

# MODEL A590

5" Deep • Chevron Drainable Blade • Sightproof • Wind Drive Rain Extruded Aluminum Louver

## STANDARD MATERIALS AND CONSTRUCTION

- EXTERIOR FRAME:** .081" thick; 6063-T6/T52 extruded aluminum alloy
- BLADES:** .060" thick; 6063-T6/T52 extruded aluminum alloy
- ASSEMBLY:** Mechanically fastened
- SCREEN:** 1/2" x .051" flattened aluminum birdscreen
- FINISH:** Mill

## OPTIONS

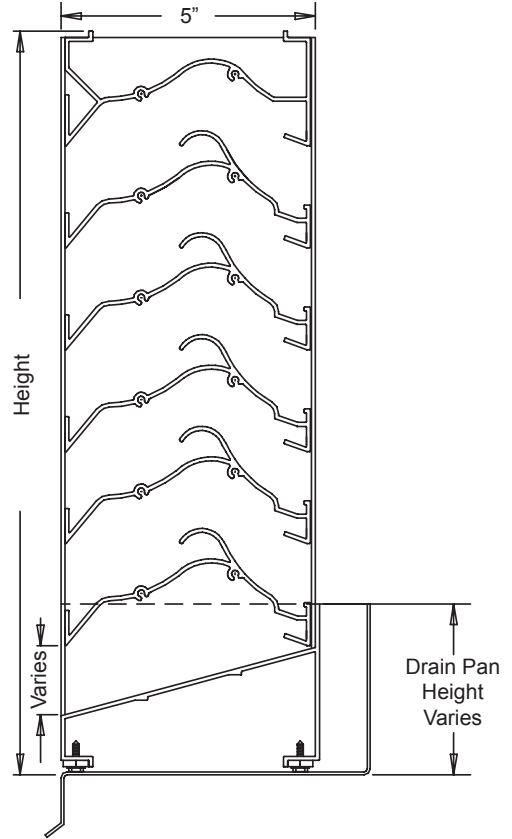
- Finish - Baked Enamel, Kynar, or Anodize
- Variety of Bird and Insect Screen
- 1 3/8" Usable Flange Frame (3 Sides Only, Not on Sill)
- Welded Construction
- Blank-off Panels

## NOTES

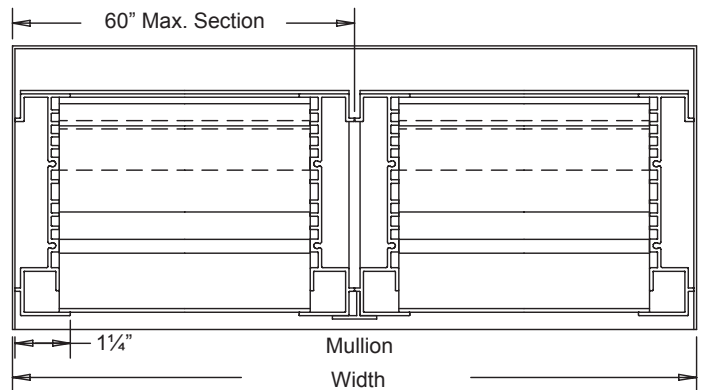
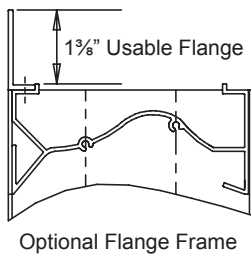
1. "A" width and "B" height are opening dimensions. Louvers are provided approximately 1/2" undercut.
2. Shipping weight approximately 5.5 lbs./sq.ft.

## LOUVER SIZES

Panels	Min Panel	Max Single Panel
A590	12"W x 12"H	40 sq.ft



Section View



air balance

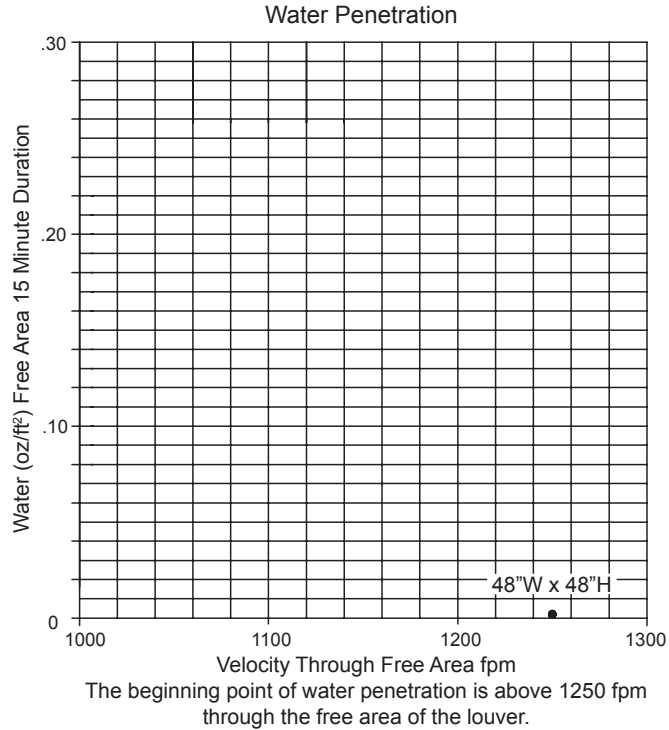
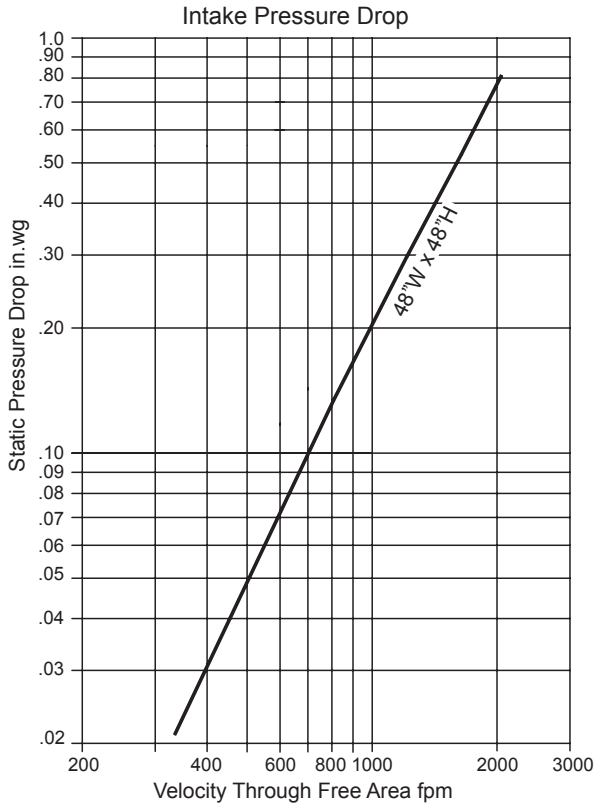
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Pressure Drop: 0.21 in.wg at 1000 fpm and 8850 scfm  
 Free Area: 7.08 sq.ft. = 44.3% for 48"W x 48"H test size

Ratings do not include the effects of birdscreen.



\*AMCA Standard 500-L Limits Testing of Water Penetration to either a maximum velocity of 1250 fpm or 2.5 ounces of water per sq.ft of louver free area.

**Free Area sq.ft**

		Width									
		12"	24"	36"	48"	60"	72"	84"	96"	108"	120"
Height	12"	0.21	0.49	0.76	1.04	1.31	1.58	1.86	2.13	2.40	2.68
	24"	0.63	1.43	2.24	3.04	3.85	4.65	5.46	6.26	7.07	7.87
	36"	1.04	2.38	3.72	5.05	6.39	7.73	9.06	10.54	11.73	13.07
	48"	1.46	3.33	5.19	7.08	8.93	10.80	12.67	14.53	16.40	18.27
	60"	1.88	4.27	6.67	9.07	11.47	13.87	16.27	18.67	21.07	23.46
	72"	2.29	5.22	8.15	11.08	14.01	16.94	19.87	22.80	25.73	28.66
	84"	2.71	6.17	9.63	13.09	16.55	20.01	23.47	26.93	30.40	33.86
	96"	3.12	7.11	11.11	15.10	19.09	23.08	27.08	31.07	35.06	39.05
	108"	3.54	8.06	12.58	17.11	21.63	26.16	30.68	35.20	39.73	44.25
	120"	3.95	9.01	14.06	19.12	24.17	29.23	34.28	39.34	44.39	49.45



Air Balance certifies that the Model A590 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with the 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 only.



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Wind Driven Rainwater Penetration Test Conducted to AMCA Standard 500-L

Test Size 1m x 1m (39.37" x 39.37") Core Area, 41.87"W x 42.77"H Nominal. Louver Free Area 5.54 sq.ft.

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	Rainfall / mph
fpm	0	0	0	0	385	474	583	682	771	866	981	3 in/hr Rainfall and 29 mph Velocity
Free Area Ventilation cfm	-	-	-	-	4143	5108	6276	7347	8303	9321	10,560	
Free Area Velocity fpm	-	-	-	-	748	922	1133	1326	1499	1682	1906	
Effective Rating Class	A	A	A	A	A	A	A	B	B	C	C	
Effectiveness Ration %	-	-	-	-	99.8	99.6	99.0	97.1	95.1	90.6	89.3	
fpm	0	122	190	285	390	481	569	673	773	884	945	8 in/hr Rainfall and 50 mph Velocity
Free Area Ventilation cfm	-	1313	2049	3071	4202	5179	6129	7243	8324	9521	10,174	
Free Area Velocity fpm	-	237	370	554	758	935	1106	1307	1503	1719	1836	
Effective Rating Class	B	B	B	B	B	B	B	B	C	C	C	
Effectiveness Ration %	98.3	98.2	98.1	97.9	97.7	97.9	97.6	95.7	93.9	89.8	85.8	

Class	Effectiveness %
A	1 - 0.99%
B	0.989 - 0.95%
C	0.949 - 0.80%
D	Below 0.80%

Class	Discharge Loss Coefficient
1	0.4 and Above
2	0.3 - 0.399
3	0.2 - 0.299
4	0.199 and Below

Discharge Coefficient  
Intake Cd = 0.29 (Class 3)

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"W x 39.37"H).
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.

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