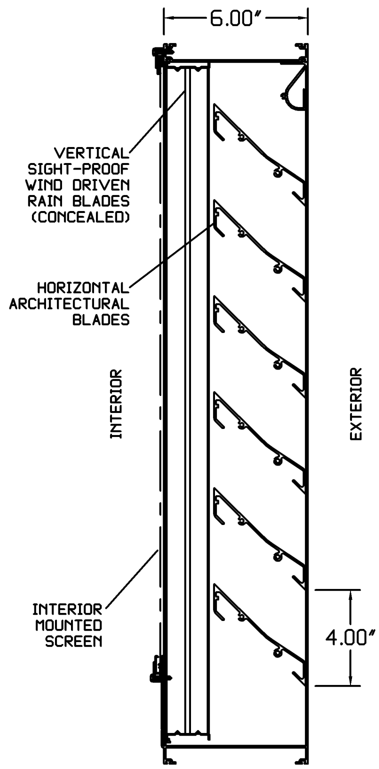
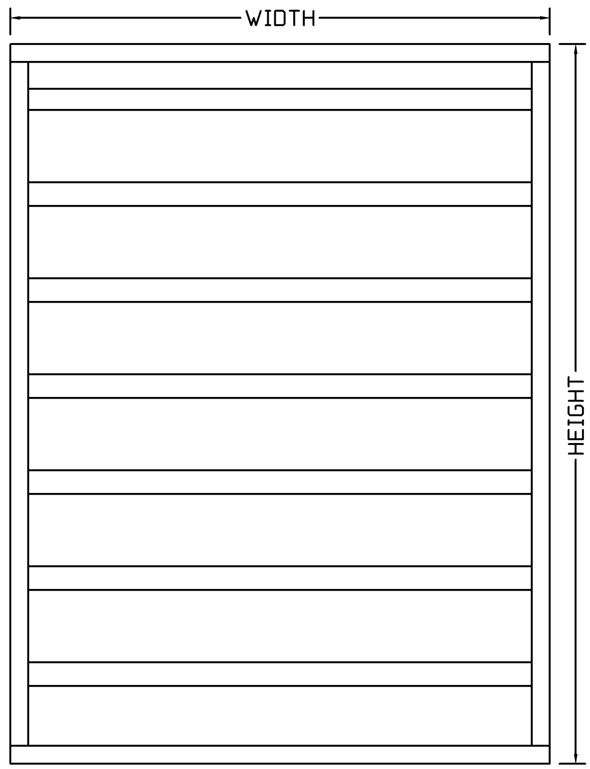
E6WF - 6" DEEP 45 DEGREE HURRICANE DUTY WDR BLADE EXTRUDED ALUMINUM STATIONARY LOUVER



SECTION VIEW



ELEVATION VIEW

BLADE - 0.081" THICKNESS TYPE 6063-T5 EXTRUDED ALUMINUM

FRAME - 0.081" THICKNESS TYPE 6063-T5 EXTRUDED ALUMINUM

DESIGNED FOR HURRICANE FORCE WIND LOADS

SIZES 12" WIDE X 12" HIGH UP TO UNLIMITED SIZE AVAILABLE

OPTIONS:

MOUNTING OPTIONS (SEE FRAME STYLES BELOW)

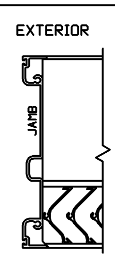
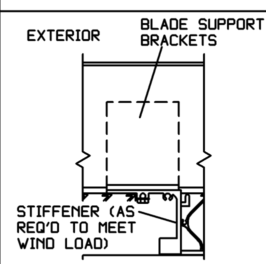
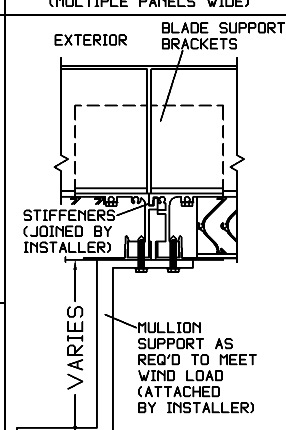
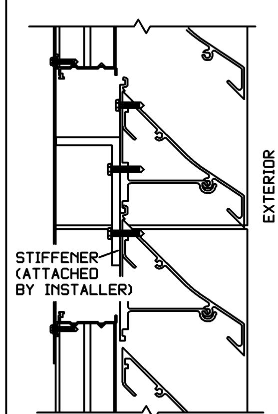
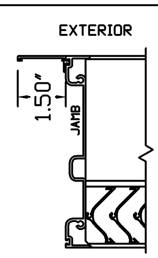
ARCHITECTURAL SHAPES (SEE SPECIAL SHAPES TECH SHEET)

ARCHITECTURAL FINISHES

VARIOUS SCREENS

MIAMI-DADE COUNTY, FL APPROVAL: NOA# 18-0222.10 EXPIRES 10/31/2023

FLORIDA CERTIFICATE OF APPROVAL: # FL16827

CONSTRUCTION	FRAME STYLE *	STIFFENER	VERTICAL MULLION (MULTIPLE PANELS WIDE)	HORIZONTAL MULLION (MULTIPLE PANELS HIGH)
STANDARD	 CHANNEL "C" FRAME	 BLADE STIFFENER	 HIDDEN	 HIDDEN
OPTIONAL	 FLANGE "F" FRAME			

ARCHITECTURAL LOUVERS
266 W Mitchell Ave - Cincinnati, OH 45232
PH: (888) 568-8371 Fax: (888) 568-8370

PROJECT	
CONTRACTOR	
ARCHITECT	

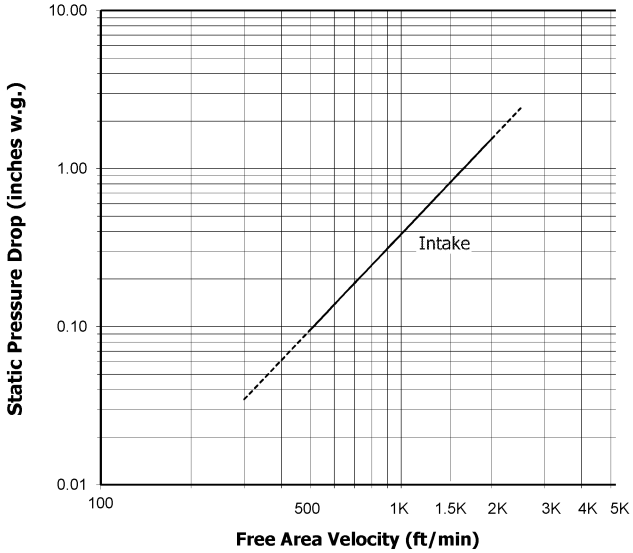
DRAWN BY:	DATE:	DRAWING TYPE:	DRAWING TITLE:
JRR	6/2018	TECHNICAL SHEET	E6WF

MODEL: E6WF Louver Performance Data

The Architectural Louvers Model E6WF 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^3) - Test Figure 5.5-6.5



AMCA CERTIFIED RATINGS
AIR PERFORMANCE
WIND DRIVEN RAIN
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.®

Architectural Louvers certifies that model E6WF 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: E6WF 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	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**
50 MPH Wind Velocity and 8" Rainfall Rate	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	99.9	A
	50	**8**	**571**	**6145**	**1081**	**99.7**	**A**
	50	8	679	7311	1286	98.1	B

The discharge loss coefficient class for louver E6WF 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: E6WF 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 E6WF ends at 1081 fpm free area velocity. Louver selection using a free area velocity below 1081 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)

Louver Height (Inches)	12	24	36	48	60	72	84	96
12	0.25	0.56	0.87	1.18	1.49	1.75	2.05	2.35
24	0.75	1.67	2.59	3.51	4.44	5.30	6.21	7.12
36	1.25	2.78	4.31	5.84	7.38	8.85	10.37	11.90
48	1.74	3.89	6.03	**8.17**	10.32	12.40	14.54	16.67
60	2.24	4.99	7.75	10.50	13.26	15.95	18.70	21.44
72	2.73	6.10	9.47	12.83	16.20	19.51	22.86	26.22
84	3.23	7.21	11.19	15.16	19.14	23.06	27.02	30.99
96	3.73	8.32	12.90	17.49	22.08	26.61	31.19	35.76

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 1081 fpm on intake louver applications).

cfm / fpm = ft^2
6000 / 1081 = 5.55

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

Width x Height	Free Area from Chart
48 x 36	5.84

(Other selections available – See Free Area Chart above)

C. Calculate Free Area Velocity

fpm = cfm / ft^2 free area of louver
1027 = 6000 / 5.84

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

in w.g. = 0.407 at 1027 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 = 16.67 sq ft

B. Multiply Free Area x Free Area Velocity (Do not exceed 1081 fpm on intake louver applications).

ft^2 x fpm = cfm
16.67 x 1081 = 18019

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

in w.g. = 0.451 at 1081 fpm free area velocity