

MODEL EA-531-D

Severe Weather Louver • 5" Deep • Combination Stationary • Chevron Blades • Extruded Aluminum

Standard Materials and Construction

FRAME: .080" thk. (nominal) extruded aluminum, 6063-T52/T6 alloy.

BLADE: .063" thk. (nominal) extruded aluminum, 6063-T52/T6 alloy.

Horizontal blades approximately 1" on center (nominal),
vertical blades approximately 1 $\frac{3}{8}$ " on center (nominal).

LOUVER FACE: Head and blades are contained within jambs, sill contains jambs.

SCREENS: (When indicated, in a removable frame.)

1 $\frac{1}{2}$ " flattened aluminum (.051" thick),

-or- 1 $\frac{1}{2}$ " sq. mesh, intermediate double-crimped aluminum wire, .063" dia.,

-or- 1 $\frac{5}{16}$ " mesh, .011" dia. aluminum wire, insect screen.

DRAIN PAN: .060" thk. (nominal) formed aluminum with welded and caulked end dams.

FINISH: Mill

Options

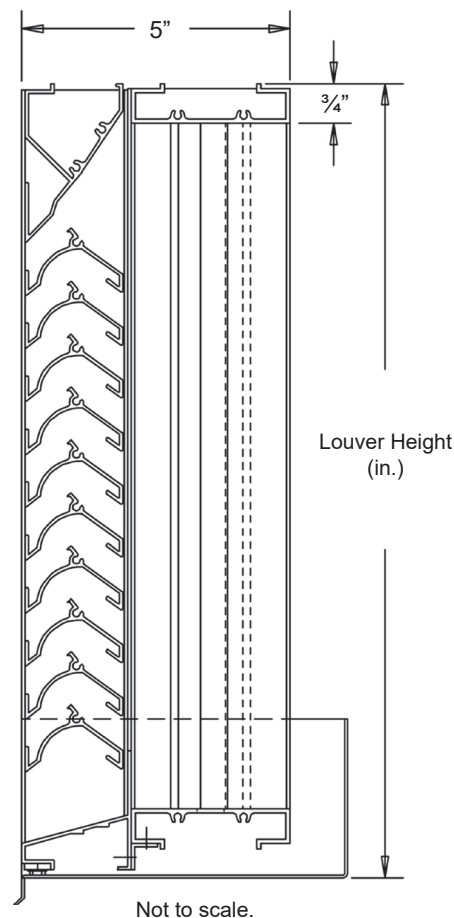
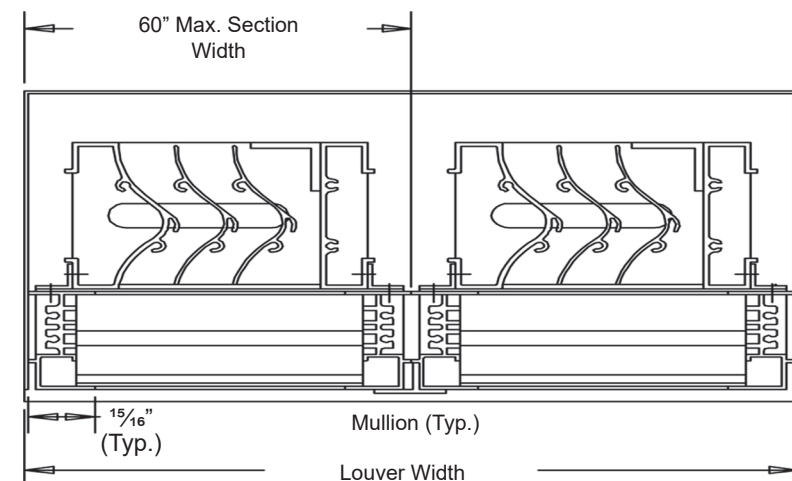
Finish - Baked Enamel, Kynar, Anodized


Notes

1. Nominal deductions will be made to the opening size given.
2. Louvers larger than the maximum factory assembled size will require field assembly of smaller louver sections.

Louver Sizes

Min Panel	Max Single Panel
12"W x 12"H	60"W x 96"H



											
Item #	Qty	Width	Height	Width	Height	Mullion	Type	Location			
		Opening Size		Louver Size			Screens				<u>Union Made</u>
Arch. / Eng.:						EDR:		ECN:		Job:	
Contractor:											
Project:						Date:		DWN:		DWG:	

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Performance Data

Pressure Drop: .47 in. wg at 1000 fpm

Free Area: 6.85 sq.ft. (43%) for 48"W x 48"H sample tested in accordance with AMCA Standard 500-L.

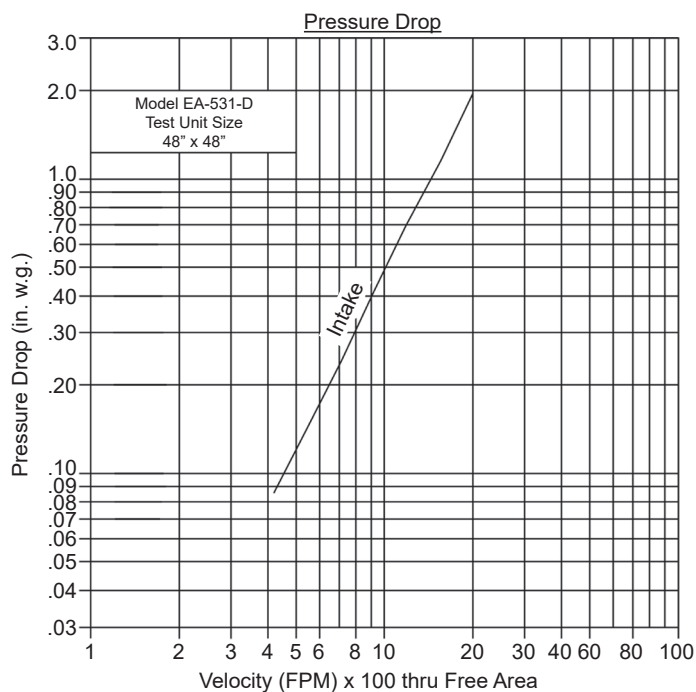
Beginning Point of Water Penetration: 821 fpm (5623 cfm)

Class "A" Rating with 100% efficiency at 3 in. rain fall at intake velocity of 1623 fpm (8,509 cfm) at wind speed of 29 mph.

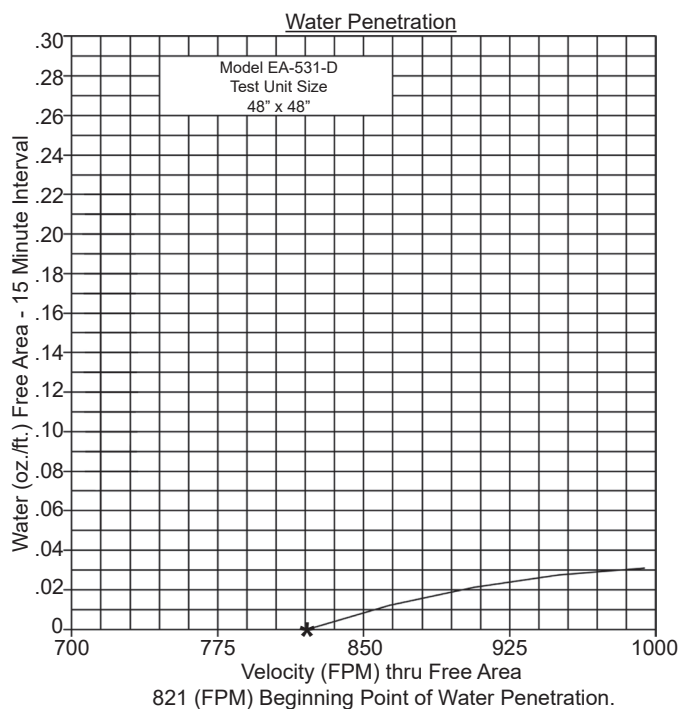
Class "A" Rating with 100% efficiency at 8 in. rain fall at intake velocity of 1420 fpm (7,444 cfm) at wind speed of 50 mph.

Testing based on 48" x 48" based on AMCA Standard 500-L.

Ratings do not include effects of a screen.



Intake air converted to standard air density.
Tested to AMCA Standard 500-L, Figure 5.5.



Free Area (sq.ft.)

		Width (in.)								
		12"	18"	24"	30"	36"	42"	48"	54"	60"
Height (in.)	12"	.24	.39	.53	.68	.83	.97	1.12	1.26	1.41
	24"	.66	1.06	1.45	1.84	2.24	2.63	3.03	3.42	3.82
	36"	1.08	1.72	2.37	3.01	3.65	4.30	4.94	5.59	6.23
	48"	1.49	2.39	3.28	4.17	5.07	5.96	6.85	7.75	8.64
	60"	1.91	3.05	4.20	5.34	6.48	7.62	8.77	9.91	11.05
	72"	2.33	3.72	5.11	6.50	7.90	9.29	10.68	12.07	13.46
	84"	2.75	4.39	6.03	7.67	9.31	10.95	12.59	14.23	15.87
	96"	3.16	5.05	6.94	8.83	10.72	12.61	14.51	16.40	18.29

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Wind Driven Rainwater Penetration Test

Conducted to AMCA Standard 500-L.

Test size 1m x 1m (39.7" x 39.7") core area nominal.

Louver Free Area 5.24 square feet.

Core Ventilation (m/s)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	Rain Fall / MPH
FPM	-	-	-	-	-	-	-	-	790	890	987	3 in. / hr. rain fall and 29 mph Velocity
Free Area Ventilation (cfm)	-	-	-	-	-	-	-	-	8,509	9,577	10,623	
Free Area Velocity (fpm)	-	-	-	-	-	-	-	-	1623	1827	2026	
Effective Rating Class	A	A	A	A	A	A	A	A	A	A	B	
Effectiveness Ratio (%)	-	-	-	-	-	-	-	-	100	99.9	96.9	
FPM	-	-	-	-	-	-	-	-	691	791	889	8 in. / hr. rain fall and 50 mph Velocity
Free Area Ventilation (cfm)	-	-	-	-	-	-	-	-	7,444	8,521	9,570	
Free Area Velocity (fpm)	-	-	-	-	-	-	-	-	1420	1625	1825	
Effective Rating Class	A	A	A	A	A	A	A	A	A	A	B	
Effectiveness Ratio (%)	-	-	-	-	-	-	-	-	100	99.9	97.7	

Wind Driven Rain Penetration Classifications

Class	Effectiveness %
A	100 to 99%
B	98.9% to 95%
C	94.9% to 80%
D	Below 80%

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

Discharge Coefficient

Intake Cd = .17 (CLASS 4)

Class 1 Loss Coefficient has the least resistance to airflow.

1. Core area is the front opening of a louver assembly with the blades removed.
2. Core area velocity is the airflow rate through the louver divided by the core area (39.37" x 39.37").
3. Free area is the minimum area through which air can pass. It is determined by multiplying the sum of the minimum distance between intermediate blades, top blade and head, bottom blade and sill, by the minimum distance between jambs.
4. Discharge loss coefficient is calculated by dividing a louver actual airflow rate vs. a theoretical airflow for the opening, providing an indication of the louver air flow characteristics.



Arrow United Industries certifies that the Model EA-531-D 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 only.