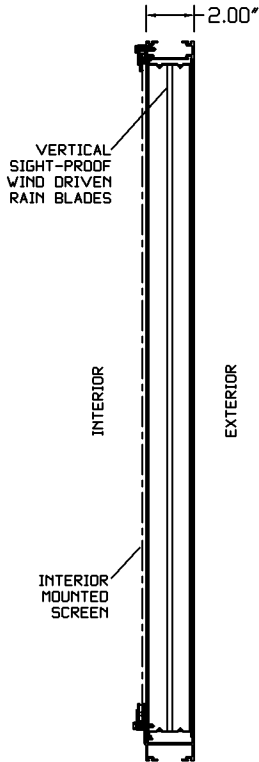
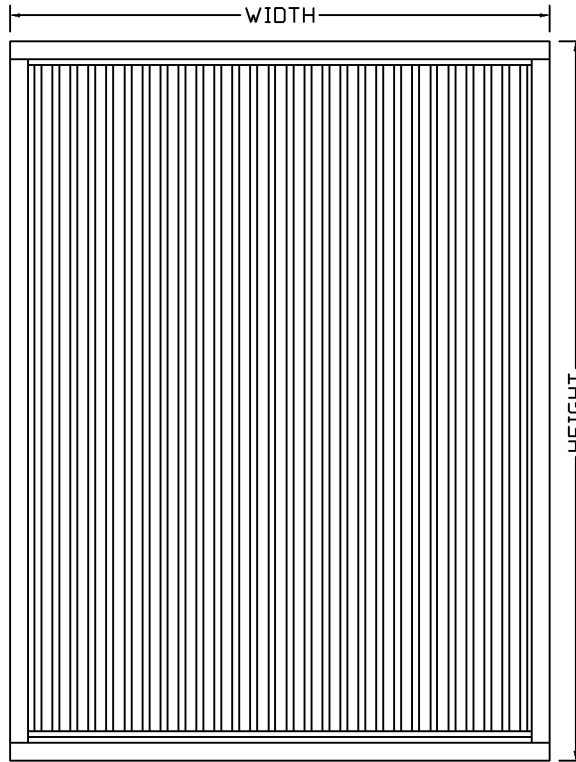


# E2WV - 2" DEEP VERTICAL WIND DRIVEN RAIN BLADE EXTRUDED ALUMINUM STATIONARY LOUVER



SECTION VIEW



ELEVATION VIEW

BLADE - 0.050" THICKNESS TYPE 6063-T5 EXTRUDED ALUMINUM  
 FRAME - 0.063" THICKNESS TYPE 6063-T5 EXTRUDED ALUMINUM  
 DESIGNED FOR 100 MPH WIND LOAD  
 SIZES 12" WIDE X 12" HIGH UP TO UNLIMITED SIZE AVAILABLE

OPTIONS:  
 MOUNTING FOR VARIOUS OPENING TYPES (SEE FRAME STYLES BELOW)  
 ARCHITECTURAL FINISHES  
 VARIOUS SCREENS

\* SEE MOUNTING OPTIONS TECHNICAL SHEET FOR MORE FRAME STYLES:

1. J-CHANNEL FOR SIDING OR STUCCO
2. G-CHANNEL FOR GLAZING INTO STOREFRONT OR CURTAINWALL

CONSTRUCTION	FRAME STYLE *	VERTICAL MULLION (MULTIPLE PANELS WIDE)	HORIZONTAL MULLION (MULTIPLE PANELS HIGH)
STANDARD	<p>EXTERIOR</p> <p>CHANNEL "C" FRAME</p>	<p>EXTERIOR</p> <p>EXPOSED</p>	<p>EXTERIOR</p> <p>EXPOSED</p>
OPTIONAL	<p>EXTERIOR</p> <p>FLANGE "F" FRAME</p>		

## ARCHITECTURAL L · O · U · V · E · R · S

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PROJECT

CONTRACTOR

ARCHITECT

DRAWN BY:  
JRR

DATE:  
08/2008

DRAWING TYPE:  
TECHNICAL SHEET

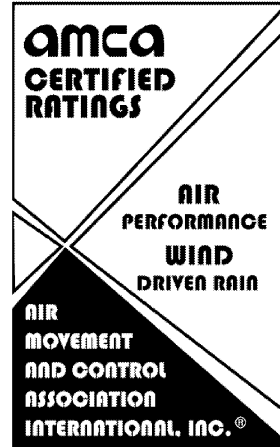
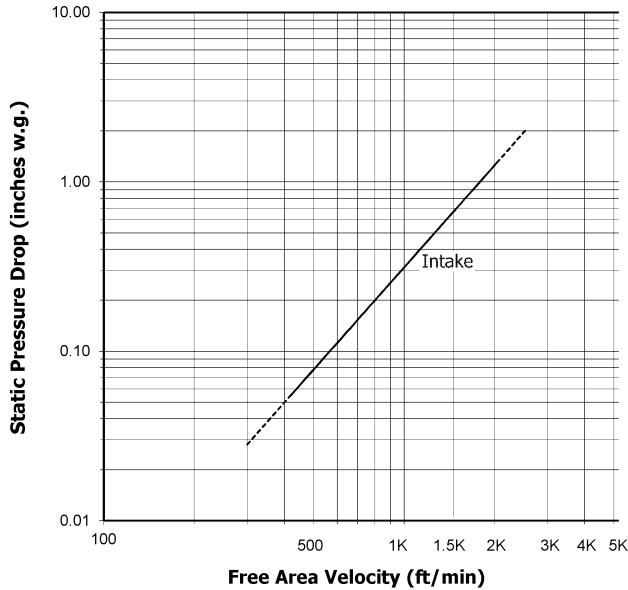
DRAWING TITLE:  
E2WV



The Architectural Louvers Model E2WV is tested in accordance with AMCA 500-L Laboratory Methods of Testing Air Louvers for Rating. The data presented are the results of these tests. Tested louver size is 48" wide x 48" high (unless noted otherwise) and does not include the effects of bird screen.

**Airflow Resistance**

(Std Air Density - .075 lb/ft<sup>3</sup>) - Test Figure 5.5-6.5



Architectural Louvers certifies that model E2WV louver 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 ratings and wind driven rain ratings only.

Model: E2WV resistance to airflow  
Free area velocities (shown left) are higher than average core, face or duct velocity. See louver application information.

Wind Driven Rain Test per AMCA Standard 500-L-99, Figure 5.11 Setup Performance.  
Test Louver Size 40.87" W x 40.87" H (1m x 1m Core Size).

	Wind Velocity (mph)	Rain Fall Rate (in. / hour)	Core Velocity (fpm)	Airflow (cfm)	Louver Free Area Velocity (fpm)	Water Penetration Effectiveness (Percentage)	Water Penetration Classification Rating
29 MPH Wind Velocity and 3" Rainfall Rate	29	3	0	0	0	100.0	A
	29	3	132	1417	235	100.0	A
	29	3	197	2117	351	100.0	A
	29	3	287	3092	513	100.0	A
	29	3	380	4092	678	100.0	A
	29	3	472	5083	843	100.0	A
	29	3	587	6317	1047	100.0	A
	<b>29</b>	<b>3</b>	<b>680</b>	<b>7323</b>	<b>1214</b>	<b>100.0</b>	<b>A</b>
	50 MPH Wind Velocity and 8" Rainfall Rate	50	8	0	0	0	100.0
50		8	96	1028	170	100.0	A
50		8	194	2093	347	100.0	A
50		8	284	3055	506	99.6	A
50		8	400	4312	715	99.5	A
<b>50</b>		<b>8</b>	<b>496</b>	<b>5341</b>	<b>886</b>	<b>99.4</b>	<b>A</b>
50		8	571	6145	1019	98.9	B
50		8	679	7311	1212	92.3	C

The discharge loss coefficient class for louver E2WV is 3. The higher the coefficient, the lower the resistance to airflow.

Class	1	2	3	4
Discharge Loss Coefficient	.4 and Above	.3 to .399	.2 to .299	.199 and below



Application of any louver involves selecting an airflow velocity through the louver free area (free area velocity in fpm) that produces an acceptable pressure drop and for intake applications and minimizes carry-over of normally occurring rain. Architectural Louvers does not warrant our louvers to prevent water penetration under all combinations of wind and rain. 99% water resistance effectiveness during testing through Model E2WV ends at 886 fpm free area velocity. Louver selection using a free area velocity below 886 fpm is recommended. Louver selection involves the following steps, and depending on the information provided, either step may come first.

**Select Free Area Velocity - Fan Forced Intake:**

Using the Airflow Resistance Chart, select a free area velocity that produces an acceptable pressure drop with minimal water penetration. (Water penetration may not need to be considered when selecting exhaust louvers.)

**Determine Louver Free Area:**

Using the free area velocity from previous step and total cfm, determine the louver Free Area required. Using louver Free Area Chart, select a louver with the required free area. If louver size is given, determine free area from chart and work backwards to determine maximum airflow. See examples below.

**Free Area Chart (ft<sup>2</sup>)**

		Louver Width (Inches)							
		12	24	36	48	60	72	84	96
Louver Height (Inches)	12	0.34	0.76	1.18	1.60	1.97	2.38	2.79	3.20
	24	0.84	1.87	2.90	3.93	4.92	5.94	6.96	7.98
	36	1.34	2.98	4.62	6.27	7.86	9.50	11.13	12.76
	48	1.83	4.09	6.34	<b>8.60</b>	10.81	13.05	15.30	17.55
	60	2.33	5.20	8.07	10.93	13.75	16.61	19.47	22.33
	72	2.83	6.31	9.79	13.27	16.70	20.17	23.64	27.11
	84	3.33	7.42	11.51	15.60	19.65	23.73	27.81	31.89
	96	3.82	8.53	13.23	17.94	22.59	27.29	31.98	36.67

**Louver Selection Examples - Fan Forced Intake:**

**Example 1:**

Airflow given as 6000 cfm – select louver size.

A. Determine louver free area by dividing airflow by free area velocity (do not exceed 886 fpm on intake louver applications).

$$\begin{aligned} \text{cfm} / \text{fpm} &= \text{ft}^2 \\ 6000 / 886 &= 6.77 \end{aligned}$$

B. Select a louver with at least the required louver free area from Free Area Chart above.

Width	x	Height	Free Area from Chart
60	x	36	7.86

(Other selections available – See Free Area Chart above)

C. Calculate Free Area Velocity

$$\begin{aligned} \text{fpm} &= \text{cfm} / \text{ft}^2 \text{ free area of louver} \\ 763 &= 6000 / 7.86 \end{aligned}$$

D. Check the pressure drop of the selected louver at the calculated airflow (Airflow Resistance Chart on Page 2).

in w.g. = 0.183 at 763 fpm free area velocity

**Example 2:**

Louver size given as 96 W x 48 H – determine maximum airflow.

A. Use Free Area Chart to obtain ft<sup>2</sup> for given size

Free Area = 17.55 sq ft

B. Multiply Free Area x Free Area Velocity (Do not exceed 886 fpm on intake louver applications).

$$\begin{aligned} \text{ft}^2 \times \text{fpm} &= \text{cfm} \\ 17.55 \times 886 &= 15545 \end{aligned}$$

C. Check the pressure drop of the selected louver at the calculated airflow (Airflow Resistance Chart on Page 2).

in w.g. = 0.246 at 886 fpm free area velocity