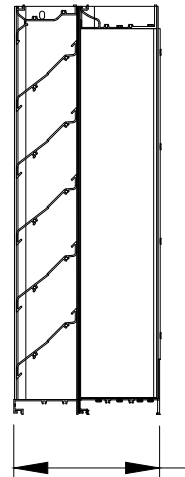


Miami-Dade Qualified Wind-Driven Rain Louver

Application and Design

EHV-901D is a High Velocity Wind Driven Rain louver designed to protect intake and exhaust openings in building exterior walls. EHV-901D is tested in accordance with AMCA 500-L Air Performance, Water Penetration and Wind Driven Rain. EHV-901D is tested in accordance with AMCA 540 Test Method for Louvers Impacted by Wind Borne Debris (Basic Protection, Missile D and Enhanced Protection, Missile E). EHV-901D is tested in accordance with AMCA 550 Test Method for High Velocity Wind Driven Rain Resistant Louvers. EHV-901D is licensed to bear the AMCA seal allowing design professionals to select and apply with confidence. EHV-901D 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 EHV-901D 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.



9 1/4"
 [235.31mm]

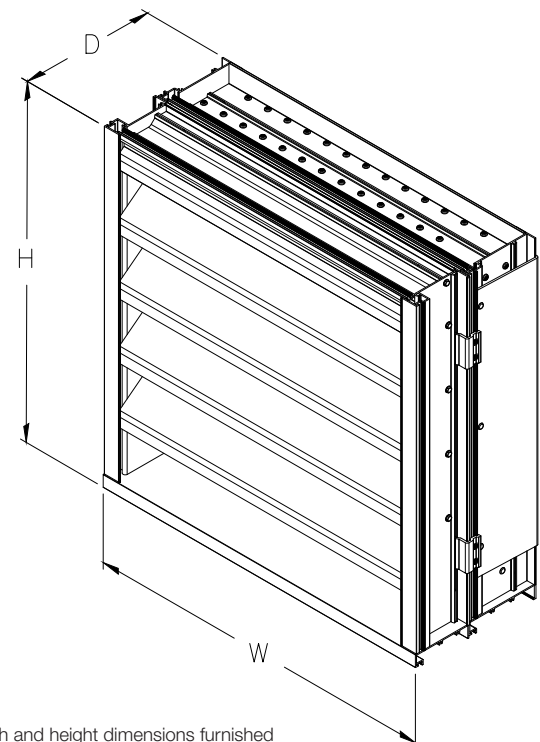
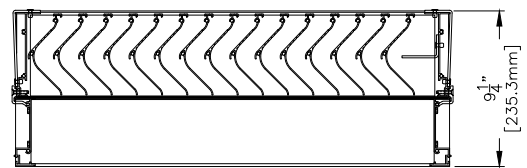


HIGH VELOCITY RAIN
 RESISTANT WITH BLADES
 FULLY OPEN AND
 IMPACT RESISTANT LOUVER
 Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify
 AMCA performance
 certification.

Standard Construction

- Frame** Heavy gauge extruded 6063-T5 aluminum (jamb), heavy gauge extruded 6063-T5 aluminum (head & sill), 9 in. x 0.081 in. nominal wall thickness
- Blades (Front)** J style, heavy gauge extruded 6063-T5 aluminum, 0.081 in. nominal wall thickness, positioned on approximately 4.25 in. blade spacing
- Blades (Rear)** 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 (actual)
- Maximum Single Section Size** 60 in. W x 120 in. H (actual)



*Width and height dimensions furnished approximately 0.75 inch under size.

Options (at additional cost)

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

PERFORMANCE DATA

EHV-901D

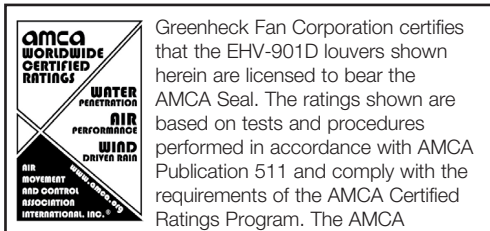
Florida Product Approval No.: 19683
 Miami-Dade, FL NOA No.: 19-0516.09 EXP. 7/28/2021
 AMCA 540 and 550 Listed
 Maximum Wind-load: +/-130 PSF

Wind-Driven Rain Performance

Ventilation Air Core Velocity m/s (fpm)	Free Area Velocity m/s (fpm)	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		Water Penetration Effectiveness %	Water Penetration Classification
		Water Penetration Effectiveness %	Water Penetration Classification	Ventilation Air Core Velocity m/s (fpm)	Free Area Velocity m/s (fpm)		
0.0 (0)	0.0 (0)		A	0.0 (0)	0.0 (0)		A
0.5 (98)	0.8 (167)		A	0.5 (98)	0.8 (167)		A
1.0 (197)	1.7 (337)		A	1.0 (197)	1.7 (337)		A
1.5 (295)	2.6 (504)		A	1.5 (295)	2.6 (504)		A
2.0 (394)	3.4 (673)		A	2.0 (394)	3.4 (673)		A
2.5 (492)	4.3 (841)		A	2.5 (492)	4.3 (841)		A
3.0 (591)	5.1 (1010)		A	3.0 (591)	5.1 (1010)		A
3.5 (689)	6 (1178)		A	3.4 (664)	5.8 (1135)	99.8	A
4.0 (787)	6.8 (1345)		A	3.9 (771)	6.7 (1318)	99.6	A
4.4 (863)	7.5 (1475)	100.0	A	4.5 (877)	7.6 (1499)	99.2	A
5.0 (980)	8.5 (1675)	98.5	B	4.9 (964)	8.4 (1648)	98.5	B

Discharge Loss Coefficient Class (Intake) = 3

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 EHV-901D 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.

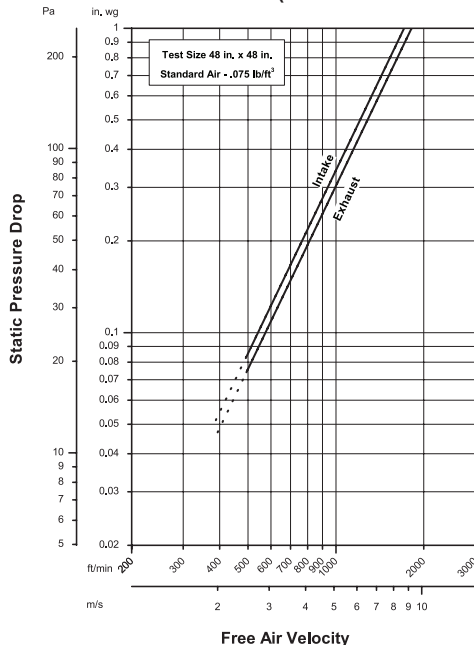


Greenheck Fan Corporation certifies that the EHV-901D louvers shown herein are approved to bear the AMCA Listing Label. The Ratings shown are based on tests and procedures performed in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant Louvers and High Velocity Wind-Driven 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

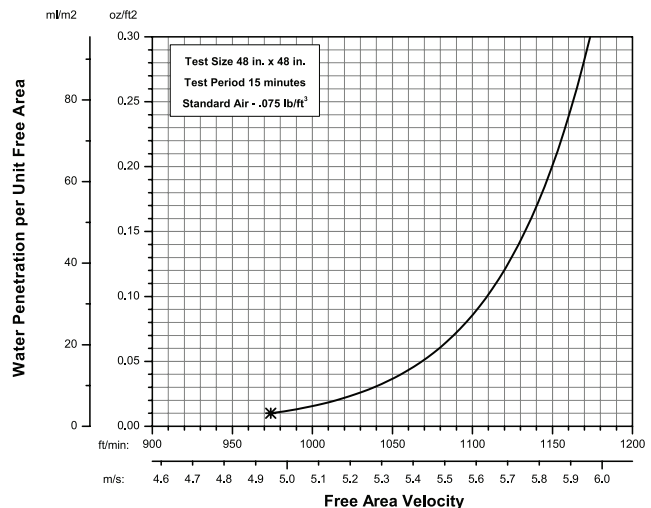
Airflow Resistance (Standard Air - .075 lb/ft³)



Model EHV-901D 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)

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 EHV-901D is 974 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

EHV-901D

Florida Product Approval No.: 19683

Miami-Dade, FL NOA No.: 19-0516.09 EXP. 7/28/2021

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
12	0.24	0.44	0.63	0.83	1.02	1.22	1.41	1.60	1.80
18	0.45	0.81	1.17	1.53	1.89	2.26	2.62	2.98	3.34
24	0.66	1.18	1.71	2.24	2.77	3.30	3.83	4.35	4.88
30	0.86	1.56	2.25	2.95	3.64	4.34	5.03	5.73	6.43
36	1.07	1.93	2.79	3.66	4.52	5.38	6.24	7.11	7.97
42	1.28	2.31	3.33	4.36	5.39	6.42	7.45	8.48	9.51
48	1.48	2.68	3.88	5.07	6.27	7.46	8.66	9.86	11.05
54	1.69	3.05	4.42	5.78	7.14	8.51	9.87	11.23	12.59
60	1.90	3.43	4.96	6.49	8.02	9.55	11.08	12.61	14.14
66	2.10	3.80	5.50	7.19	8.89	10.59	12.29	13.98	15.68
72	2.31	4.18	6.04	7.90	9.77	11.63	13.49	15.36	17.22
78	2.47	4.46	6.44	8.43	10.42	12.41	14.40	16.39	18.38
84	2.67	4.83	6.99	9.14	11.30	13.45	15.61	17.76	19.92
90	2.88	5.20	7.53	9.85	12.17	14.49	16.82	19.14	21.46
96	3.09	5.58	8.07	10.56	13.05	15.54	18.02	20.51	23.00
102	3.30	5.95	8.61	11.26	13.92	16.58	19.23	21.89	24.55
108	3.50	6.33	9.15	11.97	14.80	17.62	20.44	23.26	26.09
114	3.71	6.70	9.69	12.68	15.67	18.66	21.65	24.64	27.63
120	3.92	7.07	10.23	13.39	16.54	19.70	22.86	26.02	29.17

Core Area Chart (sq. ft.)

Louver Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	48	54	60
12	0.56	0.92	1.28	1.64	1.99	2.35	2.71	3.06	3.42
18	0.96	1.57	2.17	2.78	3.39	3.99	4.60	5.21	5.81
24	1.36	2.21	3.07	3.93	4.78	5.64	6.50	7.35	8.21
30	1.75	2.86	3.97	5.07	6.18	7.29	8.39	9.50	10.61
36	2.15	3.50	4.86	6.22	7.58	8.93	10.29	11.65	13.00
42	2.54	4.15	5.76	7.36	8.97	10.58	12.18	13.79	15.40
48	2.94	4.80	6.65	8.51	10.37	12.22	14.08	15.94	17.79
54	3.34	5.44	7.55	9.66	11.76	13.87	15.98	18.08	20.19
60	3.73	6.09	8.45	10.80	13.16	15.52	17.87	20.23	22.59
66	4.13	6.73	9.34	11.95	14.55	17.16	19.77	22.37	24.98
72	4.52	7.38	10.24	13.09	15.95	18.81	21.66	24.52	27.38
78	4.92	8.03	11.13	14.24	17.35	20.45	23.56	26.67	29.77
84	5.31	8.67	12.03	15.39	18.74	22.10	25.46	28.81	32.17
90	5.71	9.32	12.92	16.53	20.14	23.74	27.35	30.96	34.56
96	6.11	9.96	13.82	17.68	21.53	25.39	29.25	33.10	36.96
102	6.50	10.61	14.72	18.82	22.93	27.04	31.14	35.25	39.36
108	6.90	11.25	15.61	19.97	24.33	28.68	33.04	37.40	41.75
114	7.29	11.90	16.51	21.11	25.72	30.33	34.93	39.54	44.15
120	7.69	12.55	17.40	22.26	27.12	31.97	36.83	41.69	46.54



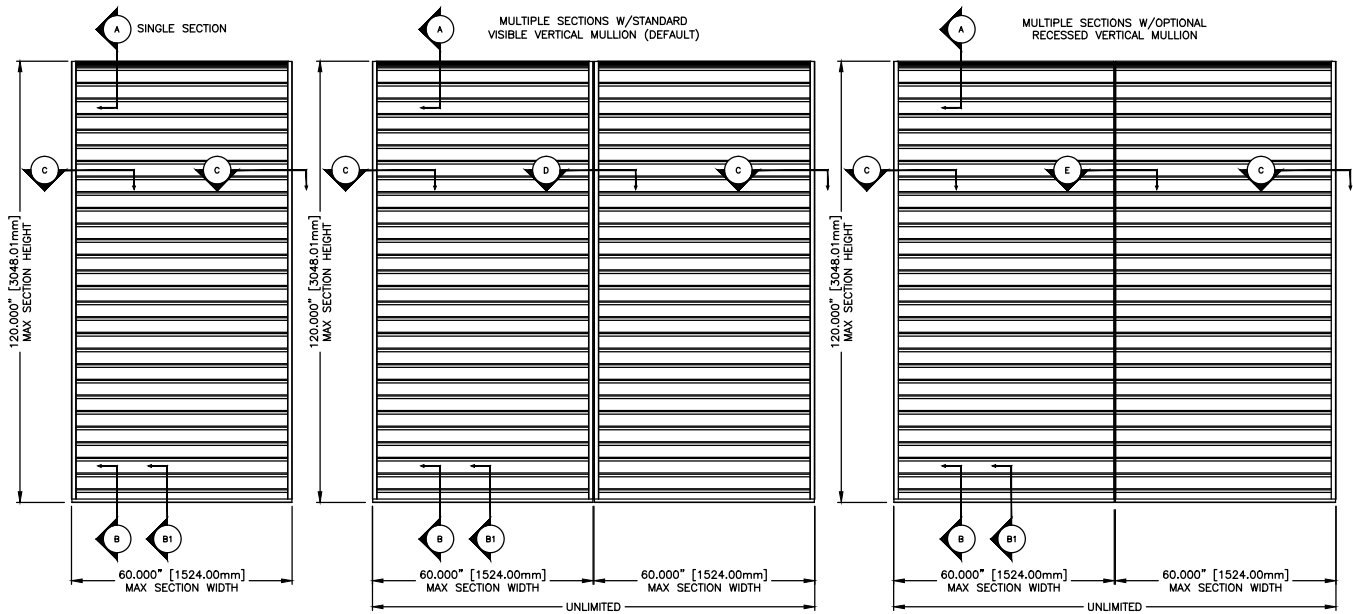
INSTALLATION DETAILS

EHV-901D

Florida Product Approval No.: 19683
 Miami-Dade, FL NOA No.: 19-0516.09 EXP. 7/28/2021
 AMCA 540 and 550 Listed
 Maximum Wind-load: +/-130 PSF

Maximum Size and Installation Information

Model EHV-901D is a Miami-Dade Qualified and Florida Product Approved louver and must be installed in accordance with the installation instructions shown herein. Model EHV-901D is qualified for installation within concrete/masonry, steel, aluminum or wood substrate. Model EHV-901D is tested and qualified to withstand positive and negative wind pressure loads up to 130 PSF. The maximum single section width is 60 in. The maximum single section height is 120 in. Multi-wide assemblies are permitted without any additional reinforcing. 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.



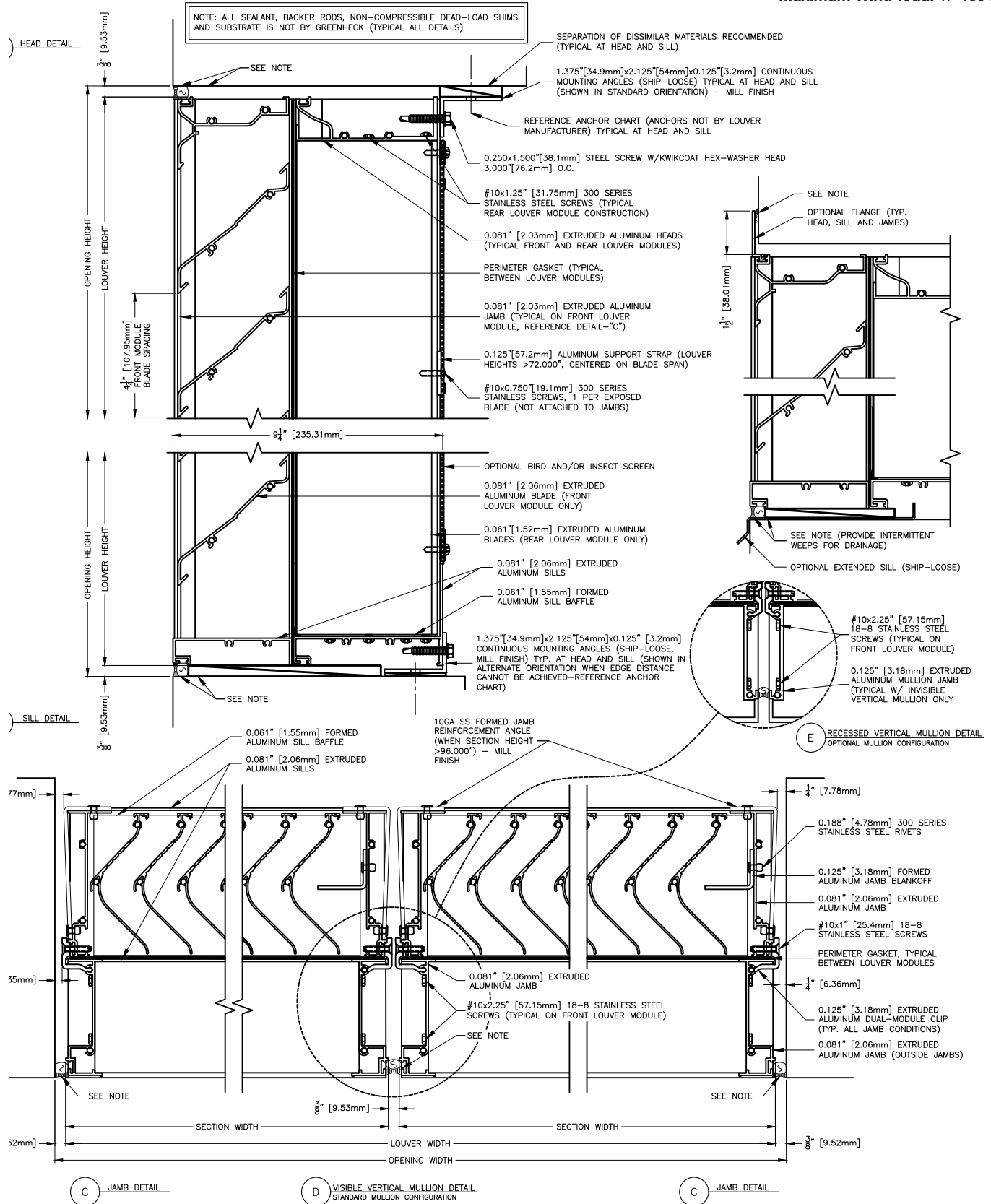
Minimum Actual Single Section Size
 12 in. W x 12 in. H

Maximum Actual Single Section Size
 60 in. W x 120 in. H

PRODUCT DETAILS

EHV-901D

Florida Product Approval No.: 19683
 Miami-Dade, FL NOA No.: 19-0516.09 EXP. 7/28/2021
 AMCA 540 and 550 Listed
 Maximum Wind-load: +/-130 PSF



FASTENER CHART

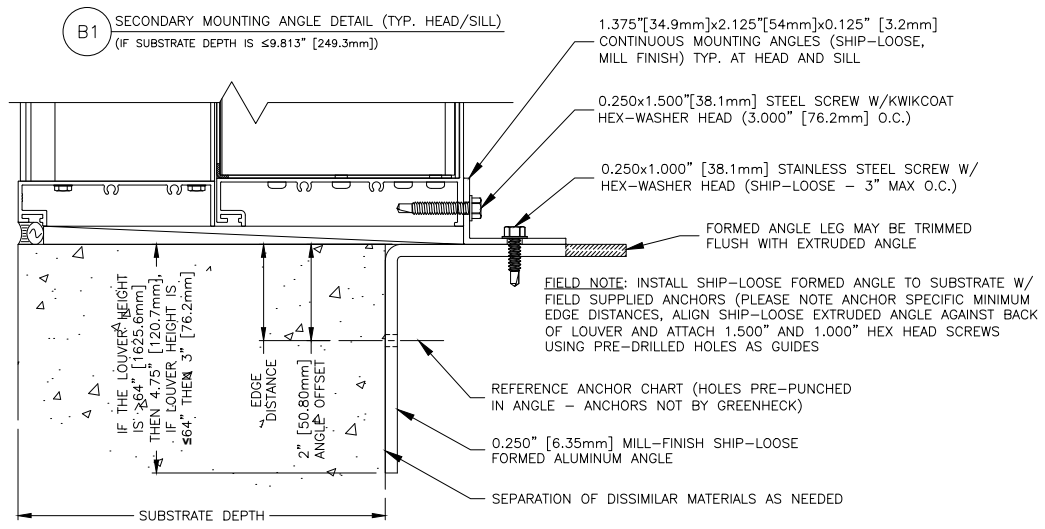
EHV-901D

Florida Product Approval No.: 19683
 Miami-Dade, FL NOA No.: 19-0516.09 EXP. 7/28/2021
 AMCA 540 and 550 Listed
 Maximum Wind-load: +/-130 PSF

ITEM 26, SUBSTRATE			ITEM 25, SUBSTRATE FASTENER FOR CONTINUOUS MOUNTING ANGLE, PRIMARY											
TYPE	MATERIAL MIN.	THICKNESS MIN.	DIA.	TYPE (ALL FASTENERS ARE HEX HEAD STYLE)	MAT'L	SPACING MAX.	EDGE MIN.	EMBED. MIN.	WASHER/FLANGE MIN.	ANGLE HOLE MAX.	SUBSTRATE HOLE MAX.			
WOOD	G ≥ 0.42	3	1/4	LAG SCREW	*	3	1 1/2	2 7/8	NA	1/4	SEE FASTENER MANUFACTURER INSTRUCTIONS			
			3/8			6			13/16 AT HEAD			3/8		
STEEL	A36	16 GA	1/4-20	BOLT W/ NUT OR THREAD CUTTING/TAPPING SCREW	*	3	3/4	16 GA	NA	5/16	5/16 FOR BOLT & NUT CONNECTION			
	A36	14 GA	3/8-16			6	1	14 GA		13/32	3/8 FOR BOLT & NUT CONNECTION			
ALUMINUM	6063-T5	1/8	1/4-20	BOLT W/ NUT OR THREAD CUTTING/TAPPING SCREW	*	3	1/2	1/8	NA	5/16	1/4			
		0.132	3/8-16			6	3/4	0.132	3/4 AT NUT	13/32	3/8			
CONCRETE	NOTE 4	1/4	1/4	BUILDEX TAPCON (BLUE, WHITE, OR 410 SS)	VARIES	3	2 1/2	1 3/4	NA	5/16	SEE FASTENER MANUFACTURER INSTRUCTIONS			
				BUILDEX TAPCON (BLUE, WHITE, OR 410 SS)	VARIES							2 3/8	1 1/2	1/4
				ELCO AGGRE-GATOR	300 SS							1 1/2	1 3/8	1/4
				ELCO ULTRACON SS4	410 SS							2 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 7/8	5/16
				POWERS WEDGE-BOLT PLUS	STEEL							1 1/2	1 1/2	5/16
				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							1/4	ELCO AGGRE-GATOR	300 SS
NOTE 2	ELCO ULTRACON SS4	410 SS	2 1/2		2									
NOTE 3	POWERS WEDGE-BOLT PLUS	STEEL	6		2	2 1/2								

ITEM 26, SUBSTRATE			ITEM 33, SECONDARY CONTINUOUS MOUNTING ANGLE SUBSTRATE FASTENER										
TYPE	MATERIAL MIN.	THICKNESS MIN.	DIA.	TYPE (ALL FASTENERS ARE HEX HEAD STYLE)	MAT'L	SPACING MAX.	EDGE MIN.	EMBED. MIN.	WASHER/FLANGE MIN.	ANGLE HOLE MAX.	SUBSTRATE HOLE MAX.		
WOOD	G ≥ 0.42	3	1/4	LAG SCREW	*	3	1 1/2	2 7/8	NA	1/4	SEE FASTENER MANUFACTURER INSTRUCTIONS		
STEEL	A36	0.0677	1/4-20	BOLT W/ NUT OR THREAD CUTTING/TAPPING SCREW	*	3	3/4	0.0677	NA	1/4	1/4 FOR BOLT & NUT CONNECTION		
ALUMINUM	6063-T5	0.138	1/4-20	BOLT W/ NUT OR THREAD CUTTING/TAPPING SCREW	*	3	1/2	1/8	0.138	0.6 AT NUT	1/4		
	6005-T5	1/8							NA	1/4			
	6061-T6								NA	1/4			
CONCRETE	NOTE 4	1/4	1/4	BUILDEX TAPCON (BLUE, WHITE, OR 410 SS)	VARIES	3	1 1/2	1 3/4	NA	5/16	SEE FASTENER MANUFACTURER INSTRUCTIONS		
				ELCO ULTRACON SS4	410 SS							1	1 3/4
				ELCO CRETE-FLEX SS4, SMALL OR LARGE HEAD	410 SS							1	1 3/4
				POWERS 316 STAINLESS STEEL WEDGE-BOLT	316 SS							1 3/4	1 7/8
				POWERS WEDGE-BOLT PLUS	STEEL							2	1 1/2
				POWERS WEDGE-BOLT PLUS	STEEL							2	1 1/2
GROUT FILLED CMU	NOTE 1	1/4	1/4	ELCO AGGRE-GATOR	300 SS	3	2	2	NA	1/4	SEE FASTENER MANUFACTURER INSTRUCTIONS		

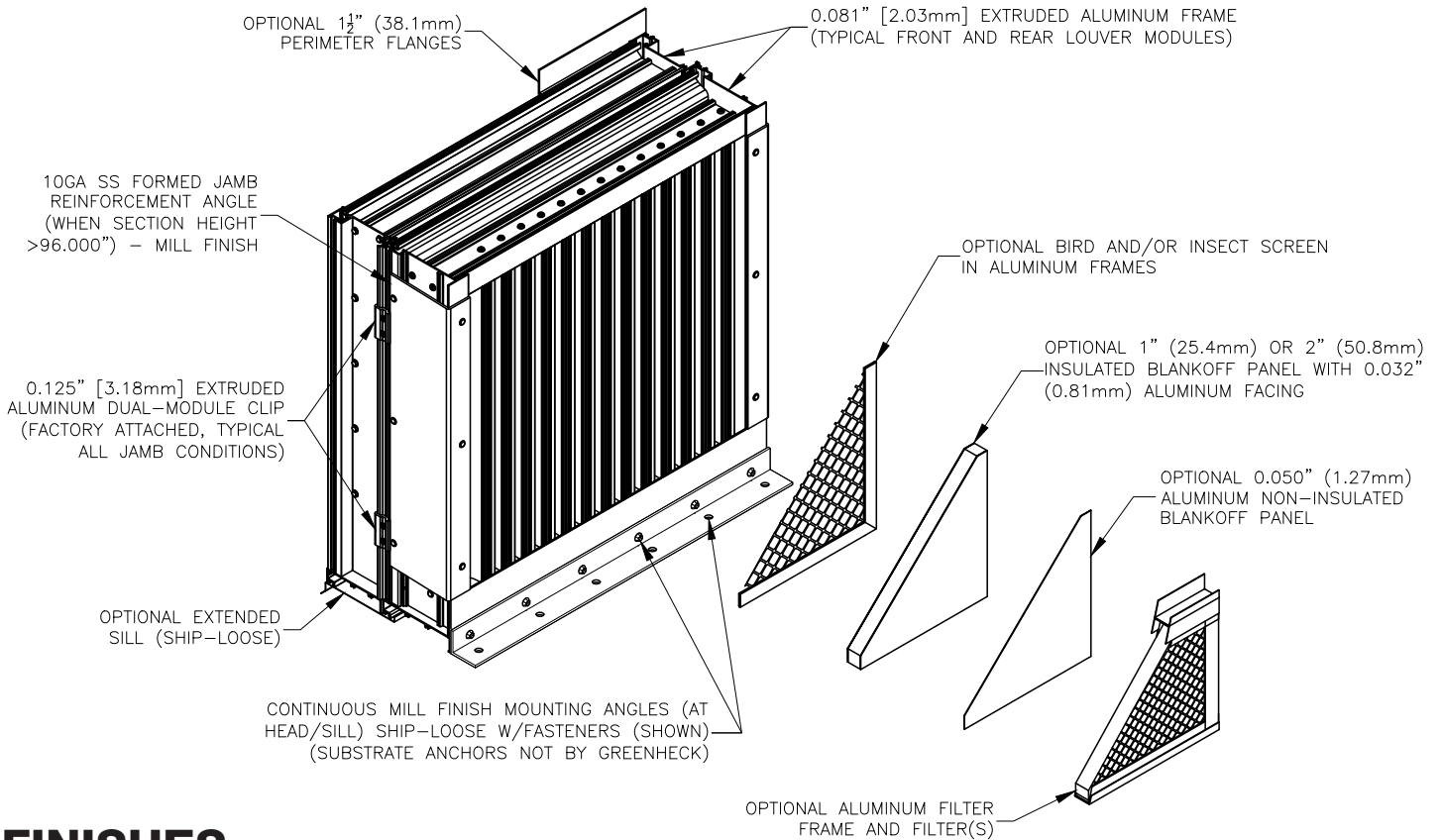
NOTE *: LAG SCREWS SHALL HAVE STRENGTHS OF MINIMUM GRADE 1 STEEL, OTHER BOLT AND SCREWS SHALL HAVE STRENGTHS OF MINIMUM GRADE 2 STEEL.
 NOTE 1: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING; 6" WIDE, CMU CONFORMING TO ASTM C-90 FILLED WITH 4,747 KSI GROUT.
 NOTE 2: CONCRETE MASONRY (CMU) SHALL BE > 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.
 NOTE 4: VARIES WITH SIZE OF FASTENER USED, SEE FASTENER MANUFACTURER'S INSTRUCTIONS.
 SS = STAINLESS STEEL



OPTION DRAWINGS

EHV-901D

Florida Product Approval No.: 19683
 Miami-Dade, FL NOA No.: 19-0516.09 EXP. 7/28/2021
 AMCA 540 and 550 Listed
 Maximum Wind-load: +/-130 PSF



FINISHES

Finish Type	Description/Application	Color Selection	Standard Warranty (Aluminum)
AAMA 2605 100% Fluoropolymer (FEVE) 2-Coat 70% Kynar® (PVDF) 3-Coat 70% Kynar® (PVDF) 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: 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)
AAMA 2604 50% Kynar® / Acroflur®	"Better." Tough, long-lasting coating has excellent color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.	Mica Colors: Greenheck offers 6 standard Mica colors for 70% Kynar® or 100% Fluoropolymer.	5 Years
AAMA 2603 Baked Enamel	"Good." Provides good adhesion and resistance to weathering, corrosion and chemical stain.	Custom Colors: Custom color matching is available. Consult your Greenheck representative for cost and/or lead-time implications if a custom color is required.	1 Year
AA-M10C22A42 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 Clear Anodize 215 R-1	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	5 years
AA-M10C22A31 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.



EHV-901D
 February 2020

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