

**ESD-435** 4 in. Frame, 35 deg Blade

**APPLICATION & DESIGN**

ESD-435 is a weather louver designed to protect air intake and exhaust openings in building exterior walls. Design incorporates drain gutters in the head member and horizontal blades to channel water to the jambs where water is further channeled through vertical downspouts and out at the sloped sill. The ESD-435 is an extremely efficient louver with AMCA LICENSED PERFORMANCE DATA enabling designers to select and apply with confidence.

**Standard Construction**

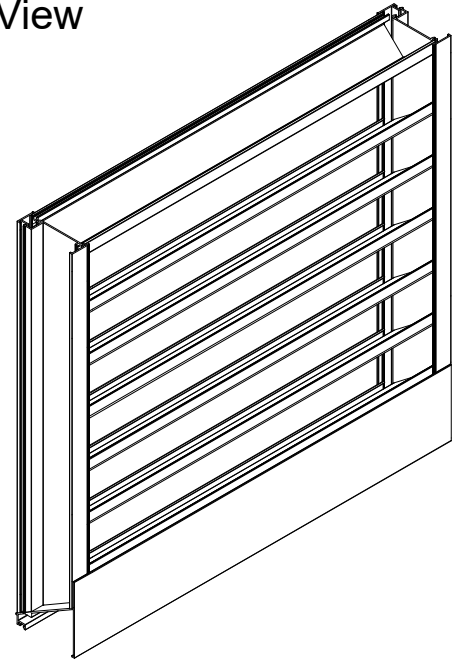
- Frame** . . . . . Heavy gauge extruded 6063-T5 aluminum, 4 in. x 0.081 in. nominal wall thickness
- Blades** . . . . . Drainable design, heavy gauge extruded 6063-T5 aluminum, 0.081 in. nominal wall thickness, positioned at 37.5° angles on approximately 3 ¼ in. centers
- Construction** . . . Mechanically fastened
- Birdscreen** . . . . 3/4 in. x 0.051 in. flattened expanded aluminum in removable frame, inside mount (rear)
- Finish** . . . . . Mill

**Stock Notes**

- Louvers are 1/4" undersized with channel frame
- Water penetration begins at 989 FPM free area velocity

Size W x H	Free Area (ft <sup>2</sup> )	Max CFM
12" x 12"	0.29	330
14" x 14"	0.43	495
16" x 16"	0.64	735
18" x 18"	0.83	955
20" x 20"	1.12	1285
24" x 12"	0.67	770
24" x 16"	1.02	1170
24" x 18"	1.15	1320
24" x 24"	1.72	1975
30" x 30"	2.97	3415
32" x 16"	1.41	1620
32" x 32"	3.38	3890
36" x 24"	2.69	3095
36" x 36"	4.38	5040
48" x 24"	3.66	4210
48" x 48"	8.44	9710

**Internal View**



*Width and Height furnished approximately 0.25 under size.*

# PERFORMANCE DATA

# ESD-435

Stationary Louver Drainable Blade  
Extruded Aluminum

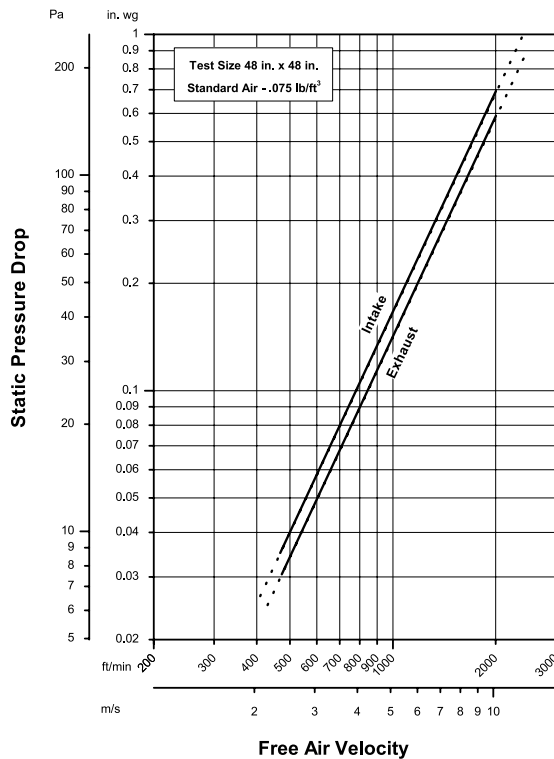
## Free Area Chart (Sq. ft.)

Louver Height Inches	Louver Width in Inches																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
9	0.15	0.25	0.35	0.44	0.54	0.64	0.74	0.81	0.91	1.01	1.10	1.20	1.30	1.37	1.47	1.57	1.67	1.76	1.86
12	0.30	0.49	0.68	0.87	1.07	1.26	1.45	1.59	1.79	1.98	2.17	2.36	2.56	2.70	2.89	3.08	3.28	3.47	3.66
18	0.54	0.88	1.23	1.58	1.93	2.28	2.62	2.88	3.23	3.58	3.93	4.28	4.62	4.88	5.23	5.58	5.93	6.28	6.62
24	0.79	1.30	1.81	2.32	2.83	3.33	3.84	4.23	4.74	5.25	5.76	6.27	6.78	7.16	7.67	8.18	8.69	9.20	9.71
30	1.04	1.71	2.38	3.06	3.73	4.40	5.08	5.58	6.26	6.93	7.60	8.28	8.95	9.45	10.13	10.80	11.47	12.15	12.82
36	1.29	2.13	2.97	3.81	4.65	5.49	6.33	6.96	7.80	8.64	9.48	10.31	11.15	11.78	12.62	13.46	14.30	15.14	15.98
42	1.55	2.55	3.55	4.56	5.56	6.56	7.57	8.32	9.32	10.32	11.33	12.33	13.33	14.09	15.09	16.09	17.10	18.10	19.10
48	1.82	3.01	4.19	5.37	6.55	7.74	8.92	9.81	10.99	12.17	13.35	14.54	15.72	16.61	17.79	18.97	20.16	21.34	22.52
54	2.08	3.44	4.79	6.14	7.49	8.85	10.20	11.21	12.56	13.92	15.27	16.62	17.97	18.99	20.34	21.69	23.04	24.40	25.75
60	2.33	3.85	5.36	6.87	8.39	9.90	11.42	12.55	14.06	15.58	17.09	18.61	20.12	21.26	22.77	24.28	25.80	27.31	28.82
66	2.58	4.26	5.94	7.61	9.29	10.97	12.64	13.90	15.58	17.25	18.93	20.60	22.28	23.54	25.21	26.89	28.57	30.24	31.92
72	2.84	4.68	6.52	8.36	10.20	12.05	13.89	15.27	17.11	18.95	20.79	22.64	24.48	25.86	27.70	29.54	31.38	33.22	35.07
78	3.09	5.10	7.10	9.11	11.11	13.12	15.12	16.63	18.63	20.64	22.65	24.65	26.66	28.16	30.17	32.17	34.18	36.18	38.19
84	3.35	5.53	7.70	9.88	12.05	14.23	16.40	18.03	20.21	22.38	24.56	26.73	28.91	30.54	32.71	34.89	37.06	39.23	41.41
90	3.64	6.00	8.37	10.73	13.09	15.45	17.82	19.59	21.95	24.31	26.67	29.04	31.40						
96	3.88	6.40	8.92	11.44	13.95	16.47	18.99	20.88	23.40	25.91	28.43	30.95	33.47						
102	4.13	6.81	9.49	12.17	14.85	17.53	20.21	22.22	24.90	27.58	30.26	32.94	35.62						
108	4.38	7.23	10.07	12.91	15.76	18.60	21.44	23.58	26.42	29.26	32.11	34.95	37.79						
114	4.64	7.65	10.66	13.67	16.68	19.68	22.69	24.95	27.96	30.97	33.98	36.99	40.00						
120	4.89	8.07	11.24	14.41	17.58	20.76	23.93	26.31	29.48	32.66	35.83	39.00	42.18						



Greenheck Fan Corporation certifies that the ESD-435 louvers shown herein are 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 and water penetration ratings.

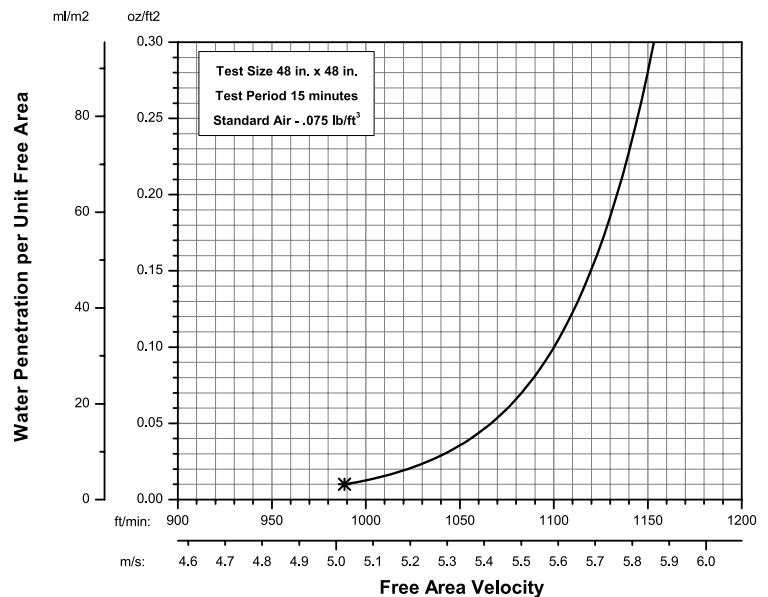
## Airflow Resistance (Standard Air - .075 lb/ft³)



Model ESD-435 resistance to airflow (pressure drop) varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information. (Test Figure 5.5)

## Water Penetration (Standard Air - .075 lb/ft³)

Test size 48 in. x 48 in. Test duration of 15 min.



The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The beginning point of water penetration is defined as that velocity where the water penetration curve projects through .01 oz. of water (penetration) per sq. ft. of louver free area. **\*The beginning point of water penetration for Model ESD-435 is 989 fpm free area velocity.** These performance ratings do not guarantee a louver to be weather-proof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers.

