

## XCD-545

(Standard for single section assemblies)  
\*Grille dimensions furnished approximately 1/2" (13) undersize.

## Ratings

**Free Area:** [48" x 48" (1219 x 1219) unit]: 6.1 ft<sup>2</sup> (0.57 m<sup>2</sup>)  
37.9%

### Performance @ Beginning Point of Water Penetration

**Free Area Velocity:** 1,250 fpm (6.35 m/s)

**Air Volume Delivered:** 7,575 cfm (3.58 m<sup>3</sup>/s)

**Pressure Loss:** 0.28 in.wg. (70 Pa)

**Design Pressure:** 300 fpm (14.4 kPa)

Classified as a UL Windstorm Rated Assembly for static pressure, cyclic pressure, and impact resistance



Pottorff certifies that the model XCD-545 shown herein is licensed to bear the AMCA seal. The ratings shown are based on test 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 water penetration, air performance and wind driven rain ratings.

The XCD-545 aluminum grille is designed in accordance with ICC 500 (2020), FEMA P-361 (2015) and FEMA P-320 (2014) guidelines for storm shelters and safe rooms. It offers exceptional protection against wind pressures, rain, and debris impacts produced by tornadoes and hurricanes. The XCD-545 is a UL Classified Windstorm Rated Assembly with a design pressure of 300 psf and has been impact-tested using 15-lb 2 x 4 timbers launched at 100 mph.

The XCD-545 is available with a non-flanged frame and continuous angles for installation.

## Standard Construction

**Material:** Aluminum

**Frame:** 5-1/2" deep x 0.25" thick (140 x 6)

**Blades:** 0.25" (6) Horizontal Chevron Style

**Screen:** 5/8" x 0.050" (15.9 x 1.3) expanded and flattened aluminum

**Mullion:** Visible

**Factory Finish:** Mill

**Minimum Size:** 12" x 12" (305 x 305)

**Maximum Size:**

Single section: 48" x 96" (1219 x 2438)

Multiple section: Unlimited width x single section high  
Single section wide x unlimited height

## Options

■ **Alternate bird or insect screens**

■ **Factory finish:**

- High Performance Fluoropolymer
- Baked Enamel ■ Prime Coat



**NOTE:** Dimensions in parentheses ( ) are millimeters. Information is subject to change without notice or obligation.

# PERFORMANCE

## XCD-545

Aluminum Grille  
5-1/2" deep • Horizontal Blade

### Free Area (ft<sup>2</sup>)

		Width (Inches)						
		12	18	24	30	36	42	48
Height (Inches)	12	0.2	0.3	0.4	0.5	0.6	0.7	0.8
	18	0.3	0.5	0.8	1.0	1.2	1.4	1.6
	24	0.5	0.8	1.2	1.5	1.8	2.1	2.5
	30	0.7	1.1	1.6	2.0	2.4	2.9	3.3
	36	0.9	1.4	2.0	2.5	3.1	3.6	4.2
	42	1.0	1.7	2.4	3.0	3.7	4.4	5.0
	48	1.2	2.0	2.8	3.6	4.3	5.1	5.9
	54	1.4	2.3	3.2	4.1	5.0	5.9	6.8
	60	1.6	2.6	3.6	4.6	5.6	6.6	7.6
	66	1.7	2.9	4.0	5.1	6.2	7.4	8.5
72	1.9	3.1	4.4	5.6	6.9	8.1	9.3	
78	2.1	3.4	4.8	6.1	7.5	8.8	10.2	
84	2.3	3.7	5.2	6.7	8.1	9.6	11.0	
90	2.4	4.0	5.6	7.2	8.7	10.3	11.9	
96	2.6	4.3	6.0	7.7	9.4	12.8	12.8	

### Weights (Approximate weight in lbs)

		Width (Inches)														
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96
Height (Inches)	12	18	28	37	47	56	66	75	85	94	104	113	123	132	142	151
	18	26	39	52	65	78	91	104	117	130	143	156	170	183	196	209
	24	33	50	67	83	100	117	133	150	166	183	200	216	233	250	266
	30	41	61	81	101	122	142	162	182	203	223	243	263	284	304	324
	36	48	72	96	120	143	167	191	215	239	263	287	310	334	358	382
	42	55	83	110	138	165	193	220	248	275	302	330	357	385	412	440
	48	63	94	125	156	187	218	249	280	311	342	373	404	435	466	497

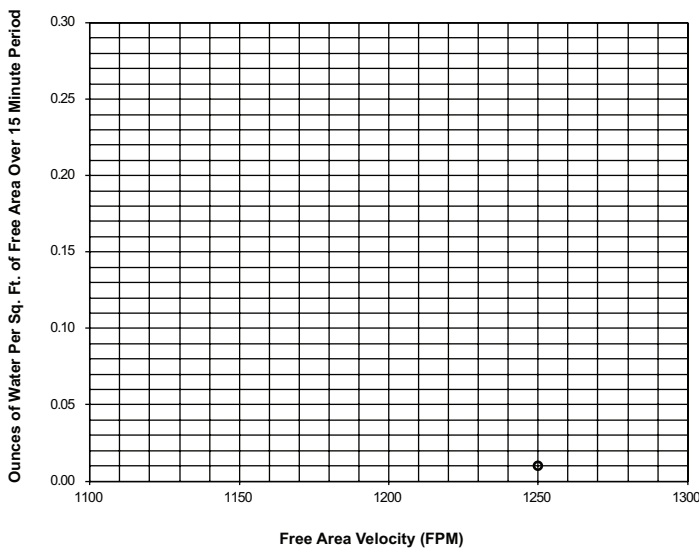


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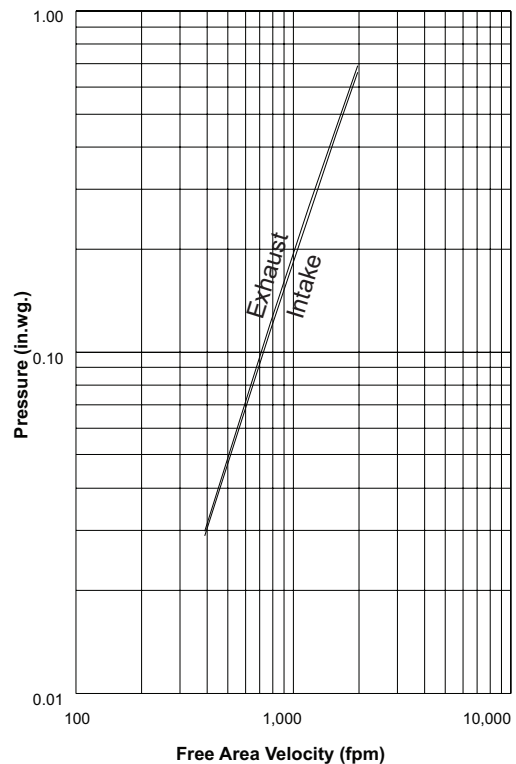
### Water Penetration

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. Pottorff 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 = 1250 fpm**



### Pressure Loss



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

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

Wind Velocity	Rainfall	Airflow	Core Velocity <sup>1</sup>	Effectiveness Ratio	Wind-Driven Rain Penetration Class	Discharge Loss Class <sup>2</sup>
29 mph	3 in/hr	4,202 cfm	390.18 fpm	99.70%	A	3

**NOTE:**

1. Core area is the open area of the louver face (face area less louver frame). Core velocity is the airflow divided by core area. Test louver core area is 10.77 ft<sup>2</sup> (1 m<sup>2</sup>).

2. Discharge Loss Coefficient is calculated by dividing the louver's actual airflow rate by the theoretical airflow rate for an unobstructed opening. The higher the coefficient, the lower the resistance to airflow.

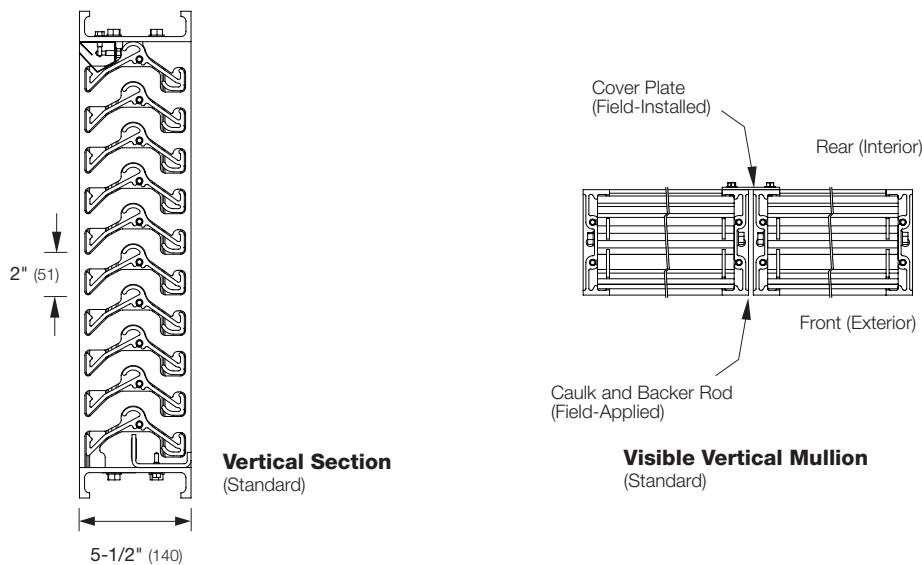
**Wind Driven Rain**

Class	Effectiveness
A	99% and above
B	95% to 98.9%
C	80% to 94.9%
D	below 80%

**Discharge Loss**

Class	Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

## Attributes



## Anchor/Fastener Requirements

Attachment Method	Attachment Location	Building Substrate	Anchor Type	Min. Edge Distance	Max. Spacing	Min. Embedment
Continuous Angles (Non-Flanged, Internal Mount Only)	Jamb	Grout-Filled CMU (f'm ≥ 1500 psi)	1/2" Through-Bolt w/ Nut & Flat Washer	2-1/8"	8"	Full
		Concrete (f'c ≥ 4000 psi)	1/2" × 4" Hilti Kwik Hus-Ez Screw Anchor	2-1/4"	7"	2-1/4"
		Steel (Min. 3/16" Thick, Fy ≥ 36 ksi)	3/8" × 1" Self-Tapping Screw*	3/4"	8"	3/16"
		Wood Blocking	1/2" Through-Bolt w/ Nut & Flat Washer	2"	8"	Full
	Top/Bottom	Grout-Filled CMU (f'm ≥ 1500 psi)	1/2" Through-Bolt w/ Nut & Flat Washer	3"	8"	Full
		Concrete (f'c ≥ 4000 psi)	1/2" × 4" Hilti Kwik Hus-Ez Screw Anchor	4-1/4"	12"	2-1/4"
		Steel (Min. 3/16" Thick, Fy ≥ 36 ksi)	3/8" × 1" Self-Tapping Screw*	3/4"	8"	3/16"

\*NOTE: It is acceptable to substitute 3/8-16 bolts, nuts, and flat washers instead of 3/8" self-tapping screws.