04	3.57	5.10	6.63	8.16	9.69	11.22	12.75	14.28	15.81	17.34	18.87	20.40	21.93	23.46	24.99	26.52	28.05	29.58
66	2.26	3.96	5.65	7.35	9.05	10.74	12.44	14.14	15.84	17.53	19.23	20.93	22.63	24.32	26.02	27.72	29.41	31.11	32.81
72	2.48	4.35	6.21	8.07	9.94	11.80	13.67	15.53	17.39	19.26	21.12	22.99	24.85	26.71	28.58	30.44	32.31	34.17	36.04
78	2.65	4.64	6.63	8.62	10.61	12.59	14.58	16.57	18.56	20.55	22.54								
84	2.87	5.03	7.18	9.34	11.50	13.65	15.81	17.96	20.12	22.28	24.43								
90	3.09	5.42	7.74	10.06	12.39	14.71	17.03	19.35	21.68	24.00	26.32								
96	3.31	5.80	8.29	10.78	13.28	15.77	18.26	20.75	23.24	25.73	28.22								
102	3.54	6.19	8.85	11.51	14.17	16.82	19.48	22.14	24.79	27.45	30.11								
108	3.76	6.58	9.41	12.23	15.05	17.88	20.70	23.53	26.35	29.17	32.00								
114	3.98	6.97	9.96	12.95	15.94	18.94	21.93	24.92	27.91	30.90	33.89								
120	4.20	7.36	10.52	13.68	16.83	19.99	23.15	26.31	29.47	32.62	35.78								

## Core Area Chart (sq. ft.)

Louver Height Inches	Louver Width in Inches																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.51	0.80	1.09	1.39	1.68	1.97	2.26	2.55	2.84	3.14	3.43	3.72	4.01	4.30	4.59	4.89	5.18	5.47	5.76
18	0.95	1.49	2.03	2.57	3.11	3.66	4.20	4.74	5.28	5.82	6.36	6.91	7.45	7.99	8.53	9.07	9.61	10.16	10.70
24	1.39	2.18	2.97	3.76	4.55	5.34	6.14	6.93	7.72	8.51	9.30	10.09	10.89	11.68	12.47	13.26	14.05	14.84	15.64
30	1.82	2.86	3.91	4.95	5.99	7.03	8.07	9.11	10.16	11.20	12.24	13.28	14.32	15.36	16.41	17.45	18.49	19.53	20.57
36	2.26	3.55	4.84	6.14	7.43	8.72	10.01	11.30	12.59	13.89	15.18	16.47	17.76	19.05	20.34	21.64	22.93	24.22	25.51
42	2.70	4.24	5.78	7.32	8.86	10.41	11.95	13.49	15.03	16.57	18.11	19.66	21.20	22.74	24.28	25.82	27.36	28.91	30.45
48	3.14	4.93	6.72	8.51	10.30	12.09	<b>13.89</b>	15.68	17.47	19.26	21.05	22.84	24.64	26.43	28.22	30.01	31.80	33.59	35.39
54	3.57	5.61	7.66	9.70	11.74	13.78	15.82	17.86	19.91	21.95	23.99	26.03	28.07	30.11	32.16	34.20	36.24	38.28	40.32
60	4.01	6.30	8.59	10.89	13.18	15.47	17.76	20.05	22.34	24.64	26.93	29.22	31.51	33.80	36.09	38.39	40.68	42.97	45.26
66	4.45	6.99	9.53	12.07	14.61	17.16	19.70	22.24	24.78	27.32	29.86	32.41	34.95	37.49	40.03	42.57	45.11	47.66	50.20
72	4.89	7.68	10.47	13.26	16.05	18.84	21.64	24.43	27.22	30.01	32.80	35.59	38.39	41.18	43.97	46.76	49.55	52.34	55.14
78	5.21	8.19	11.17	14.15	17.13	20.11	23.09	26.07	29.05	32.03	35.01								
84	5.65	8.88	12.11	15.34	18.57	21.80	25.03	28.26	31.48	34.71	37.94								
90	6.09	9.57	13.05	16.53	20.01	23.48	26.96	30.44	33.92	37.40	40.88								
96	6.53	10.26	13.98	17.71	21.44	25.17	28.90	32.63	36.36	40.09	43.82								
102	6.96	10.94	14.92	18.90	22.88	26.86	30.84	34.82	38.80	42.78	46.76								
108	7.40	11.63	15.86	20.09	24.32	28.55	32.78	37.01	41.23	45.46	49.69								
114	7.84	12.32	16.80	21.28	25.76	30.23	34.71	39.19	43.67	48.15	52.63								
120	8.28	13.01	17.73	22.46	27.19	31.92	36.65	41.38	46.11	50.84	55.57								



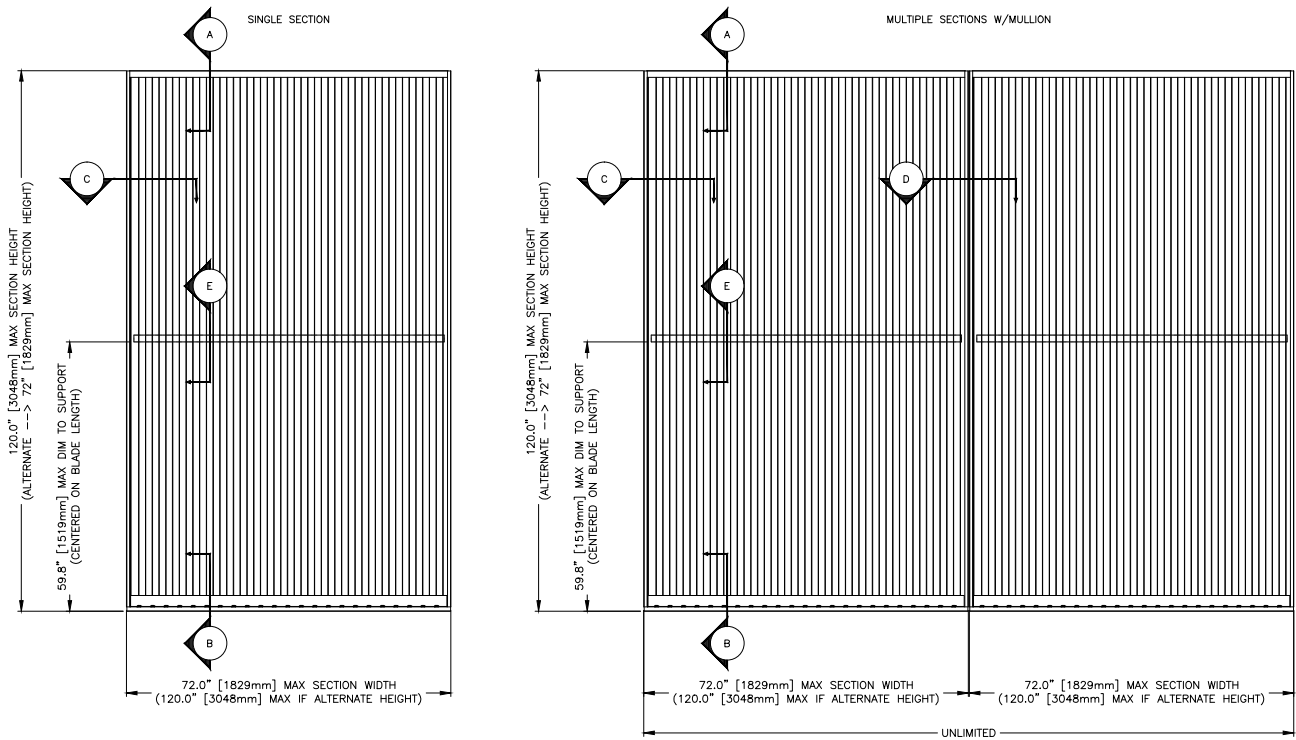
# INSTALLATION DETAILS

# EVH-501D

Florida Product Approval No.: 19277.1  
 Miami-Dade, FL NOA No.: 20-0602.02 EXP. 8/6/2025  
 AMCA 540 and 550 Listed  
 Maximum Wind-load: 130 PSF

## Maximum Size and Installation Information

Model EVH-501D is a Miami-Dade Qualified and Florida Product Approved louver and must be installed in accordance with the installation instructions shown herein. Model EVH-501D is qualified for installation within concrete/masonry, steel, aluminum or wood substrate. Model EVH-501D is tested and qualified to withstand positive and negative wind pressure loads up to 130 PSF. The maximum single section width is 120 in. (72 in. height maximum). The maximum single section height is 120 in. (72 in. width maximum). Multi-wide assemblies are permitted without any additional reinforcing provided the maximum rough opening height is not exceeded. Multi-high assemblies are permitted provided suitable load bearing structure is provided (by others) at each louver section(s) head and sill condition so that the louver section(s) may be installed in accordance with the instructions shown herein. Structural reinforcing members along with any associated installation hardware is not provided by Greenheck unless indicated otherwise by Greenheck. Options and are not subject to structural analysis unless indicated otherwise by Greenheck.



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

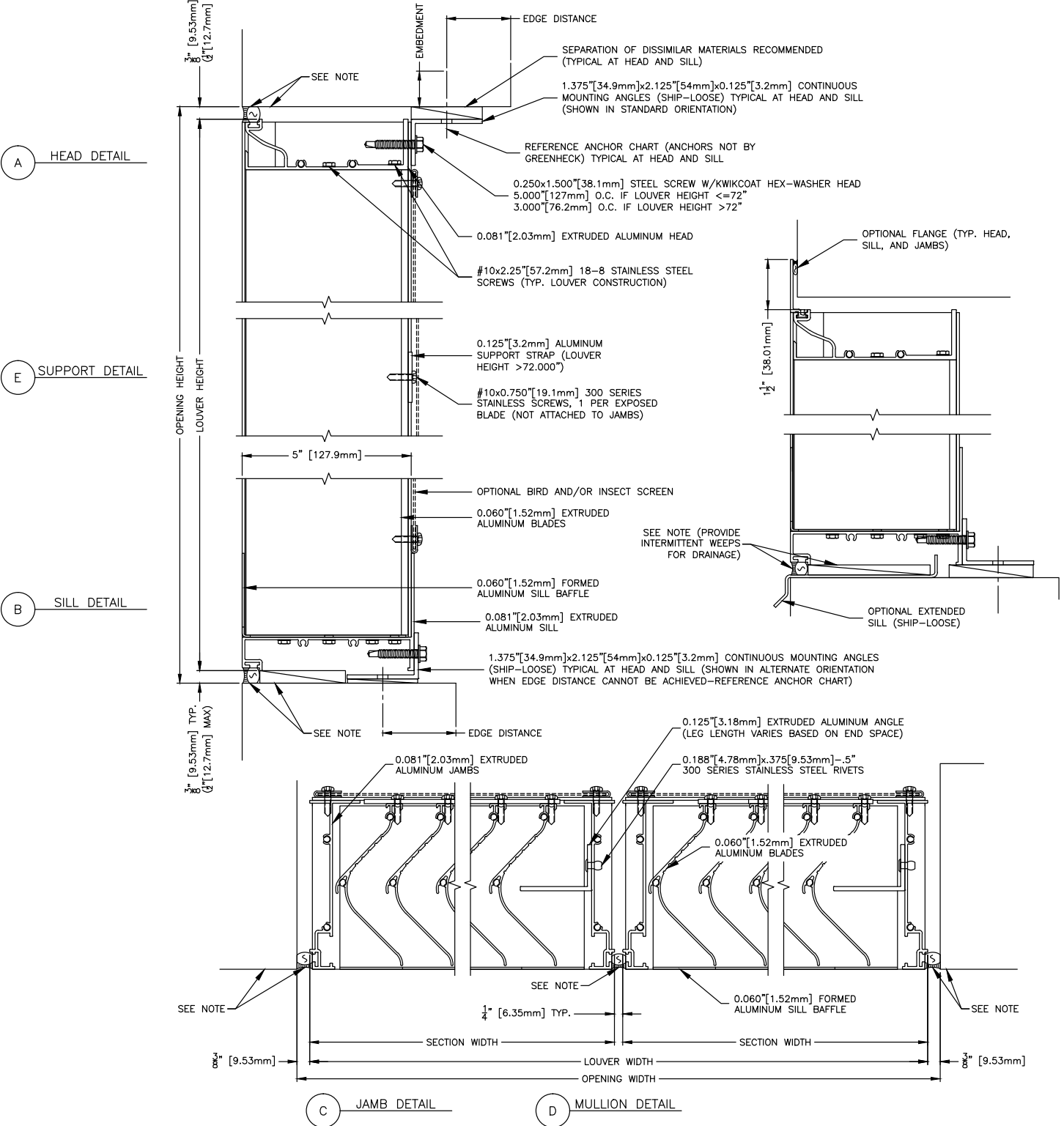
**Maximum Rough Opening  
 Single Section Size**  
 72 3/4 in. W x 120 3/4 in. H or  
 120 3/4 in. W x 72 3/4 in. H

# PRODUCT DETAILS

# EVH-501D

Florida Product Approval No.: 19277.1  
 Miami-Dade, FL NOA No.: 20-0602.02 EXP. 8/6/2025  
 AMCA 540 and 550 Listed  
 Maximum Wind-load: 130 PSF

NOTE: ALL SEALANT, BACKER RODS, NON-COMPRESSIBLE DEAD-LOAD SHIMS AND SUBSTRATE IS NOT BY GREENHECK (TYPICAL ALL DETAILS)



# FASTENER CHART

# EVH-501D

Florida Product Approval No.: 19277.1  
 Miami-Dade, FL NOA No.: 20-0602.02 EXP. 8/6/2025  
 AMCA 540 and 550 Listed  
 Maximum Wind-load: 130 PSF

BUILDING SUBSTRATE MATERIAL			BUILDING SUBSTRATE ANCHORS/FASTENERS															
TYPE	MATERIAL MIN.	THICKNESS MIN.	TYPE (ALL FASTENERS ARE HEX HEAD STYLE)	MAT'L	DIA.	HEIGHT MAX.	SPACING MAX.	EDGE MIN.	EMBED. MIN.	WASHER/FLANGE MIN.	ANGLE HOLE MAX	SUBSTRATE HOLE, MAX.						
WOOD	G DF 0.42	3	LAG SCREW	**	1/4	72	6	1 1/2	2 7/8	NA	1/4	SEE FASTENER MANUFACTURER INSTRUCTIONS						
						120	3 *											
STEEL	A36	16 GA	BOLT W/ NUT OR THREAD CUTTING/TAPPING SCREW	**	1/4-20	72	6	3/4	SHOWN GAGE VALUE	NA	5/16	5/16, FOR USE WITH NUT CONNECTION ONLY						
		14 GA				120	3 *											
		16 GA				72	9	1					13/32	3/8, FOR USE WITH NUT CONNECTION ONLY				
		14 GA				120	6											
ALUMINUM	6063-T5	1/8	BOLT W/ NUT OR THREAD CUTTING/TAPPING SCREW	**	1/4-20	72	6	1/2	1/8	NA	5/16	1/4						
						120	3 *											
						72	9	3/4					13/32	3/8				
						120	6											
CONCRETE	VARIES WITH SIZE OF FASTENER USED, SEE FASTENER MANUFACTURER INSTRUCTIONS		BUILDEX TAPCON (BLUE, WHITE, OR 410 SS)	VARIES	1/4	72	6	2 1/8	1 3/4	NA	1/4	SEE FASTENER MANUFACTURER INSTRUCTIONS						
			ELCO AGGRE-GATOR	300 SS				1 1/2	1 3/4		1/4							
			ELCO ULTRACON SS4	410 SS				2 1/2	1 3/4		1/4							
			ELCO CRETE-FLEX SS4, SMALL HEAD	410 SS				1 3/4	1 3/4		1/4							
			ELCO CRETE-FLEX SS4, FLANGED HEAD	410 SS				1	1 3/4		1/4							
			POWERS 316 STAINLESS STEEL WEDGE-BOLT	316 SS				2 1/2	1 7/8		5/16							
			POWERS WEDGE-BOLT PLUS	STEEL			1 3/4	1 1/2	5/16									
			BUILDEX TAPCON (BLUE, WHITE, OR 410 SS)	VARIES			2 3/8	1 1/2	1/4									
			BUILDEX TAPCON (BLUE, WHITE, OR 410 SS)	VARIES			1 1/2	1 3/4	1/4									
			ELCO AGGRE-GATOR	300 SS			1 1/2	1 3/8	1/4									
			ELCO ULTRACON SS4	410 SS			1 1/2	1 3/4	1/4									
			ELCO CRETE-FLEX SS4, SMALL HEAD	410 SS			2 1/2	1 3/4	1/4									
			ELCO CRETE-FLEX SS4, FLANGED HEAD	410 SS		2 1/2	1 3/4	1/4										
			POWERS 316 STAINLESS STEEL WEDGE-BOLT	316 SS		2 1/2	1 3/4	5/16										
			POWERS WEDGE-BOLT PLUS	STEEL		2	1 7/8	5/16										
			POWERS 316 STAINLESS STEEL WEDGE-BOLT	316 SS		1 1/2	1 1/2	5/16										
			POWERS WEDGE-BOLT PLUS	STEEL		2 3/4	2 3/8	7/16										
			POWERS WEDGE-BOLT PLUS	STEEL		2 1/4	1 1/2	7/16										
			POWERS 316 STAINLESS STEEL WEDGE-BOLT	316 SS		1 1/4	2 3/8	7/16										
			POWERS WEDGE-BOLT PLUS	STEEL		1 1/8	1 1/2	7/16										
			CRACKED OR UNCRACKED, POWERS WEDGE-BOLT PLUS	STEEL		1 3/4	2 1/8	7/16										
			GROUT FILLED CMU	NOTE 1			ELCO AGGRE-GATOR	300 SS	1/4		72		6	2	2	NA	1/4	SEE FASTENER MANUFACTURER INSTRUCTIONS
							ELCO AGGRE-GATOR	300 SS	1/4		120		3 *	2	2		1/4	
							ELCO ULTRACON SS4	410 SS	120		6		2 1/2	2	1/4			
POWERS WEDGE-BOLT PLUS	STEEL	3/8			120		6	2	2 1/2	7/16								

NOTE \*: ALL 0.25" DIAMETER 3.0" CENTER FASTENER SETUPS (LOUVERS WITH HEIGHT < 120") CAN HAVE THEIR CENTERS INCREASED TO 5.0" AND BE USED ON A LOUVER WITH HEIGHT OF < 72" AS LONG AS NO OTHER ITEMS OF THE ORIGINAL SELECTED 0.25" DIAMETER 3.0" CENTER FASTENER SETUP CHANGE (I.E. SUBSTRATE, EMBEDMENT, ETC.).

NOTE \*\*: LAG SCREWS SHALL HAVE STRENGTHS OF MINIMUM GRADE 1 STEEL, OTHER BOLT AND SCREWS SHALL HAVE STRENGTHS OF MINIMUM GRADE 2 STEEL.

NOTE 1: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING; 6" WIDE, CMU CONFORMING TO ASTM C-90 FILLED WITH 4,747 KSI GROUT.

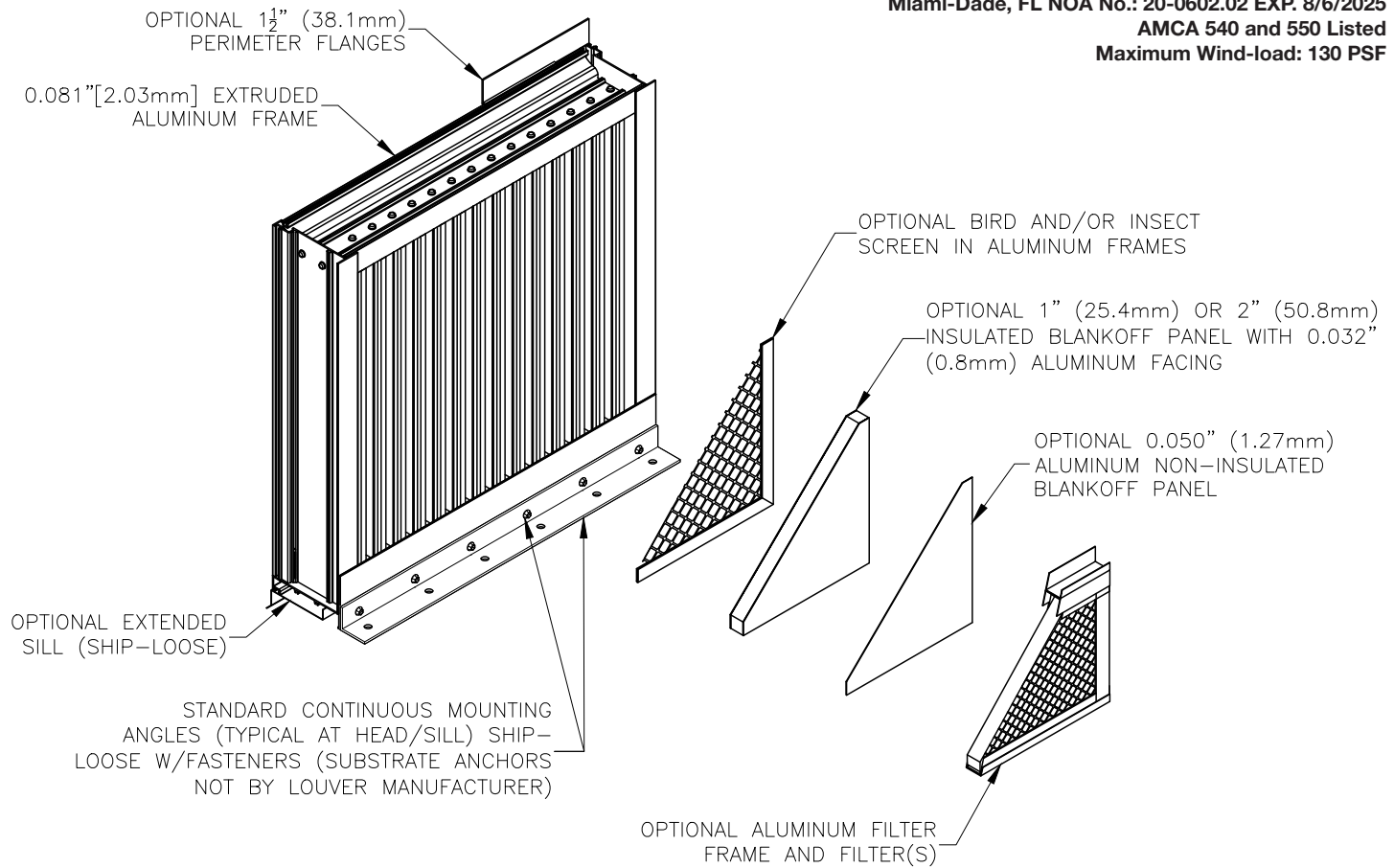
NOTE 2: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING; 6" WIDE, 2 KSI CMU CONFORMING TO ASTM C-90 WITH 1624 KSI GROUT.

NOTE 3: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING; 6" WIDE, GRADE N, TYPE II, LIGHT-WEIGHT/MEDIUM-WEIGHT/NORMAL-WEIGHT CMU CONFORMING TO ASTM C-90. MORTAR MUST BE TYPE N.

# OPTION DRAWINGS

# EVH-501D

Florida Product Approval No.: 19277.1  
 Miami-Dade, FL NOA No.: 20-0602.02 EXP. 8/6/2025  
 AMCA 540 and 550 Listed  
 Maximum Wind-load: 130 PSF



## 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.	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.	<b>Mica Colors:</b> Greenheck offers 6 standard Mica colors for 70% Kynar® or 100% Fluoropolymer.	5 Years
<b>AAMA 2603</b> Baked Enamel	<b>"Good."</b> Provides good adhesion and resistance to weathering, corrosion and chemical stain.	<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.	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.



EVH-501D  
 June 2020

Copyright © 2020 Greenheck Fan Corporation

Greenheck Fan Corporation reserves the right to make product changes without notice.