E6WH - 6" DEEP 45 DEGREE WIND DRIVEN RAIN BLADE EXTRUDED ALUMINUM STATIONARY LOUVER

6.00"

VERTICAL SIGHT-PROOF WIND DRIVEN RAIN BLADES (CONCEALED)

HORIZONTAL ARCHITECTURAL BLADES

INTERIOR

EXTERIOR

INTERIOR MOUNTED SCREEN

4.25"

SECTION VIEW

WIDTH

HEIGHT
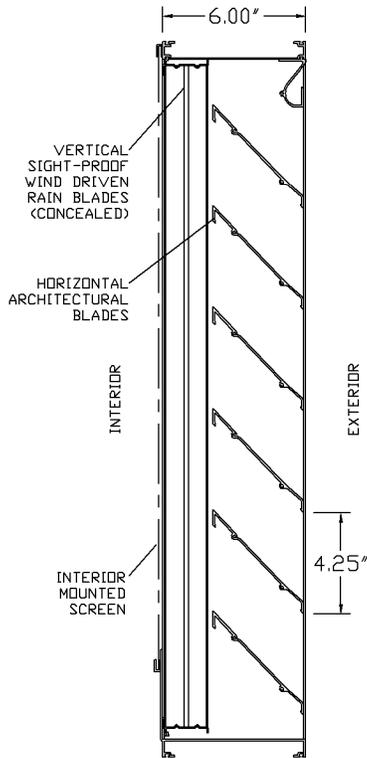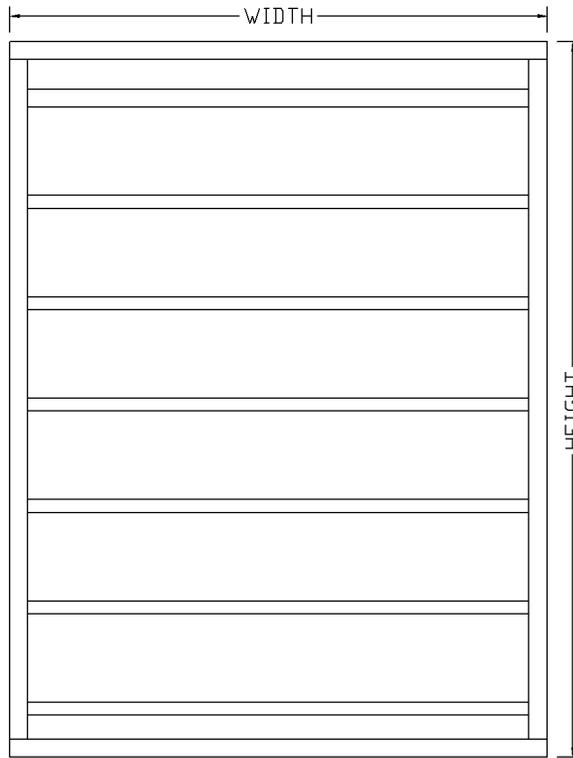
ELEVATION VIEW

BLADE - 0.081" THICKNESS TYPE 6063-T5 EXTRUDED ALUMINUM

FRAME - 0.081" 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 SHAPES (SEE SPECIAL SHAPES TECH SHEET)

HIGHER WIND LOAD RATINGS

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 ∗	STIFFENER	VERTICAL MULLION (MULTIPLE PANELS WIDE)	HORIZONTAL MULLION (MULTIPLE PANELS HIGH)
STANDARD	EXTERIOR / JAMB / CHANNEL "C" FRAME	EXTERIOR / BLADE SUPPORT BRACKETS / STIFFENER (EVERY 60" WIDTH MAX) / BLADE STIFFENER	EXTERIOR / MULLION COVER ENTIRE HEIGHT / JAMB / EXPOSED	EXTERIOR / EXPOSED
OPTIONAL	EXTERIOR / 1.50" / JAMB / FLANGE "F" FRAME	EXTERIOR / BLADE SUPPORT BRACKETS / STIFFENER (TO MEET WIND LOAD) / BLADE STIFFENER	EXTERIOR / BLADE SUPPORT BRACKETS / STIFFENERS (JOINED BY INSTALLER) / HIDDEN	EXTERIOR / HIDDEN

ARCHITECTURAL L·O·U·V·E·R·S
266 West Mitchell Ave - Cincinnati, OH 45232
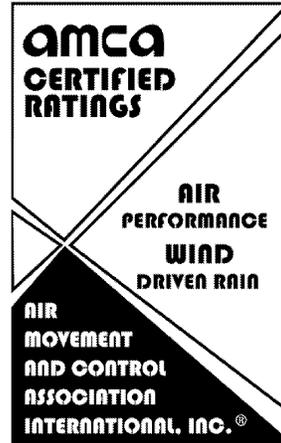PH: (888) 568-8371 Fax: (888) 568-8370

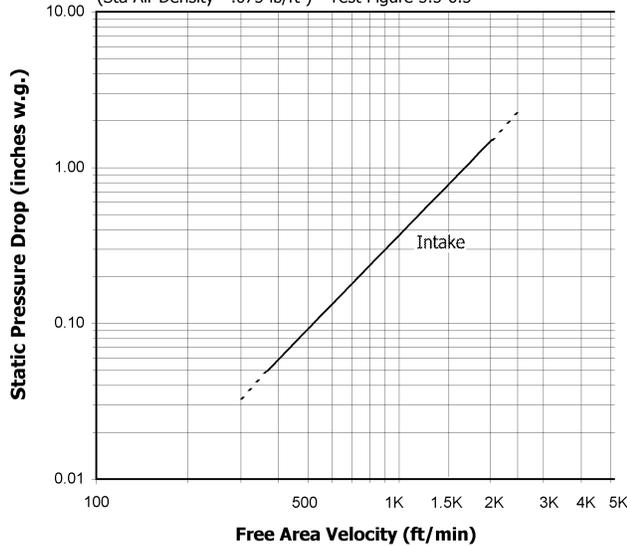| PROJECT	
CONTRACTOR	
ARCHITECT	

| DRAWN BY: JRR | DATE: 08/2008 | DRAWING TYPE: TECHNICAL SHEET | DRAWING TITLE: E6WH |

MODEL: E6WH   Louver Performance Data

The Architectural Louvers Model E6WH 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^2) - Test Figure 5.5-6.5

Static Pressure Drop (inches w.g.) vs Free Area Velocity (ft/min). Curve labeled "Intake".

Architectural Louvers certifies that model E6WH 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.

amca CERTIFIED RATINGS — AIR PERFORMANCE — WIND DRIVEN RAIN — AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL. INC. ®

Model: E6WH 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	3	0	0	0	100.0	A
29	3	132	1417	249	100.0	A
29	3	197	2117	372	100.0	A
29	3	287	3092	544	100.0	A
29	3	380	4092	720	100.0	A
29	3	472	5083	894	100.0	A
29	3	587	6317	1111	99.9	A
29	3	680	7323	1288	99.9	A
29	**3**	**780**	**8397**	**1477**	**99.9**	**A**
29	3	865	9309	1637	97.8	B
29	3	991	10666	1876	82.1	C
50	8	0	0	0	100.0	A
50	8	96	1028	181	100.0	A
50	8	194	2093	368	100.0	A
50	8	284	3055	537	100.0	A
50	8	400	4312	758	100.0	A
50	8	496	5341	939	100.0	A
50	8	571	6145	1081	100.0	A
50	**8**	**679**	**7311**	**1286**	**99.8**	**A**
50	8	786	8459	1488	98.6	B
50	8	878	9452	1662	91.2	C
50	8	974	10482	1843	70.3	D

(Left labels: 29 MPH Wind Velocity and 3" Rainfall Rate; 50 MPH Wind Velocity and 8" Rainfall Rate)

The discharge loss coefficient class for louver E6WH 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

MODEL: E6WH   Louver Application Guide

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 E6WH ends at 1286 fpm free area velocity. Louver selection using a free area velocity below 1286 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^2)

	Louver Width (Inches)							
	12	24	36	48	60	72	84	96
12	0.25	0.56	0.88	1.19	1.50	1.75	2.05	2.35
24	0.75	1.67	2.60	3.52	4.44	5.31	6.22	7.13
36	1.25	2.78	4.32	5.85	7.39	8.87	10.39	11.92
48	1.74	3.89	6.04	**8.19**	10.34	12.42	14.56	16.70
60	2.24	5.00	7.76	10.52	13.28	15.98	18.73	21.48
72	2.74	6.11	9.48	12.86	16.23	19.54	22.90	26.26
84	3.24	7.22	11.20	15.19	19.17	23.10	27.07	31.05
96	3.73	8.33	12.93	17.52	22.12	26.66	31.24	35.83

Louver Height (Inches) (row labels)

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 1286 fpm on intake louver applications).

    cfm / fpm   = ft^2
    6000 / 1286   = 4.67

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

    Width   x Height   Free Area from Chart
       36 x 48   6.04
    (Other selections available – See Free Area Chart above)

C. Calculate Free Area Velocity

    fpm = cfm / ft^2 free area of louver
    993 = 6000 / 6.04

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

    in w.g. =   0.363   at 993 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^2 for given size

    Free Area = 16.7 sq ft

B. Multiply Free Area x Free Area Velocity (Do not exceed 1286 fpm on intake louver applications).

    ft^2 x   fpm   = cfm
    16.7 x 1286   = 21474

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

    in w.g. =   0.608   at 1286 fpm free area velocity