

MODEL EA-521-V

Severe Weather Louver • 5" Deep • Chevron Blades • Vertical • Rain Resistant • Extruded Aluminum

Standard Materials and Construction

FRAME: .081" thick (nominal) extruded aluminum, 6063-T52/T6 alloy.

BLADE: .081" thick (nominal) extruded aluminum, 6063-T52/T6 alloy.
Blades approximately 2" on centers.

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

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

- ½" flattened aluminum (.051" thick),
- or- ½" sq. mesh, intermediate double-crimped aluminum wire, .063" dia.,
- or- 18/16 mesh, .011" dia. aluminum wire, insect screen.

FINISH: Mill

Options

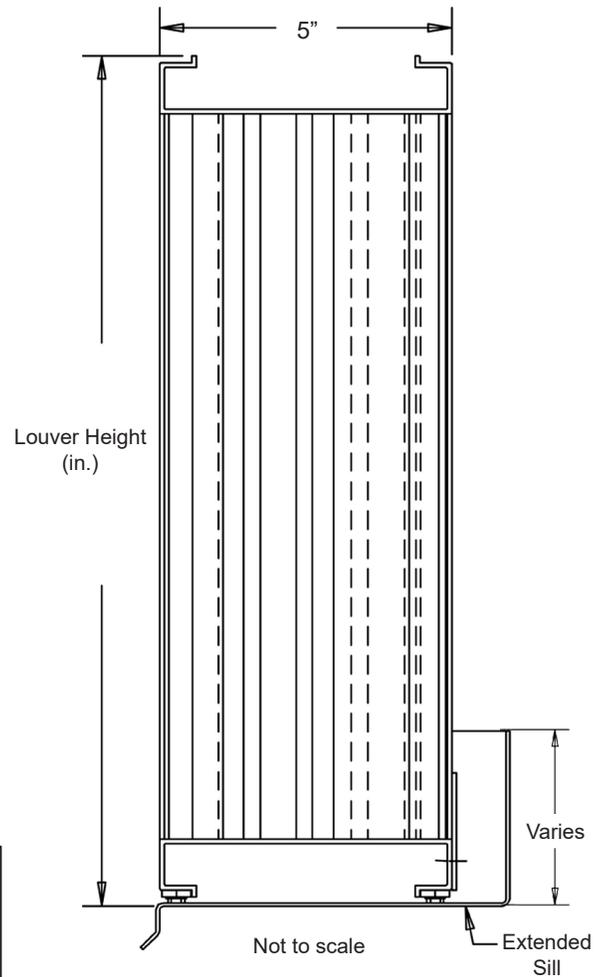
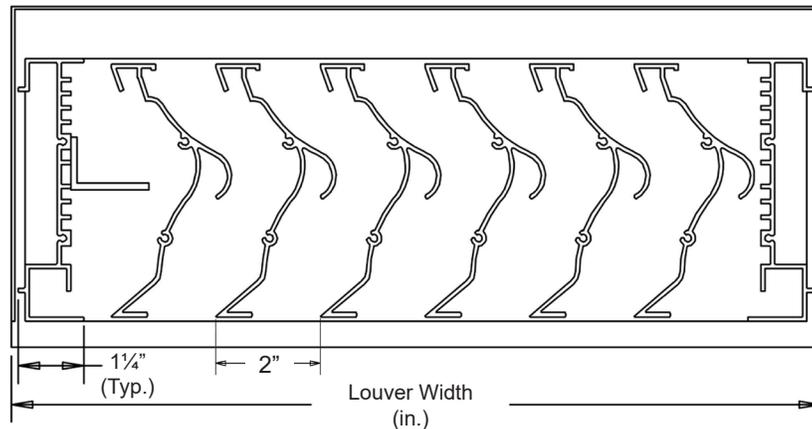
Finish - Baked Enamel, Kynar, Anodize

Notes

1. ½" nominal deduction 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.
3. Approximate shipping weight is 5.5 lbs./sq.ft.

Louver Sizes

Min Panel	Max Single Panel
12"W x 12"H	60"W x 96"H 40 sq. ft.



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

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Performance Data

Pressure Drop: .22 in. w.g. at 1000 fpm (intake)

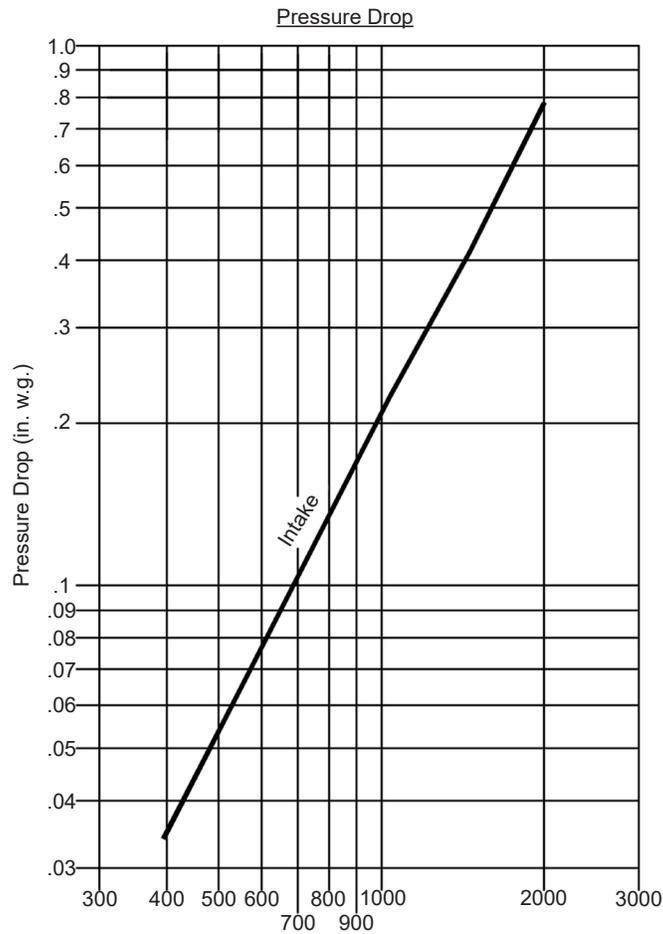
Free Area: 7.49 sq.ft. = 46.8% for 48"W x 48"H sample tested in accordance with AMCA Standard 500-L.

Class "A" Rating at 3 in. rain fall at intake velocity of 1,661 fpm (12,242 cfm) at wind speed of 29 mph.

Class "A" Rating at 8 in. rain fall at intake velocity of 1,095 fpm (8,070 cfm) at wind speed of 50 mph.

Testing based on 48" x 48" sample size under 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.)								
Height (in.)		12"	18"	24"	30"	36"	42"	48"	54"	60"
		12"	.30	.52	.74	.96	1.17	1.39	1.61	1.83
24"	.67	1.15	1.64	2.12	2.60	3.09	3.57	4.05	4.54	
36"	1.04	1.79	2.53	3.28	4.03	4.78	5.53	6.28	7.03	
48"	1.40	2.42	3.43	4.45	5.46	6.48	7.49	8.51	9.52	
60"	1.77	3.05	4.33	5.61	6.89	8.17	9.45	10.73	12.01	
72"	2.14	3.68	5.23	6.78	8.32	9.87	11.41	12.96	14.51	
84"	2.51	4.32	6.13	7.94	9.75	11.56	13.38	15.19	17.00	
96"	2.87	4.95	7.03	9.11	11.18	13.26	15.34	17.41	19.49	

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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 5.57 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	0	0	0	0	0	0	0	0	774	859	987	3 in. / hr. rain fall and 29 mph Velocity
Free Area Ventilation (cfm)	-	-	-	-	-	-	-	-	8,338	9,249	10,624	
Free Area Velocity (fpm)	-	-	-	-	-	-	-	-	1,497	1,661	1,907	
Effective Rating Class	A	A	A	A	A	A	A	A	A	A	C	
Effective Ratio %	-	-	-	-	-	-	-	-	100	99.4	93.0	
FPM	0	0	0	0	400	487	567	671	783	871	976	8 in. / hr. rain fall and 50 mph Velocity
Free Area Ventilation (cfm)	-	-	-	-	4,310	5,246	6,100	7,229	8,428	9,379	10,509	
Free Area Velocity (fpm)	-	-	-	-	774	942	1,095	1,298	1,513	1,684	1,887	
Effective Rating Class	A	A	A	A	A	A	A	B	B	C	C	
Effective Ratio %	-	-	-	-	99.9	99.7	99.7	98.9	96.0	92.3	85.5	

Wind Driven Rain Penetration Classifications

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

$$\frac{\text{Discharge Coefficient}}{\text{Intake Cd} = 0.28 \text{ (Class 3)}}$$

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

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 distances 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-521-V 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 and Wind Driven Rain Ratings only.