LOUVERS

WE GUIDE
AIR

BETA
industrial

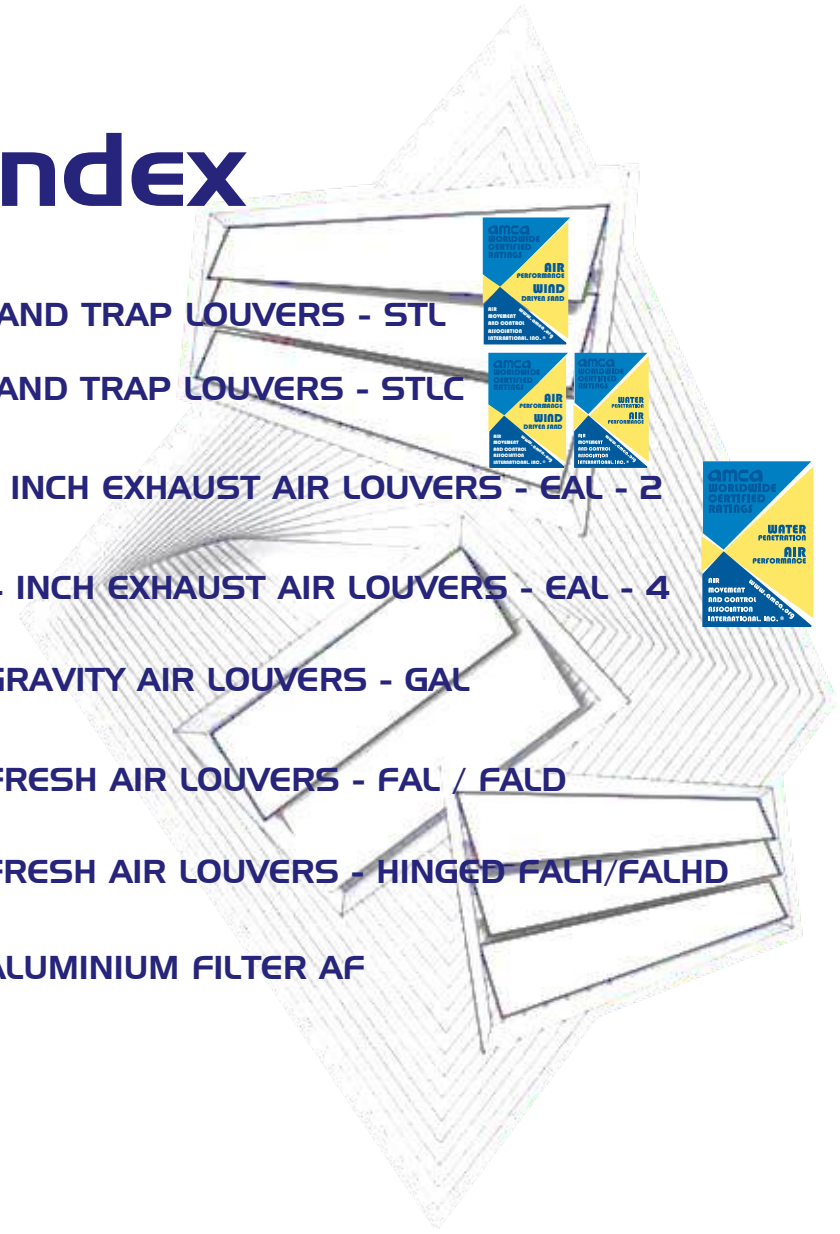
PRODUCTS CATALOGUE

PRODUCT BULLETIN 5

Ver.4A Mar 2023

BETA
industrial

index



>> The sand trap louver is made of aluminum section/ GI sheet. It is composed of two sets of inverted U-channels, mounted vertically on two opposite rows.

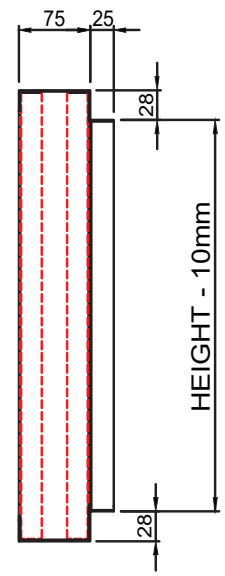
>> The sand trap louver is used at the fresh air inlet. It can lower the dust loading of conventional filtration as it is designed to separate large size sand particles at low to medium speeds. It can be fitted with a bird/insect screen mesh.

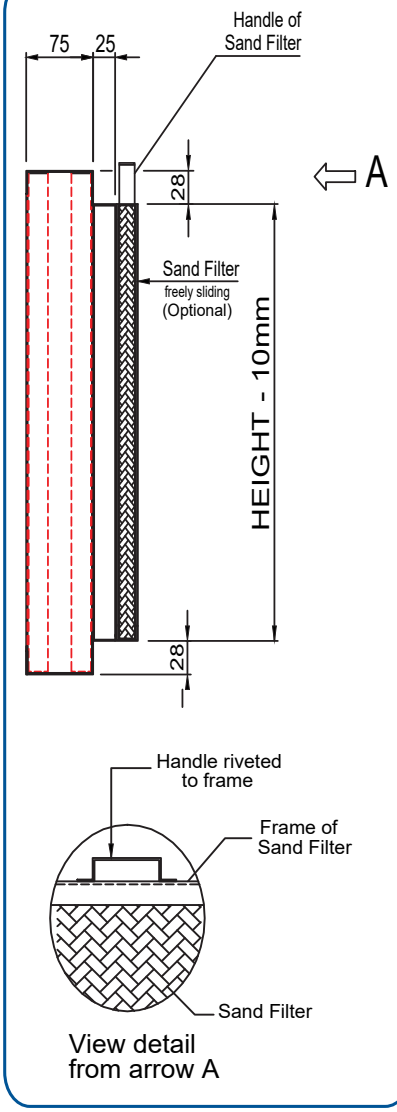
>> The sand trap louver is a self emptying system, it has a set of holes at the bottom of the casing to discharge separated sand particles.

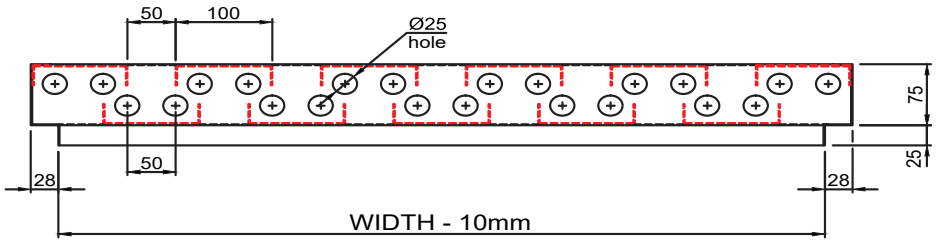
>> Tested by AMCA in accordance with ANSI/ AMCA 500-L

SAND TRAP LOUVERS

SAND TRAP LOUVERS







SAND TRAP LOUVERS BOTTOM VIEW DETAILS

Ordering Key:

S	T	L A	SSWM	SF	SIZE
STLA: SAND TRAP LOUVER IN ALUMINIUM STLG: SAND TRAP LOUVER IN GI					
–: WITHOUT SCREEN/WIRE MESH IS: G.I. INSECT SCREEN SSWM: STAINLESS STEEL WIRE MESH					
–: WITHOUT FILTER SF: WITH SLIDING 1 INCH THICK ALUMINUM FILTER SF2: WITH SLIDING 2 INCH THICK ALUMINUM FILTER					
SIZE: WIDTH X HEIGHT **NOTE: 78 INCH X 78 INCH (OUT TO OUT) IS MAXIMUM SINGLE SECTION SIZE					

SAND TRAP LOUVERS - STL

Beta Industrial LLC certifies that the STL shown hereon 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 Wind Driven Sand.

Test Information

Tested in accordance with ANSI/AMCA 500-L, Figure 5.5 Test sample size is 1219mm x 1219mm (48 in. x 48 in.) Air Performance data are based on exhaust performance

The sand grading used for the test is between 76µm - 699µm as per AMCA 500-L.

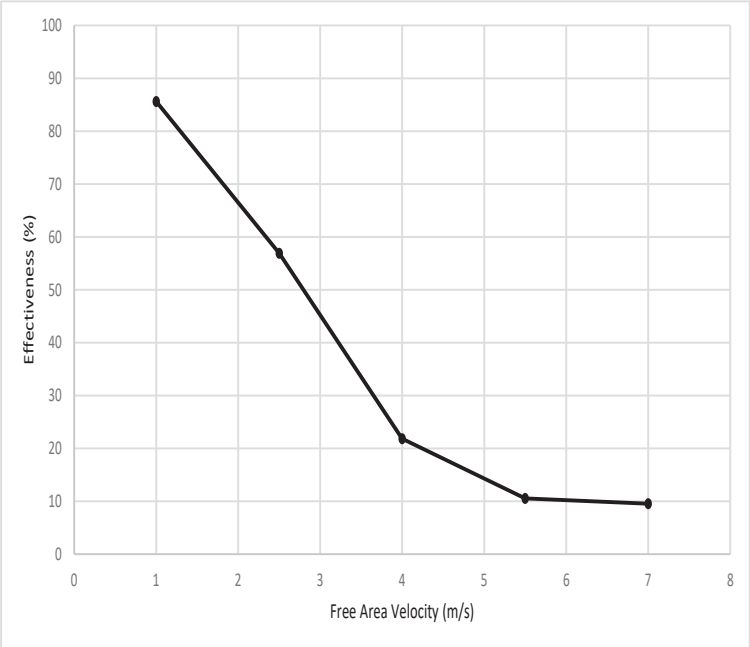
FREE AREA CHART (SQUARE FEET)

Width (inches)

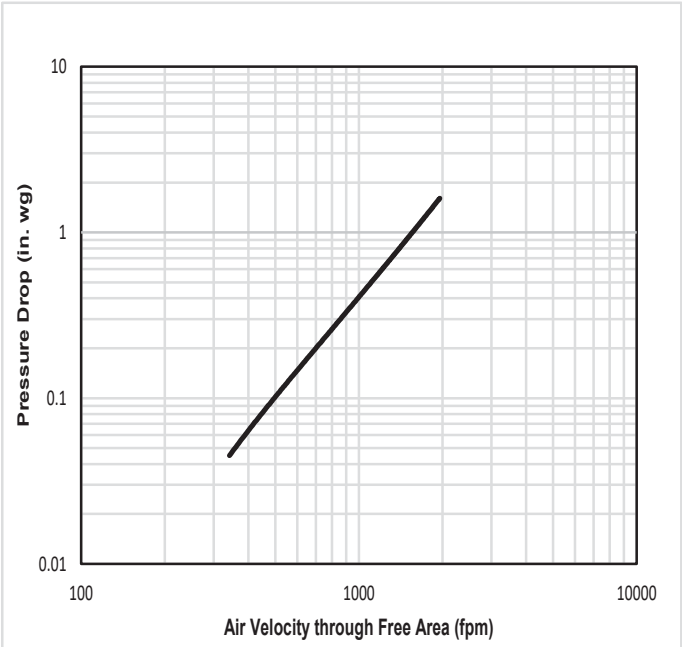
Height (inches)	Out to Out	12	18	24	30	36	42	48	54	60	66	72	78
Out to Out	Neck Size	9.8	15.8	21.8	27.8	33.8	39.8	45.8	51.8	57.8	63.8	69.8	75.8
12	9.8	0.17	0.31	0.45	0.59	0.73	0.88	1.02	1.16	1.30	1.44	1.58	1.72
18	15.8	0.28	0.51	0.73	0.96	1.18	1.41	1.64	1.86	2.09	2.32	2.54	2.77
24	21.8	0.39	0.70	1.01	1.32	1.64	1.95	2.26	2.57	2.88	3.20	3.51	3.82
30	27.8	0.48	0.89	1.29	1.69	2.09	2.48	2.88	3.28	3.68	4.08	4.47	4.87
36	33.8	0.60	1.06	1.57	2.05	2.54	3.02	3.50	3.99	4.47	4.96	5.44	5.92
42	39.8	0.71	1.28	1.85	2.42	2.99	3.56	4.13	4.70	5.27	5.84	6.41	6.98
48	45.8	0.81	1.47	2.12	2.78	3.44	4.09	4.75	5.40	6.06	6.72	7.37	8.03
54	51.8	0.92	1.66	2.40	3.14	3.89	4.63	5.37	6.11	6.85	7.60	8.34	9.08
60	57.8	1.02	1.85	2.68	3.51	4.34	5.16	5.99	6.82	7.65	8.48	9.30	10.13
66	63.8	1.13	2.04	2.96	3.87	4.79	5.70	6.61	7.53	8.44	9.36	10.27	11.18
72	69.8	1.24	2.24	3.24	4.24	5.24	6.24	7.24	8.27	9.24	10.24	11.24	12.24
78	75.8	1.34	2.43	3.51	4.60	5.69	6.77	7.86	8.94	10.03	12.12	12.20	13.29

Free Area velocity, m/s	Sand Rejection Louver Effectiveness (%)	Penetration Class
1.000	86.10	B
2.500	58.96	D
4.000	21.94	D
5.500	10.96	D
7.000	7.8	D

SAND REJECTION EFFECTIVENESS DATA



PRESSURE DROP DATA



STLC

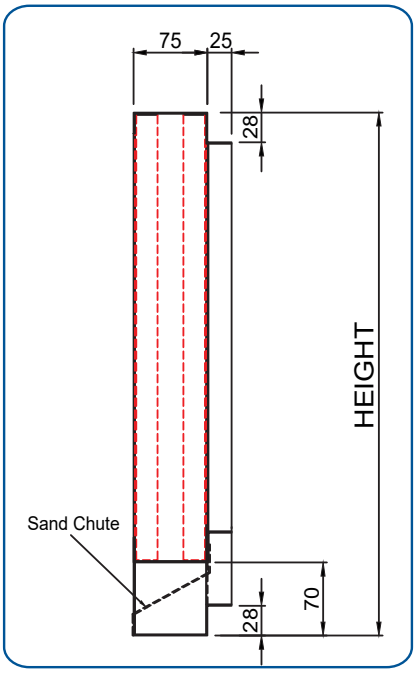
>> The sand trap louver is made of aluminum section/ GI sheet. It is composed of two sets of inverted U-channels, mounted vertically on two opposite rows.

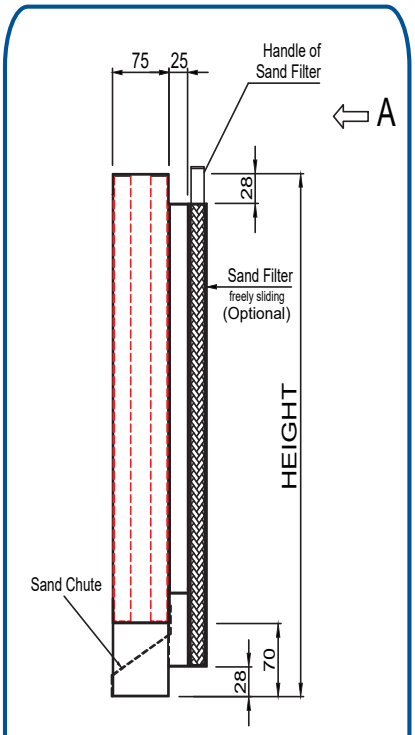
>> The sand trap louver is used at the fresh air inlet duct. It can lower the dust loading of conventional filtration as it is designed to separate large size sand particles at low to medium speeds. It can be fitted with a bird/insect screen mesh.

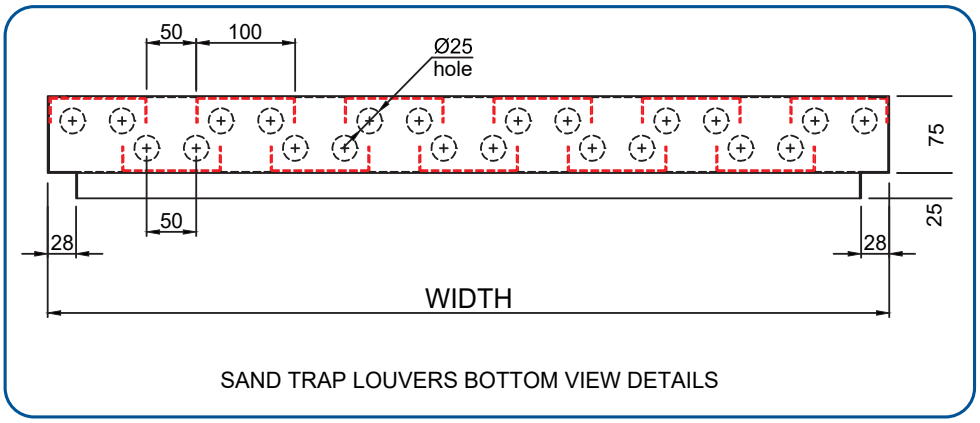
>> The sand trap louver is a self emptying system, it has a set of holes at the bottom and a chute to discharge separated sand particles.

>> Tested by AMCA in accordance with ANSI/ AMCA 500-L

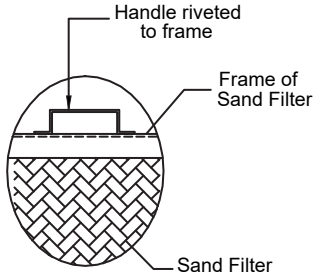
SAND TRAP LOUVERS WITH SAND CHUTE







SAND TRAP LOUVERS BOTTOM VIEW DETAILS



View detail from arrow A

Ordering Key:

S	T	L	C A	SSWM	SF	SIZE
STLCA: SAND TRAP LOUVER WITH CHUTE IN ALUMINIUM STLCG: SAND TRAP LOUVER WITH CHUTE IN GI						
–: WITHOUT SCREEN/WIRE MESH IS: G.I. INSECT SCREEN SSWM: STAINLESS STEEL WIRE MESH						
–: WITHOUT FILTER SF: WITH SLIDING 1 INCH THICK ALUMINUM FILTER SF2: WITH SLIDING 2 INCH THICK ALUMINUM FILTER						
SIZE: WIDTH X HEIGHT **NOTE: 78 INCH X 78 INCH (OUT TO OUT) IS MAXIMUM SINGLE SECTION SIZE						

SAND TRAP LOUVERS - STLC

Beta Industrial LLC certifies that the STLC shown hereon 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, Wind Driven Sand and Water Penetration.

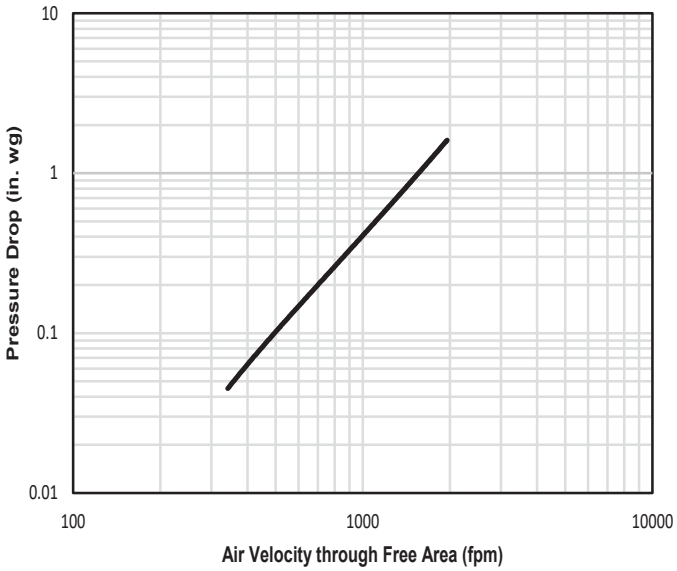
The beginning point of water penetration is 232.6 fpm

Test Information

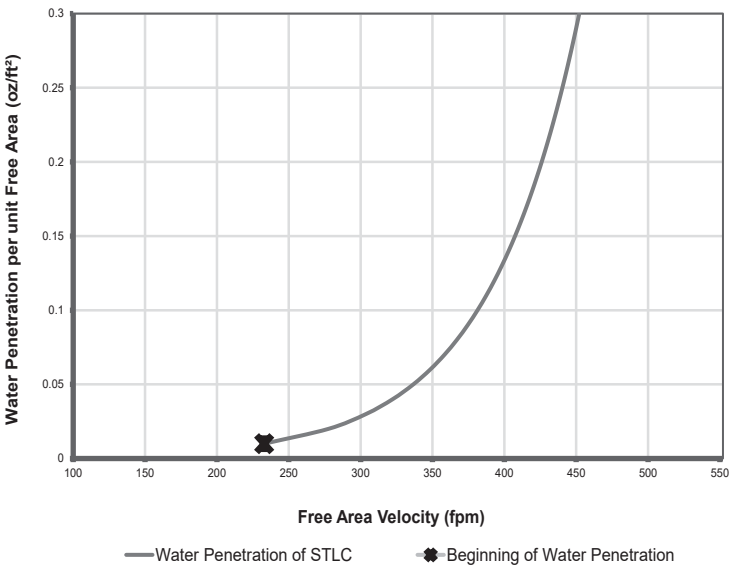
Tested in accordance with ANSI/AMCA 500-L, Figure 5.5Test sample size is 1219mm x 1219mm (48 in. x 48 in.)Air Performance data are based on exhaust performance

The sand grading used for the test is between 76µm - 699µm as per AMCA 500-L.

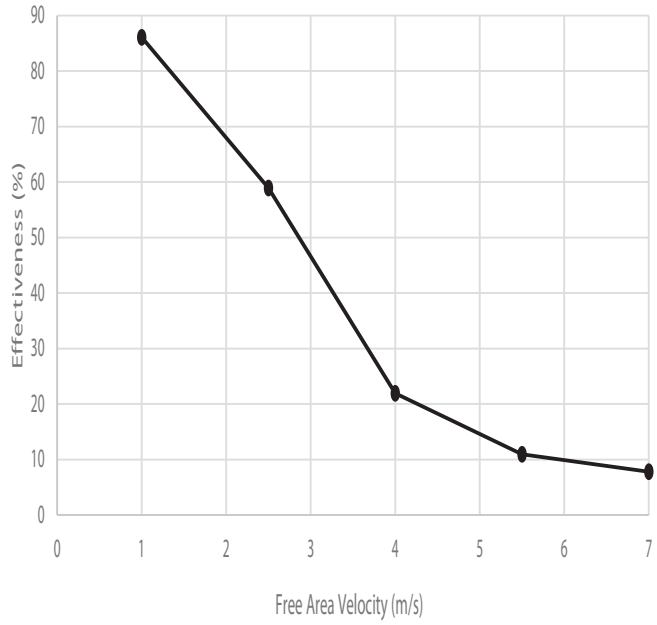
PRESSURE DROP DATA



WATER PENETRATION DATA



SAND REJECTION EFFECTIVENESS DATA



FREE AREA CHART (SQUARE FEET)

Width (inches)

Height (inches)	Out to Out	12	18	24	30	36	42	48	54	60	66	72	78
Out to Out	Neck Size	9.8	15.8	21.8	27.8	33.8	39.8	45.8	51.8	57.8	63.8	69.8	75.8
12	9.8	0.17	0.30	0.44	0.57	0.70	0.84	0.97	1.10	1.24	1.37	1.50	1.64
18	15.8	0.30	0.54	0.79	1.03	1.28	1.53	1.77	2.02	2.26	2.51	2.75	3.00
24	21.8	0.44	0.80	1.15	1.51	1.86	2.22	2.57	2.93	3.30	3.64	4.01	4.36
30	27.8	0.58	1.05	1.51	1.98	2.44	2.91	3.39	3.85	4.32	4.78	5.25	5.71
36	33.8	0.71	1.29	1.87	2.46	3.02	3.61	4.19	4.77	5.34	5.92	6.50	7.08
42	39.8	0.85	1.54	2.24	2.92	3.61	4.30	4.99	5.67	6.37	7.06	7.74	8.44
48	45.8	1.00	1.80	2.58	3.39	4.19	4.99	5.79	6.59	7.39	8.19	9.00	9.80
54	51.8	1.12	2.04	2.95	3.86	4.78	5.69	6.59	7.51	8.43	9.33	10.25	11.15
60	57.8	1.27	2.29	3.31	4.33	5.35	6.38	7.41	8.43	9.45	10.47	11.49	12.51
66	63.8	1.40	2.53	3.67	4.81	5.93	7.07	8.21	9.34	10.47	11.61	12.74	13.88
72	69.8	1.54	2.78	4.03	5.27	6.51	7.77	9.01	10.25	11.50	12.74	13.98	15.24
78	75.8	1.68	3.04	4.39	5.75	7.10	8.45	9.81	11.17	12.52	13.88	15.24	16.59

Free Area velocity, m/s	Sand Rejection Louver Effectiveness (%)	Penetration Class
1.000	85.31	B
2.500	56.90	D
4.000	21.85	D
5.500	10.56	D
7.000	9.54	D

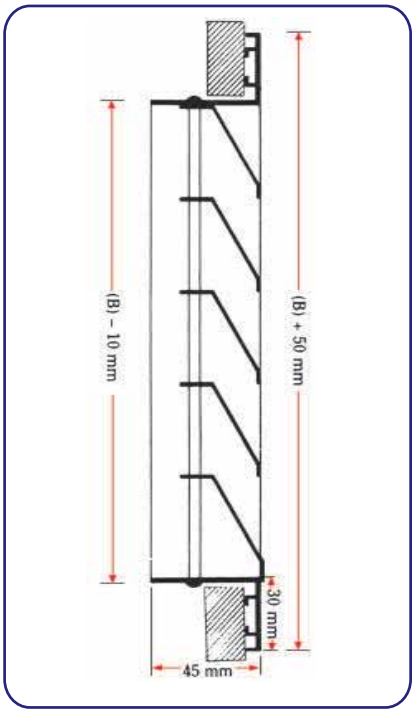
2 INCH EXHAUST AIR LOUVERS - EAL-2

>> The well mounted exhaust air louver EAL-2 is a weather proof external cover for air inlet and discharge openings.

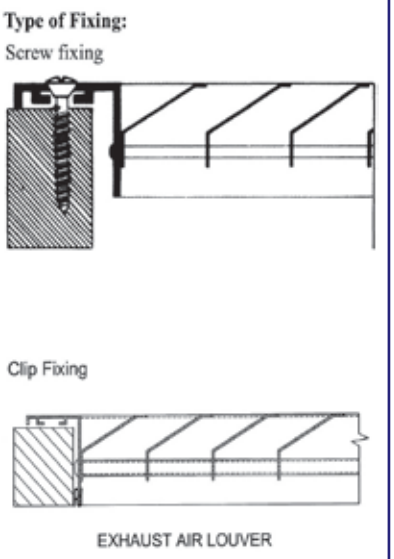
>> The exhaust air louver EAL-2 is composed of a set of blades made of aluminum extruted profiles/ GI sheet arranged in horizontal rows and inclined downward to protect against rain water.

>> The exhaust air louver EAL-2 is used in cooling, heating and air ventilation applications.

>> Frame depth 45mm, spacing 35mm & blade angle 60°



TYPE OF FIXING



FREE AREA CHART (SQUARE FEET)

Width (inches)

Height (inches)	Out to Out	12	18	24	30	36	42	48	54	60	66	72	78
Out to Out	Neck Size	9.64	15.64	21.64	27.64	33.64	39.64	45.64	51.64	57.64	63.64	69.64	75.64
12	9.64	0.19	0.31	0.44	0.57	0.69	0.82	0.95	1.07	1.20	1.33	1.45	1.58
18	15.64	0.32	0.54	0.76	0.98	1.20	1.42	1.64	1.86	2.08	2.30	2.52	2.74
24	21.64	0.46	0.77	1.09	1.40	1.71	2.02	2.33	2.65	2.96	3.27	3.58	3.90
30	27.64	0.60	1.00	1.40	1.80	2.21	2.61	3.01	3.41	3.82	4.22	4.62	5.02
36	33.64	0.73	1.23	1.72	2.22	2.71	3.21	3.70	4.20	4.69	5.19	5.69	6.18
42	39.64	0.87	1.46	2.05	2.63	3.22	3.81	4.40	4.99	5.57	6.16	6.75	7.34
48	45.64	1.00	1.67	2.35	3.03	3.70	4.38	5.05	5.73	6.40	7.08	7.76	8.43
54	51.64	1.14	1.91	2.68	3.45	4.23	5.00	5.77	6.54	7.31	8.08	8.85	9.62
60	57.64	1.28	2.15	3.01	3.88	4.74	5.61	6.47	7.34	8.21	9.07	9.94	10.80
66	63.64	1.41	2.37	3.32	4.27	5.23	6.18	7.14	8.09	9.05	10.00	10.96	11.91
72	69.64	1.55	2.60	3.64	4.69	5.74	6.78	7.83	8.88	9.93	10.97	12.02	13.07
78	75.64	1.69	2.83	3.97	5.11	6.25	7.39	8.53	9.67	10.81	11.95	13.09	14.23

Ordering Key:

E	A	L	2A	IS	SIZE
EAL2A: EXHAUST AIR LOUVER WITH 2 INCH DEPTH IN ALUMINIUM EAL2G: EXHAUST AIR LOUVER WITH 2 INCH DEPTH IN GI					
–: WITHOUT SCREEN/WIRE MESH IS: WITH G.I. INSECT SCREEN SSWM: WITH STAINLESS STEEL WIRE MESH					
SIZE: WIDTH X HEIGHT **NOTE: 78 INCH X 78 INCH (OUT TO OUT) IS MAXIMUM SINGLE SECTION SIZE					

2 INCH EXHAUST AIR LOUVERS - EAL-2

Beta Industrial LLC certifies that the EAL2 shown hereon 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.

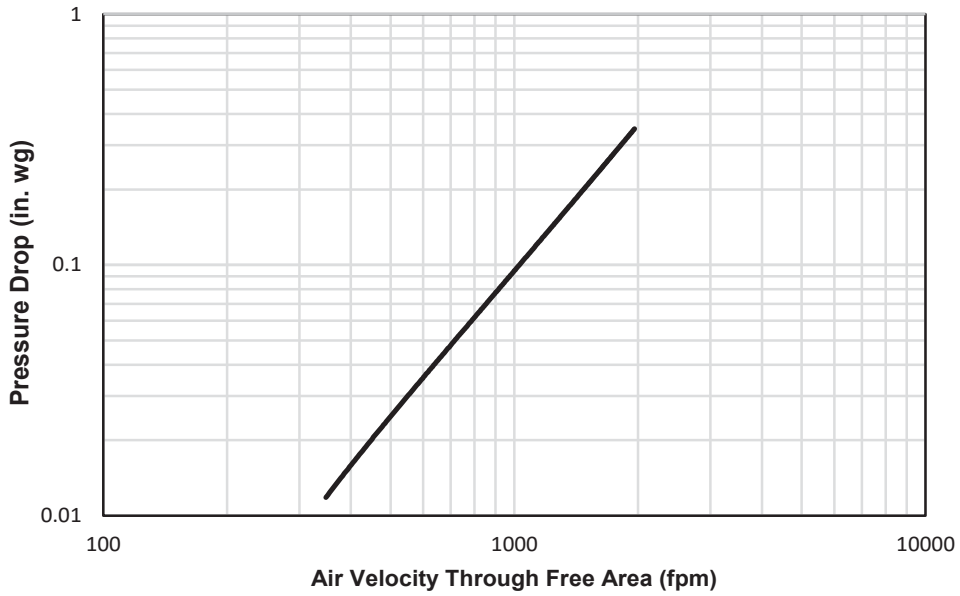
The AMCA Certified Ratings Seal applies to Air Performance and Water Penetration ratings.

The beginning point of water penetration is 264.4 fpm

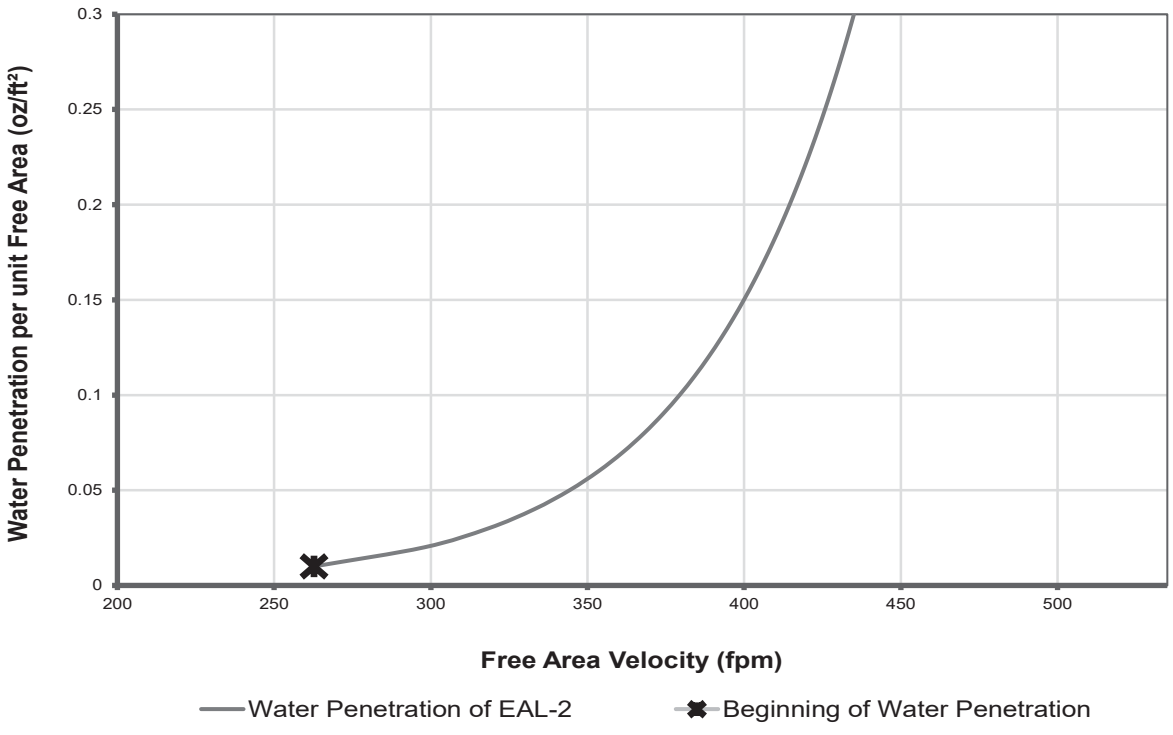
Test Information

Tested in accordance with ANSI/AMCA 500-L, Figure 5.5Test sample size is 1219mm x 1219mm (48 in. x 48 in.) (Out to Out). Air Performance data are based on exhaust performance

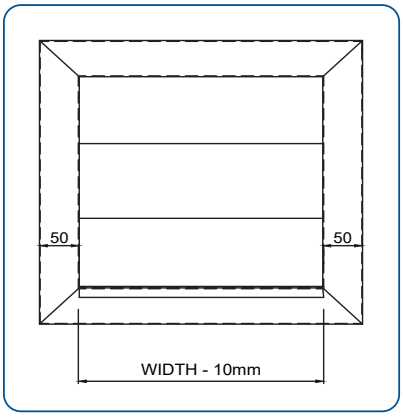
PRESSURE DROP DATA

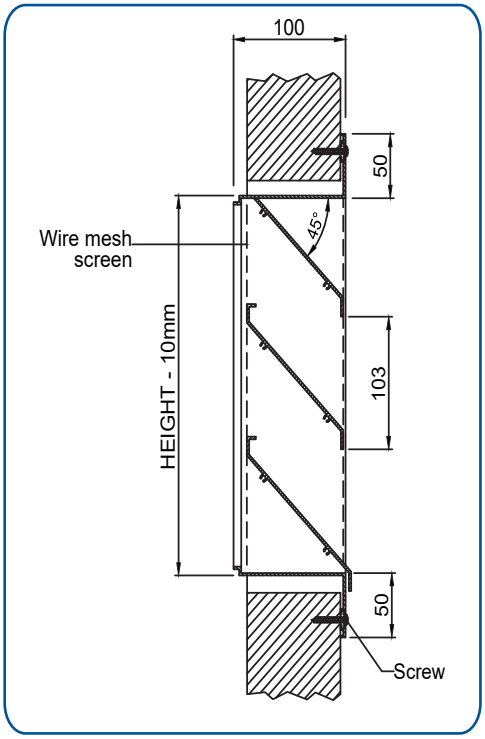


WATER PENETRATION DATA



4 INCH EXHAUST AIR LOUVERS - EAL-4





>> The exhaust air louver iscomposed of a set of blades made of 2MM aluminum extruted profile/ GI sheet arranged in 45 degree in horizontal rows and inclined downward to protect against rain water.

>> The exhaust air louver is used in cooling, heating and air ventilation applications for intake & discharge.

>> Frame depth 100MM, spacing 87MM & blade angle 45.

>> The wall mounted exhaust air louver EAL-4 is a weather proof external cover for air inlet and discharge openings.

FREE AREA CHART (SQUARE FEET)

Width (inches)

Height (inches)	Out to Out	12	18	24	30	36	42	48	54	60	66	72	78
Out to Out	Neck Size	8.06	14.06	20.06	26.06	32.06	38.06	44.06	50.06	56.06	62.06	68.06	74.06
12	8.06	0.11	0.20	0.29	0.38	0.48	0.57	0.66	0.75	0.84	0.93	1.02	1.12
18	14.06	0.22	0.41	0.59	0.77	0.96	1.14	1.32	1.50	1.68	1.86	2.05	2.23
24	20.06	0.45	0.82	1.18	1.54	1.91	2.27	2.63	3.00	3.36	3.73	4.10	4.46
30	26.06	0.56	1.02	1.47	1.93	2.39	2.84	3.30	3.75	4.21	4.66	5.12	5.57
36	32.06	0.78	1.42	2.06	2.69	3.33	3.97	4.60	5.24	5.88	6.51	7.15	7.78
42	38.06	0.90	1.63	2.36	3.09	3.82	4.54	5.27	6.00	6.73	7.46	8.19	8.91
48	44.06	1.12	2.02	2.93	3.83	4.74	5.64	6.55	7.45	8.36	9.26	10.16	11.07
54	50.06	1.24	2.24	3.24	4.24	5.24	6.25	7.25	8.25	9.25	10.25	11.25	12.26
60	56.06	1.45	2.63	3.80	4.97	6.14	7.32	8.49	9.67	10.84	12.01	13.19	14.36
66	62.06	1.58	2.85	4.13	5.40	6.68	7.96	9.23	10.50	11.78	13.05	14.33	15.60
72	68.06	1.79	3.23	4.67	6.11	7.55	9.00	10.44	11.88	13.32	14.76	16.21	17.65
78	74.06	1.91	3.46	5.01	6.56	8.11	9.66	11.20	12.75	14.30	15.85	17.40	18.94

Ordering Key:

E	A	L	4 A/G	IS	SIZE
EAL4A: EXHAUST AIR LOUVER WITH 4 INCH DEPTH IN ALUMINIUMEAL4G: EXHAUST AIR LOUVER WITH 4 INCH DEPTH IN GI					
–: WITHOUT SCREEN/WIRE MESH IS: WITH G.I. INSECT SCREEN SSWM: WITH STAINLESS STEEL WIRE MESH					
SIZE: WIDTH X HEIGHT (NECK SIZE) **NOTE: 78 INCH X 78 INCH (OUT TO OUT) IS MAXIMUM SINGLE SECTION SIZE					

4 INCH EXHAUST AIR LOUVERS - EAL-4

Beta Industrial LLC certifies that the EAL4 shown hereon 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.

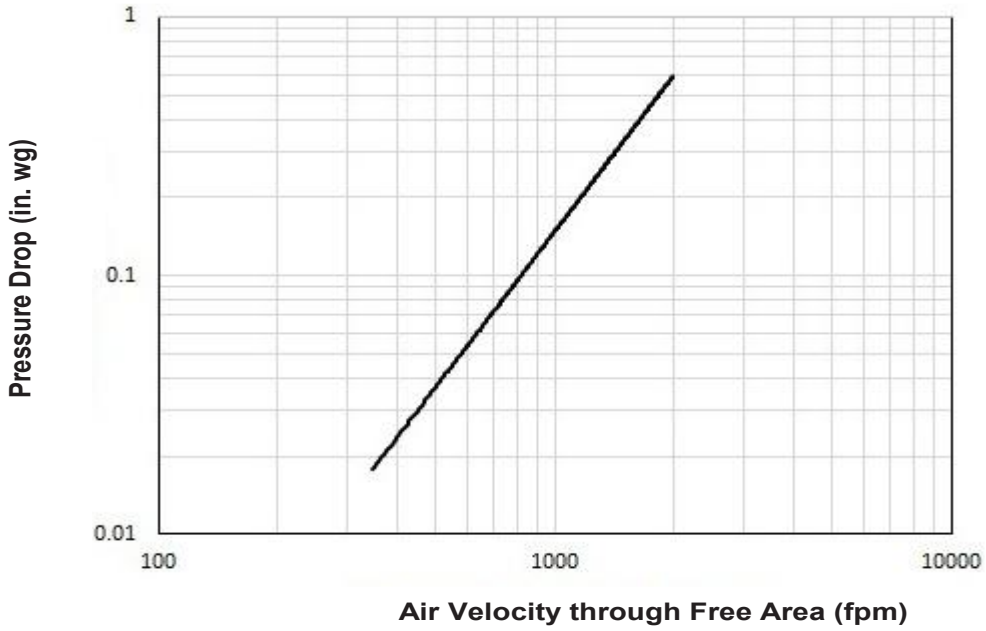
The AMCA Certified Ratings Seal applies to Air Performance and Water Penetration ratings.

The beginning point of water penetration is 752.1 fpm

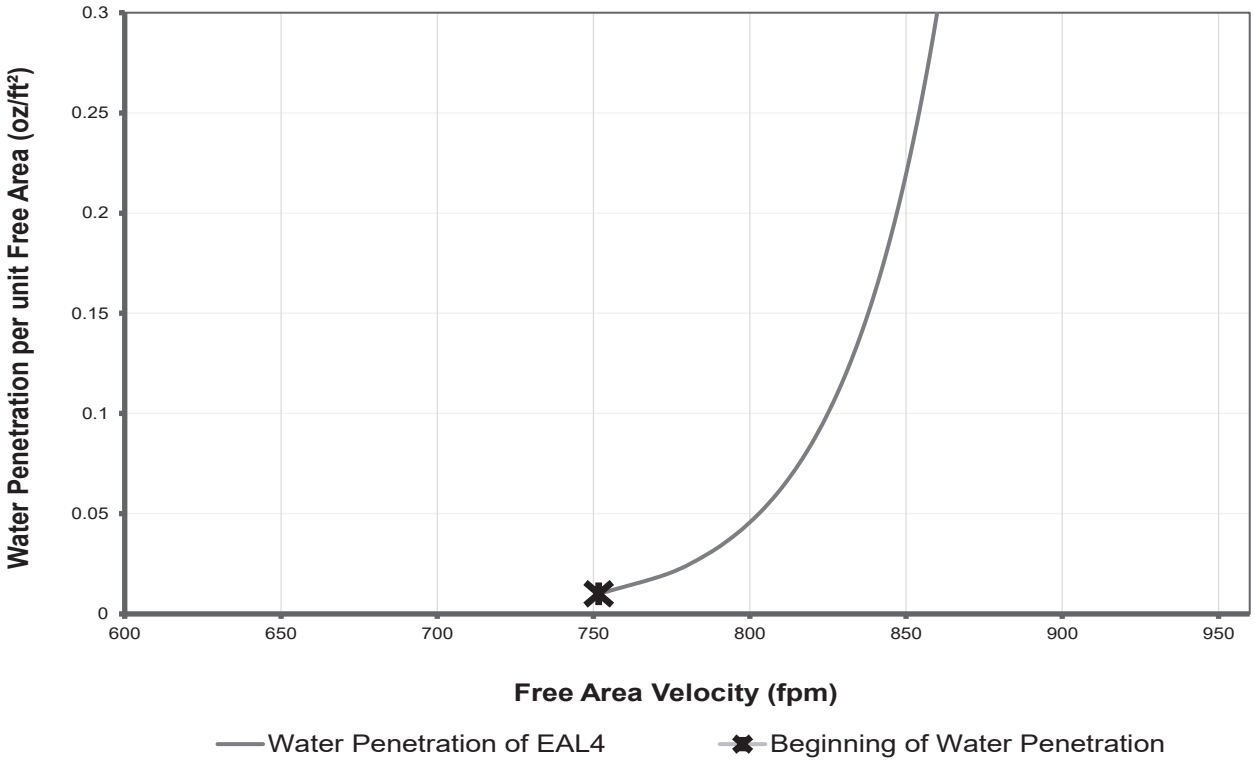
Test Information

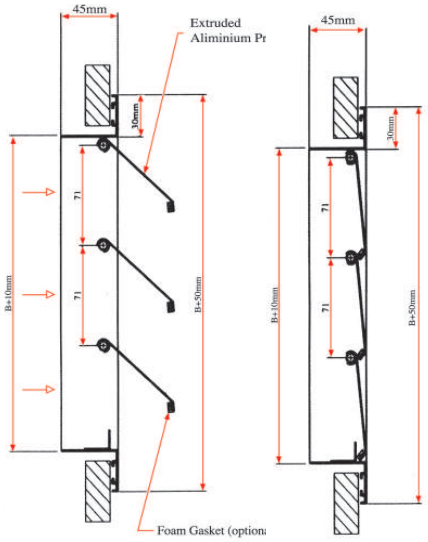
Tested in accordance with ANSI/AMCA 500-L, Figure 5.5Test sample size is 1219mm x 1219mm (48 in. x 48 in.) (Out to Out). Air Performance data are based on exhaust performance

PRESSURE DROP DATA



WATER PENETRATION DATA

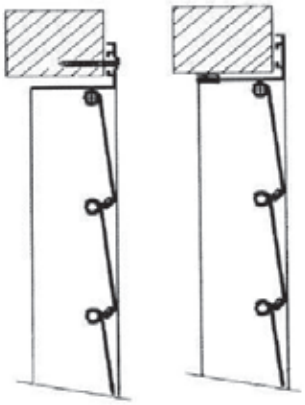




TYPE OF FIXING

SCREW FIXING

CLIP FIXING



>> The gravity air louver is a wall mounted device. It is composed of a set of horizontally mounted blades; they are normally closed and are free to rotate about the horizontal axis.

>> The blades & frame are manufactured from aluminum extruded profiles.

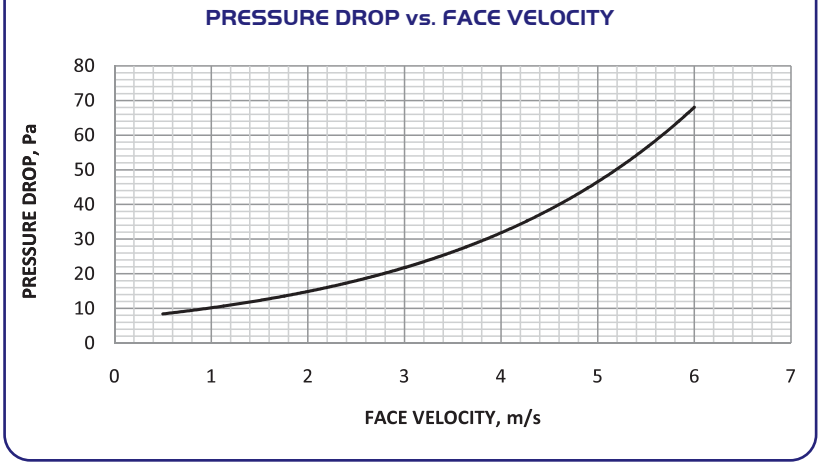
>> Horizontally mounted blades are available with bushes.

>> Free area ratio (approx.) = 0.82 for 100% open blades.

>> To calculate the air flow rate :

$$CFM = \frac{0.82 \times A\,(in") \times B(in") \times \text{Face velocity (fpm)}}{144}$$

$$L/S = \frac{0.82 \times A\,(mm) \times B\,(mm) \times \text{Face velocity (m/s)}}{1000}$$



Ordering Key:

G	A	L	B	CR	SSWM	SIZE
GALB: GRAVITY AIR LOUVER WITH BRASS BUSHES GAL: GRAVITY AIR LOUVER WITHOUT BUSHES						
–: WITHOUT CONNECTING ROD ON BLADES CR: WITH CONNECTING ROD ON BLADES						
–: WITHOUT SCREEN/WIRE MESH IS: WITH G.I. INSECT SCREEN SSWM: WITH STAINLESS STEEL WIRE MESH						
SIZE: WIDTH X HEIGHT **NOTE: 2000 MM X 2000 MM IS MAXIMUM SINGLE SECTION SIZE						

FRESH AIR LOUVERS FAL / FALD

>> The wall mounted fresh air louver is a simple form of filter louver. It is composed of an exhaust louver with an aluminum filter fixed at the back.

>> The fresh air louver is used to supply fresh clean air to the air handling units.

>> The filter is made from washable aluminum l"media and is fixed on the back of the grille.

>> Insulating gasket can be fixed around the back of the frame to prevent infiltration between the frame and the wall.

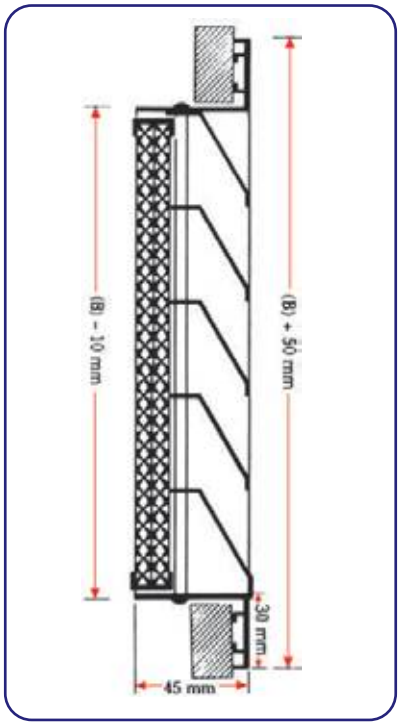
Available types of finishing:

>> Natural anodized aluminum finish.
>> Powder coated to RAL codes.

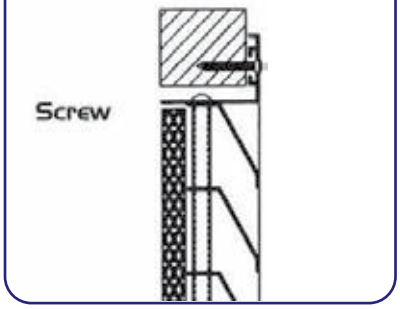
>> Free area ratio (approx.) = 0.37
>> To calculate the air flow rate :

$$CFM = \frac{0.37 \times A\ (in'') \times B(in'') \times \text{Face velocity (fpm)}}{144}$$

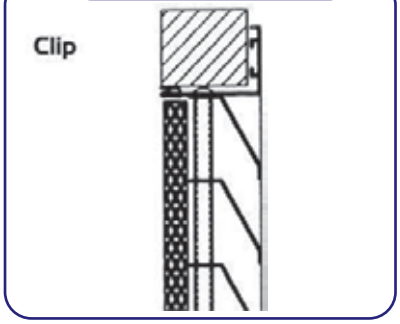
$$L/S = \frac{0.37 \times A\ (mm) \times B\ (mm) \times \text{Face velocity (m/s)}}{1000}$$



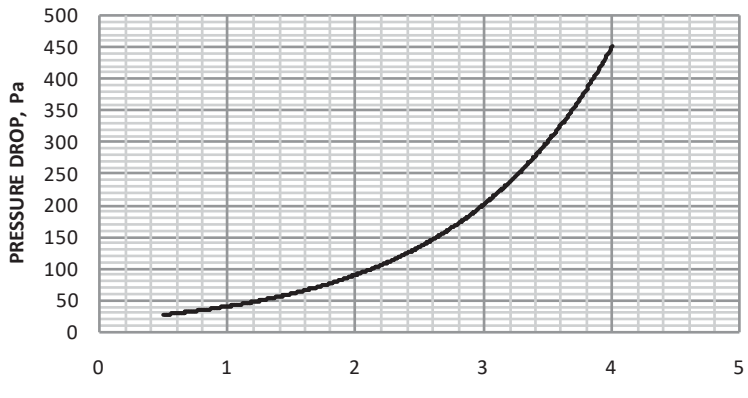
TYPE OF FIXING



TYPE OF FIXING



PRESSURE DROP vs. FACE VELOCITY



Ordering Key:

F	A	L	DB	SIZE
FRESH AIR LOUVER (WITH I" AL FILTER)				
–: WITHOUT DAMPER DB: WITH BLACK DAMPER DM: WITH MILL FINISH DAMPER				
SIZE: WIDTH X HEIGHT **NOTE: 2000 MM X 2000 MM IS MAXIMUM SINGLE SECTION SIZE				

FRESH AIR LOUVERS - HINGED FALH/FALHD

>> The wall-mounted fresh air louver is composed of an exhaust air louver which is fixed to a frame that contains a filter by means of steel hinges.

>> The filter is made of washable aluminum media. It is contained in rear frame and is easily removable.

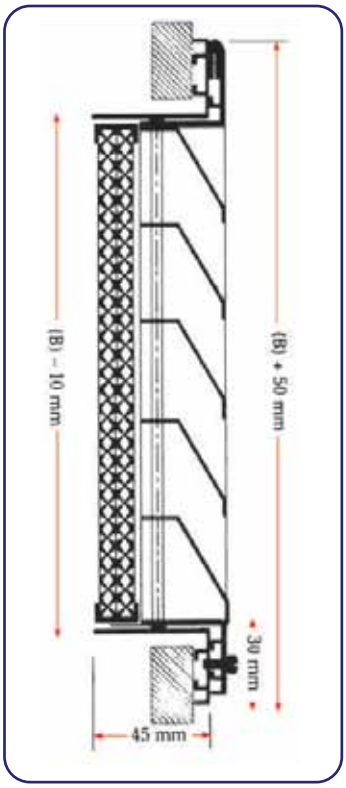
>> The fresh air louver can be opened like door to give flexibility to access the filter for either cleaning or changing.

>> The fresh air louver is used in cooling, heating and ventilation application. The existence of filter provides clean air to the system.

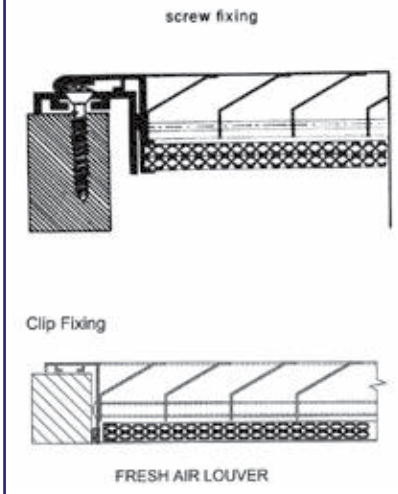
>> Free area ratio (approx.) = 0.37
>> To calculate the air flow rate :

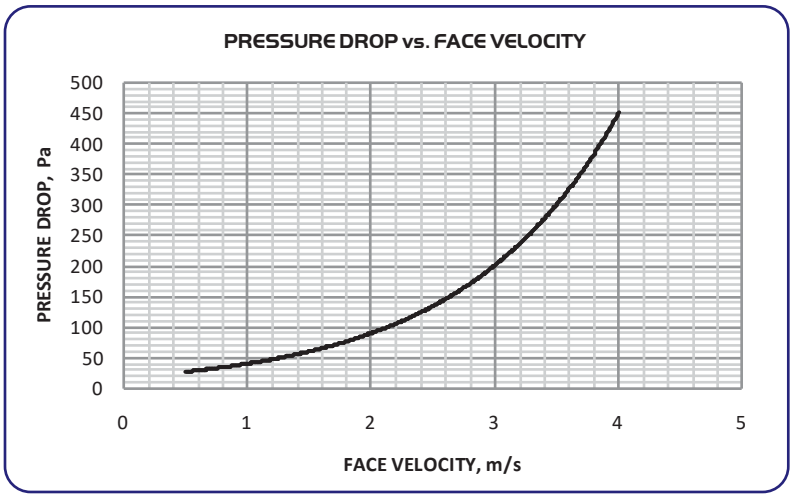
$$CFM = \frac{0.37 \times A\,(in") \times B(in") \times \text{Face velocity (fpm)}}{144}$$

$$L/S = \frac{0.37 \times A\,(mm) \times B\,(mm) \times \text{Face velocity (m/s)}}{1000}$$



TYPE OF FIXING





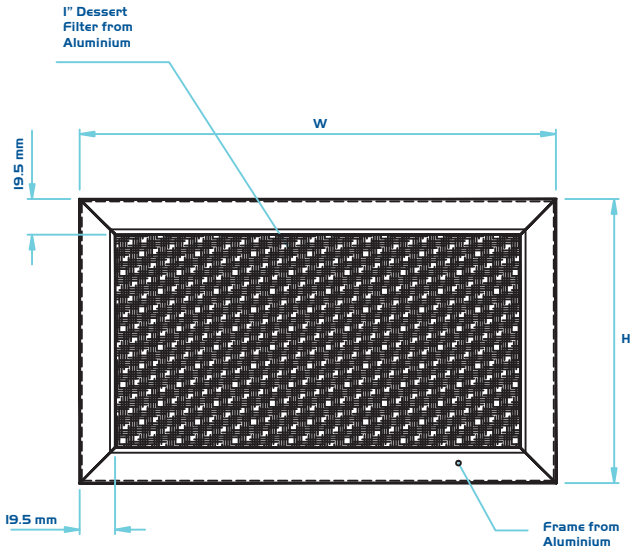
Ordering Key:

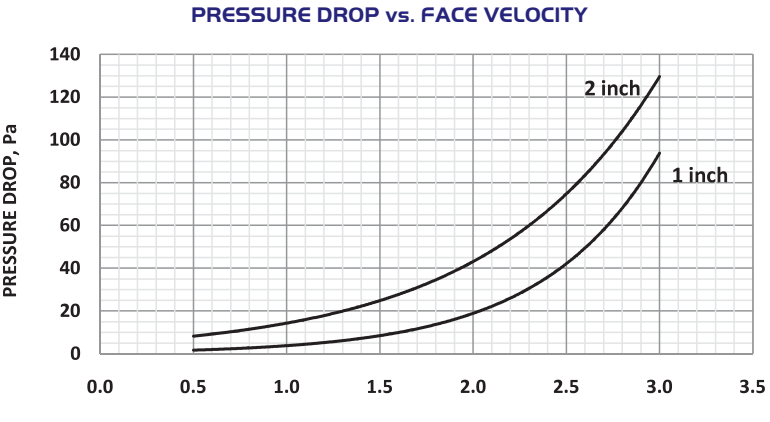
F	A	L	H	DB	SIZE
HINGED FRESH AIR LOUVER (WITH I" AL FILTER)					
–: WITHOUT DAMPER DB: WITH BLACK DAMPER DM: WITH MILL FINISH DAMPER					
SIZE: WIDTH X HEIGHT **NOTE: 2000 MM X 2000 MM IS MAXIMUM SINGLE SECTION SIZE					

ALUMINUM FILTER - AF

>> AF Aluminum Filters are used widely in HVAC & other applications to filter air from dust and dirt.
>> AF is made of Aluminum filter media and a frame made of Aluminum extruded profiles.
>> AF is easily washable for frequent long-life use.
>> AF has a reasonable initial pressure drop

ALUMINIUM FILTER





Ordering Key:

A	F	2	SIZE
ALUMINUM FILTER			
–: 1" THICK AL FILTER 2: 2" THICK AL FILTER			
SIZE: WIDTH X HEIGHT			

NOTES :

NOTES :

BETA
industrial

Dubai Head Office:
Tel: +971 4 706 9777
Fax: +971 4 706 9787

Abu Dhabi Branch:
Tel: +971 2 645 0107
Fax: +971 2 645 0167

Saudi Arabia:
Tel: +966 1 265 4551
Fax: +966 1 265 4550

Email: betai@betag.com
P.O.Box 50708, Dubai
United Arab Emirates

www.betag.com