

EXHAUST AIR LOUVER

CONSTRUCTION:

Frame and blades: High quality extruded aluminium profile of 1.2 mm thickness.

Blade pitch: 40 mm standard.

Flange width: 30 mm standard.



Description:

- Composed of frame and horizontal blade assembly made of high quality extruded aluminium profile with the advantages of durability and corrosion resistance.
- Designed to have sturdy construction. Blades are fixed to the main frame using screws and riveted to the mullions for bigger sizes.
- Weather resistant structure with blades inclined at an angle of 45° to protect against rain water penetration.
- Assembly provides around 42% effective pressure area.
- Multiple sections will be assembled as per request.
- Standard finishes and fixing details are on section 14.9

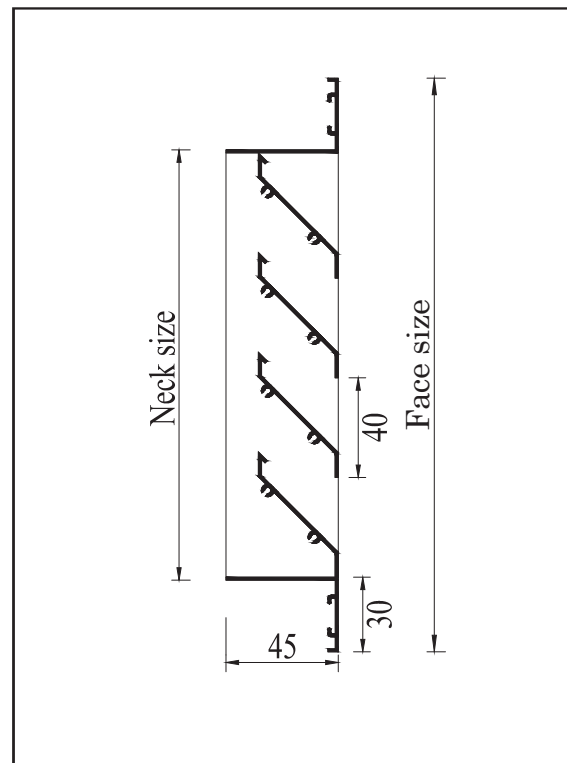
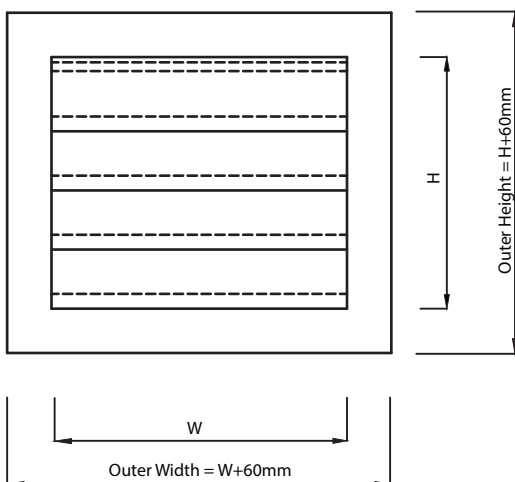


Table 14.1 - Effective Pressure Area in sq.ft

Louver Outer Width (inches)

Louver Outer Height (inches)	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.25	0.40	0.55	0.71	0.86	1.01	1.17	1.32	1.47	1.63	1.78	1.93	2.09	2.24	2.40	2.55	2.70	2.86	3.01
18	0.44	0.72	1.00	1.27	1.55	1.82	2.10	2.38	2.65	2.93	3.21	3.48	3.76	4.04	4.31	4.59	4.86	5.14	5.42
24	0.59	0.96	1.33	1.70	2.06	2.43	2.80	3.17	3.54	3.91	4.27	4.64	5.01	5.38	5.75	6.12	6.49	6.85	7.22
30	0.84	1.36	1.88	2.40	2.92	3.45	3.97	4.49	5.01	5.53	6.06	6.58	7.10	7.62	8.14	8.67	9.19	9.71	10.23
36	0.98	1.60	2.21	2.83	3.44	4.05	4.67	5.28	5.90	6.51	7.12	7.74	8.35	8.97	9.58	10.19	10.81	11.42	12.04
42	1.13	1.84	2.54	3.25	3.96	4.66	5.37	6.08	6.78	7.49	8.19	8.90	9.61	10.31	11.02	11.72	12.43	13.14	13.84
48	1.28	2.08	2.88	3.67	4.47	5.27	6.07	6.87	7.67	8.46	9.26	10.06	10.86	11.66	12.45	13.25	14.05	14.85	15.65
54	1.43	2.32	3.21	4.10	4.99	5.88	6.77	7.66	8.55	9.44	10.33	11.22	12.11	13.00	13.89	14.78	15.67	16.56	17.45
60	1.67	2.72	3.76	4.81	5.85	6.89	7.94	8.98	10.02	11.07	12.11	13.16	14.20	15.24	16.29	17.33	18.37	19.42	20.46
66	1.92	3.12	4.32	5.51	6.71	7.91	9.10	10.30	11.50	12.70	13.89	15.09	16.29	17.49	18.68	19.88	21.08	22.27	23.47
72	2.12	3.44	4.76	6.08	7.40	8.72	10.04	11.36	12.68	14.00	15.32	16.64	17.96	19.28	20.60	21.92	23.24	24.56	25.88
78	2.27	3.68	5.09	6.50	7.91	9.33	10.74	12.15	13.56	14.97	16.39	17.80	19.21	20.62	22.04	23.45	24.86	26.27	27.68
84	2.46	4.00	5.53	7.07	8.60	10.14	11.67	13.21	14.74	16.28	17.81	19.35	20.88	22.42	23.95	25.49	27.02	28.56	30.09
90	2.66	4.32	5.97	7.63	9.29	10.95	12.61	14.26	15.92	17.58	19.24	20.89	22.55	24.21	25.87	27.53	29.18	30.84	32.50
96	2.86	4.64	6.42	8.20	9.98	11.76	13.54	15.32	17.10	18.88	20.66	22.44	24.22	26.00	27.78	29.56	31.35	33.13	34.91
102	3.05	4.96	6.86	8.76	10.67	12.57	14.47	16.38	18.28	20.18	22.09	23.99	25.89	27.80	29.70	31.60	33.51	35.41	37.31
108	3.25	5.28	7.30	9.33	11.35	13.38	15.41	17.43	19.46	21.49	23.51	25.54	27.56	29.59	31.62	33.64	35.67	37.69	39.72
114	3.45	5.60	7.75	9.89	12.04	14.19	16.34	18.49	20.64	22.79	24.94	27.09	29.23	31.38	33.53	35.68	37.83	39.98	42.13
120	3.64	5.92	8.19	10.46	12.73	15.00	17.27	19.55	21.82	24.09	26.36	28.63	30.91	33.18	35.45	37.72	39.99	42.26	44.54

Effective pressure areas for non standard sizes can be interpolated from the above data.



Note:- Follow neck size (WxH) for ordering louver

Selection example

Given airflow : 3150 cfm

Free area velocity : 520 fpm (assumed)

Calculation:

Free area = airflow/ louver free area velocity

$$=3150/520$$

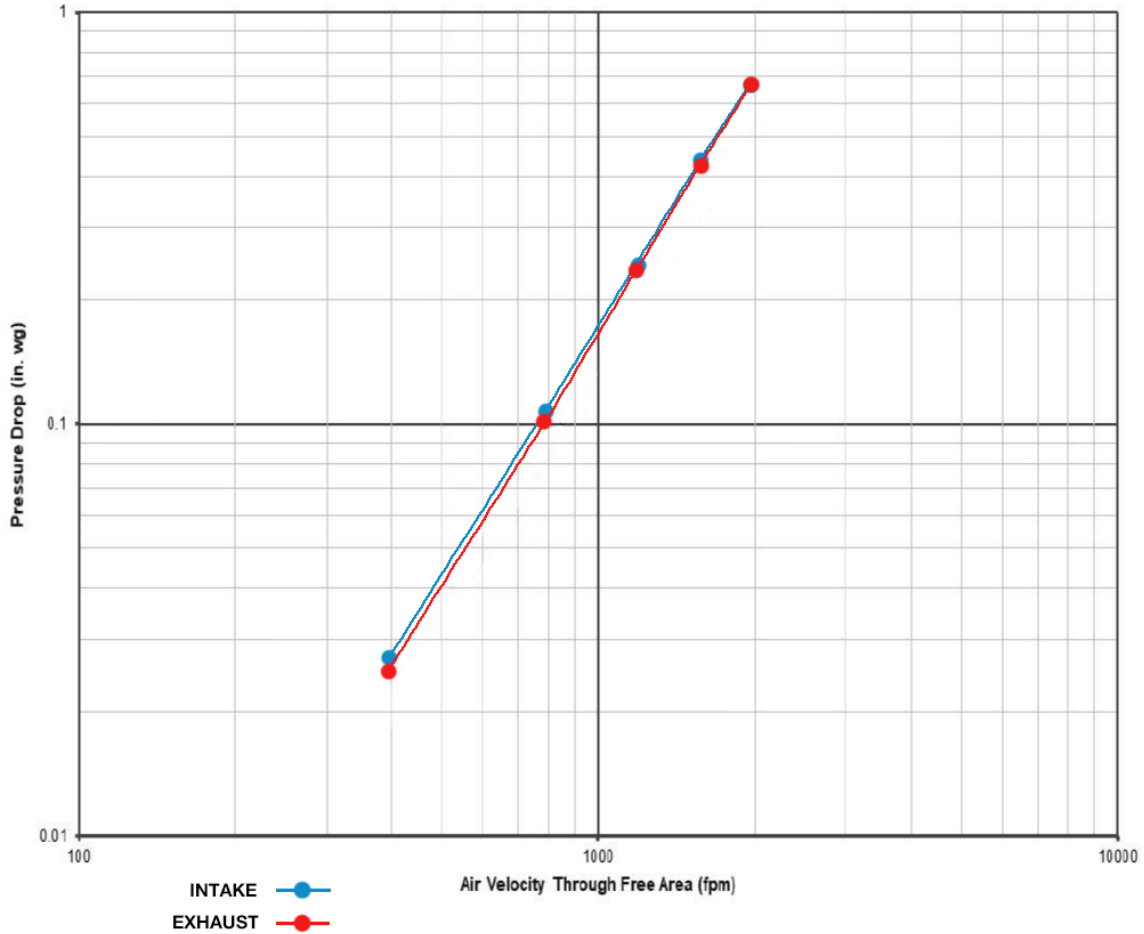
$$=6.06ft^2$$

From the free area chart, selected size of the louver is 48"x 48"

From the graph, louver pressure or Pressure drop= 0.102 in.wg

EXHAUST AIR LOUVER

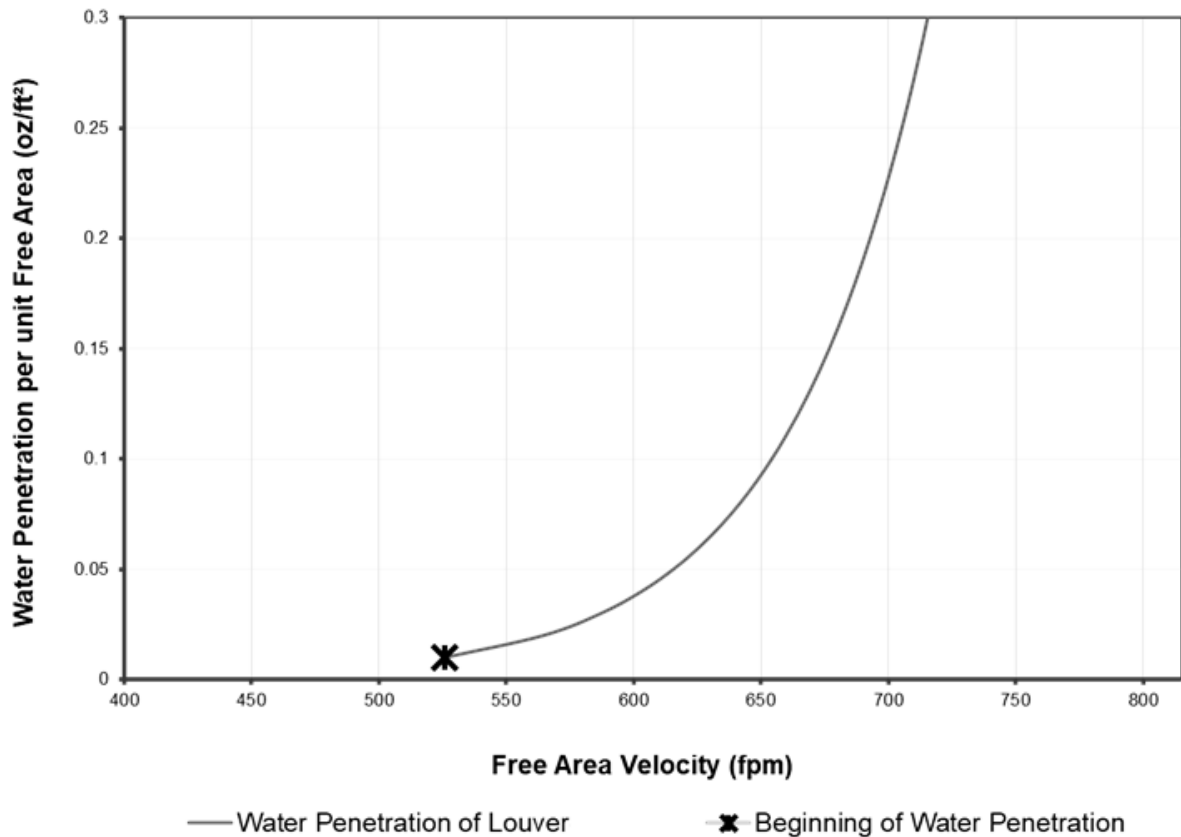
Pressure Drop V/S Free Area Velocity



Free Area Velocity (fpm)	Intake (in.wg)	Exhaust (in.wg)
400	0.03	0.03
800	0.11	0.10
1200	0.24	0.24
1600	0.44	0.43
2000	0.67	0.67



Airmaster Equipments Emirates L.L.C certifies that the Weather Louver model "AL" 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 and Water Penetration ratings.

EXHAUST AIR LOUVER**Water Penetration Chart**

**Beginning of Water Penetration per AMCA
Publication 511 Section 8.3.2 based on AMCA
measured free area: > or = 522.7 fpm**

Percentage of free area calculation

Louver size = 48" x 48"

Free area = 6.07 sq ft

W = 48 - 2.375 = 45.625

H = 48 - 2.375 = 45.625

Core area = W x H = 45.625 x 45.625

= 14.46 sq ft

% free area = (Free area / Core area) x 100

= (6.07 / 14.46) x 100

= **42 %**

SURFACE FINISH AND FIXING DETAILS

Standard Finishes:

- Natural anodized aluminium finish.
- Epoxy powder coated finish. Color as per clients' choice.

Options:

- Mesh :
 - 12 x 12 x 1.5mm dia aluminium PVC coated wire mesh
 - 12 x 12 x 1mm dia G.I wire mesh
 - S.S Mesh
- Insect Screen
- PVDF, SDF coatings

Fixing Details

