

Application

The ECD-745 offers exceptional protection against wind-driven rain under the most severe conditions and is ideally suited for high wind areas or applications that are sensitive to wind-driven rain penetration. The ECD-745 incorporates horizontal blades and is available in a wide array of anodized and painted finishes including custom color matching.

Standard Construction

Material: Mill finish 6063-T5 extruded aluminum.

Frame: 7" deep × 0.081" thick (178 × 2) channel.

Blades: 45° × 0.081" (2) thick horizontal drainable style.

Screen: 1/2" × 0.063" (12.7 × 1.6) expanded and flattened aluminum.

Mullion: Visible.

Minimum Size: 4.5" × 6.5" (114 × 165)

Maximum Size: Single section: 60" × 120" (1524 × 3048)
120" × 60" (3048 × 1524)
Multiple section: Unlimited

Options

- Factory finish:
 - High Performance Fluoropolymer - 100% resin Newlar®/ 70% resin Kynar®
 - Baked Enamel
 - Clear or Color Anodized, Class 1
 - Prime Coat
- Hidden vertical mullion for continuous blade appearance.
- Flange frame:
 - 1 1/2" (38) flange
 - Custom-size flange
 - Stucco flange
 - Glazing frame
- Welded construction.
- Alternate bird or insect screens.
- Insulated or non-insulated blank-off panels.
- Filter racks.
- Hinged frame.
- Head and/or sill flashing.
- Installation hardware:
 - Clip angles
 - Continuous angles
- Burglar bars.
- Frame closure.

Ratings

Free Area: [48" × 48" (1219 × 1219) unit]: 8.1 ft² (0.75 m²)
50.6%

Performance @ Beginning Point of Water Penetration

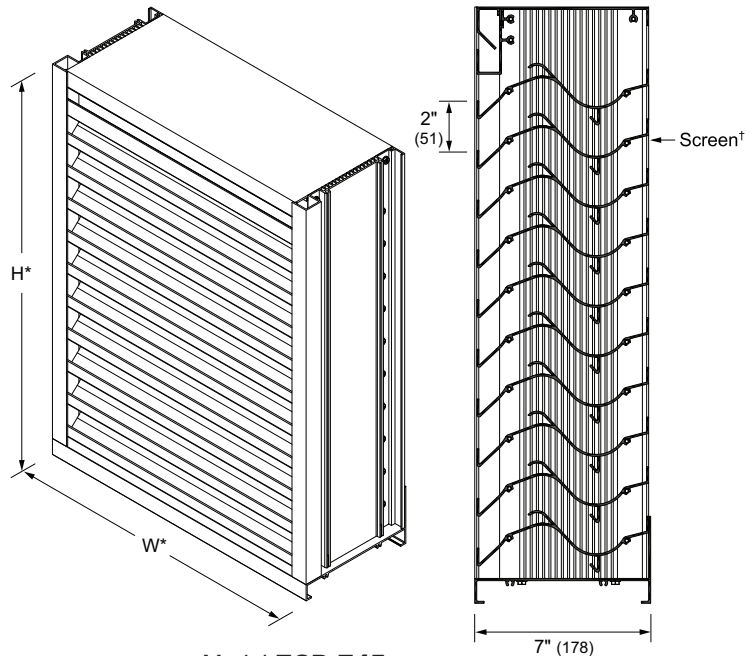
Free Area Velocity: 1,218 fpm (6.19 m/s)

Air Volume Delivered: 9,866 cfm (4.66 m³/s)

Pressure Loss: 0.57 in.wg. (141 Pa)

Velocity @ 0.15 in.wg. Pressure Loss: 631 fpm (3.21 m/s)

Design Load: 30 psf

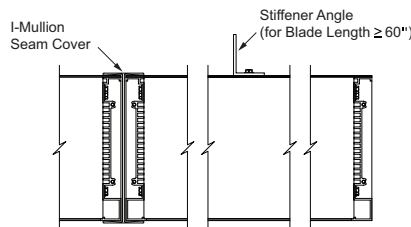


Model **ECD-745**
(standard)

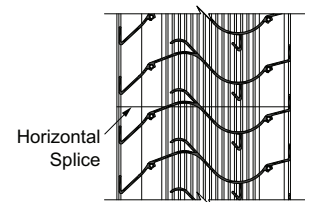
*Louver dimensions furnished approximately 1/2" (13) undersize.

Vertical Section

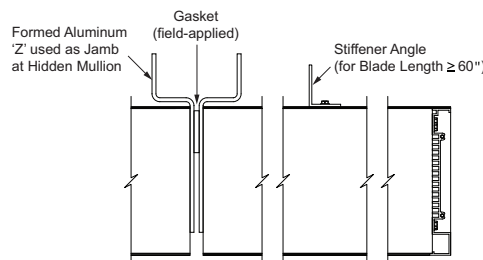
†Screen adds approximately 3/16" (5) to louver depth.



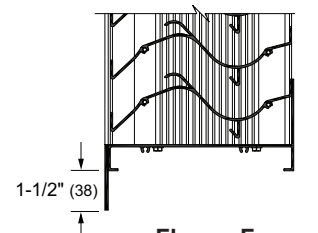
Visible Vertical Mullion
(standard)



Horizontal Mullion
(standard)



Hidden Vertical Mullion
(optional)



Flange Frame
(optional)

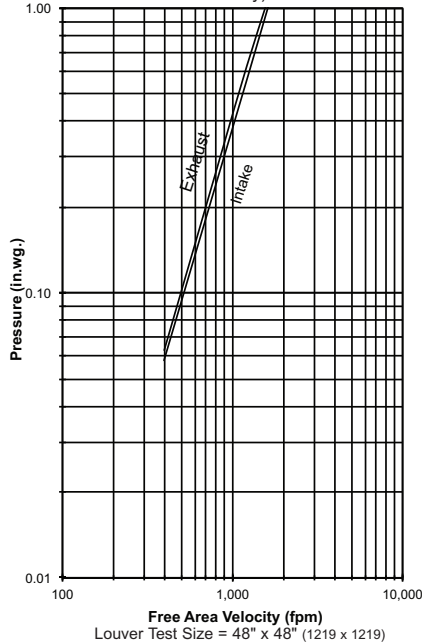
Performance Data

Free Area (ft²)

Height (Inches)	Width (Inches)																			
	4.5	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
6	0.01	0.04	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5
12	0.1	0.3	0.5	0.6	0.8	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.7	2.9	3.0	3.2	3.4
18	0.1	0.5	0.8	1.2	1.5	1.8	2.1	2.4	2.8	3.1	3.4	3.7	4.0	4.3	4.7	5.0	5.3	5.6	5.9	6.3
24	0.2	0.8	1.2	1.7	2.2	2.6	3.1	3.6	4.0	4.5	5.0	5.4	5.9	6.3	6.8	7.3	7.7	8.2	8.7	9.1
30	0.3	1.0	1.6	2.2	2.9	3.5	4.1	4.7	5.3	5.9	6.5	7.1	7.7	8.4	9.0	9.6	10.2	10.8	11.4	12.0
36	0.3	1.3	2.0	2.8	3.5	4.3	5.1	5.8	6.6	7.3	8.1	8.8	9.6	10.4	11.1	11.9	12.6	13.4	14.1	14.9
42	0.4	1.5	2.4	3.3	4.2	5.1	6.0	6.9	7.8	8.7	9.7	10.6	11.5	12.4	13.3	14.2	15.1	16.0	16.9	17.8
48	0.4	1.8	2.8	3.9	4.9	6.0	7.0	8.1	9.1	10.2	11.2	12.3	13.3	14.4	15.4	16.5	17.5	18.6	19.6	20.7
54	0.5	2.0	3.2	4.4	5.6	6.8	8.0	9.2	10.4	11.6	12.8	14.0	15.2	16.4	17.6	18.8	20.0	21.2	22.4	23.6
60	0.6	2.2	3.6	4.9	6.3	7.6	9.0	10.3	11.7	13.0	14.3	15.7	17.0	18.4	19.7	21.1	22.4	23.8	25.1	26.4
66	0.6	2.5	4.0	5.5	7.0	8.5	9.9	11.4	12.9	14.4	15.9	17.4	18.9	20.4	21.9	23.4	24.9	26.4	27.8	29.3
72	0.7	2.7	4.4	6.0	7.6	9.3	10.9	12.6	14.2	15.8	17.5	19.1	20.8	22.4	24.0	25.7	27.3	28.9	30.6	32.2
78	0.7	3.0	4.8	6.5	8.3	10.1	11.9	13.7	15.5	17.3	19.0	20.8	22.6	24.4	26.2	28.0	29.8	31.5	33.3	35.1
84	0.8	3.2	5.2	7.1	9.0	10.9	12.9	14.8	16.7	18.7	20.6	22.5	24.5	26.4	28.3	30.3	32.2	34.1	36.1	38.0
90	0.9	3.5	5.5	7.6	9.7	11.8	13.9	15.9	18.0	20.1	22.2	24.2	26.3	28.4	30.5	32.6	34.6	36.7	38.8	40.9
96	0.9	3.7	5.9	8.2	10.4	12.6	14.8	17.1	19.3	21.5	23.7	26.0	28.2	30.4	32.6	34.9	37.1	39.3	41.5	43.8
102	1.0	4.0	6.3	8.7	11.1	13.4	15.8	18.2	20.6	22.9	25.3	27.7	30.0	32.4	34.8	37.2	39.5	41.9	44.3	46.6
108	1.0	4.2	6.7	9.2	11.8	14.3	16.8	19.3	21.8	24.3	26.9	29.4	31.9	34.4	36.9	39.5	42.0	44.5	47.0	49.5
114	1.1	4.4	7.1	9.8	12.4	15.1	17.8	20.4	23.1	25.8	28.4	31.1	33.8	36.4	39.1	41.8	44.4	47.1	49.8	52.4
120	1.2	4.7	7.5	10.3	13.1	15.9	18.7	21.6	24.4	27.2	30.0	32.8	35.6	38.4	41.2	44.1	46.9	49.7	52.5	55.3

Pressure Loss

(Data corrected to standard air density)

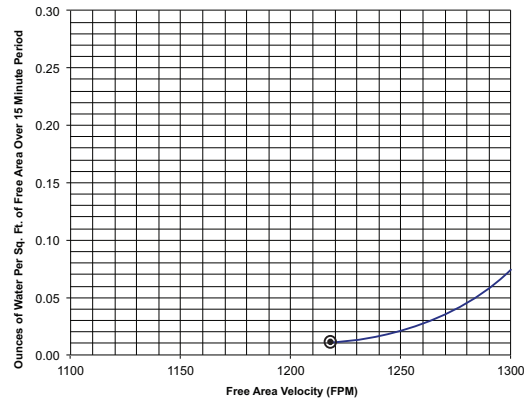


Pressure loss tested in accordance with Figure 5.5 of AMCA Standard 500-L

Water Penetration

AMCA defines the beginning point of water penetration as the free area velocity at the intersection of a simple linear regression of test data and the line of 0.01 ounces of water per square foot of free area and is measured through a 48" x 48" louver during a 15 minute period. The AMCA water penetration test provides a method for comparing louver models and designs as to their efficiency in resisting the penetration of rainfall under specific lab conditions. C&S recommends that intake louvers are selected with a reasonable margin of safety below the beginning point of water penetration in order to avoid unwanted penetration during severe storm conditions.

Beginning Point of Water Penetration = 1,218 fpm



Wind Driven Rain Performance — AMCA 500-L Wind Driven Rain Test

Test louver Core Area₁ is 39³/₈" x 39³/₈".

Wind Velocity	Rainfall	Airflow	Core Velocity	Effectiveness Ratio	Penetration Class ₂	Discharge Class ₃
29 mph	3 in/hr	6260 cfm	581 fpm	99.6%	A	3
50 mph	8 in/hr	5312 cfm	493 fpm	99.2%	A	3

Wind Driven Rain ₂ Class	Effectiveness	Discharge Loss ₃	
		Class	Coefficient
A	1.000 to 0.99	1	0.4 to 1.000
B	0.989 to 0.95	2	0.3 to 0.399
C	0.949 to 0.80	3	0.2 to 0.299
D	0.799 to 0.00	4	0.0 to 0.199

NOTES 1. Core Area is the open area of the louver face (face area less louver frame). 2. Wind Driven Rain Penetration Classes. 3. Discharge Loss Coefficient is calculated by dividing the louvers' actual airflow rate by the theoretical airflow rate for an unobstructed opening. The higher the coefficient the lower the resistance to air flow.

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses () are millimeters.