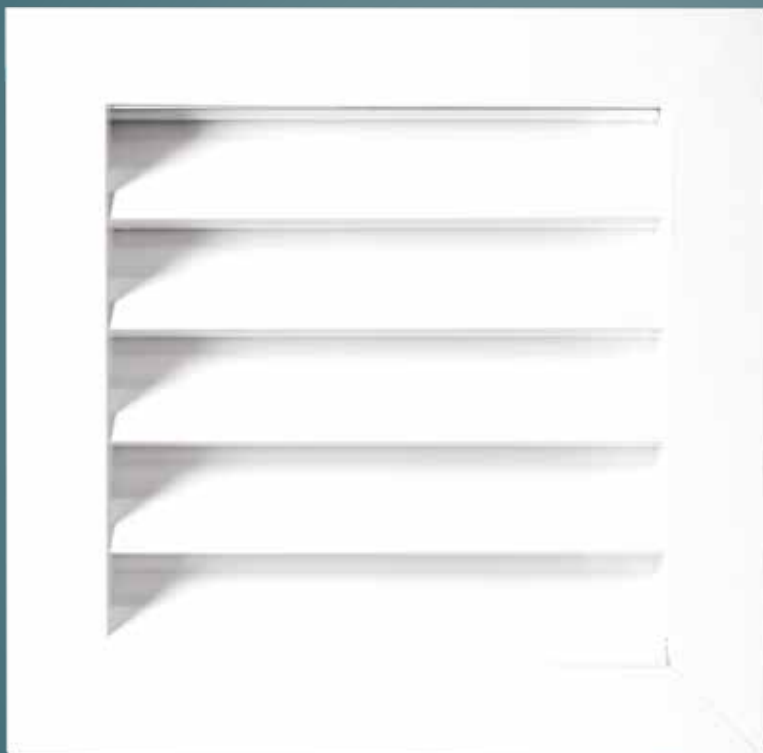




TECNALCO

CHAPTER 10



AIR LOUVRES

CHAPTER-10

AIR LOUVRES

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AIR LOUVRES (OR) EXTERNAL LOUVRES

TECNALCO horizontal outside louvres are designed for both intake and exhaust air applications. Two different TECNALCO types of louvres of light and heavy duty construction with their strong, clean and careful workmanship enhance the applications in industrial and commercial works. Effective weather protection, moderate pressure drop and long life will result from TECNALCO louvres.

Features:

- Available in two different applications for light and heavy duty applications.
- The strong and rigid construction of louvres is useful in industrial and commercial purposes.
- Effective weather protection and moderate pressure drop are maintained even in variable weather conditions.
- The blades and frames are from extruded aluminium and also available in natural anodised finish.
- Bird screen or fly screen along with the louver is an option.
- Available in powder coated colour finish on request.

Standard types and models:

Types	Models	Remarks
ALT (or) AHT	'S'	with bird screen
	'F'	with filter
	'FD'	with filter & damper
	'DB'	with double bank

Construction details:

Models	ALT Light duty mm	AHT Heavy duty mm
Fw = Frame width =	30	50
Fd = Frame depth =	47	75
Bw = Blade width =	40	65
Bt = Blade tip width =	8	13
Bd = Blade depth =	37	32
Bt = Blade thickness =	1.1	1.2/2/2.3
Bp = Blade pitch =	38	65
Ft = Filter thickness =	12.5/25	25 / 50
Frame thickness =	1.2	2 / 3

NOTE:

- ALT → Light duty models
- AHT → Heavy duty models
- Optional depth available

AMCA500-L Tested Weather Louvers

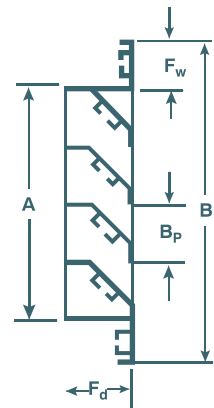
AHT- S

TECNALCO model AHT-'S' is an intake or exhaust air louver provided with a bird screen.

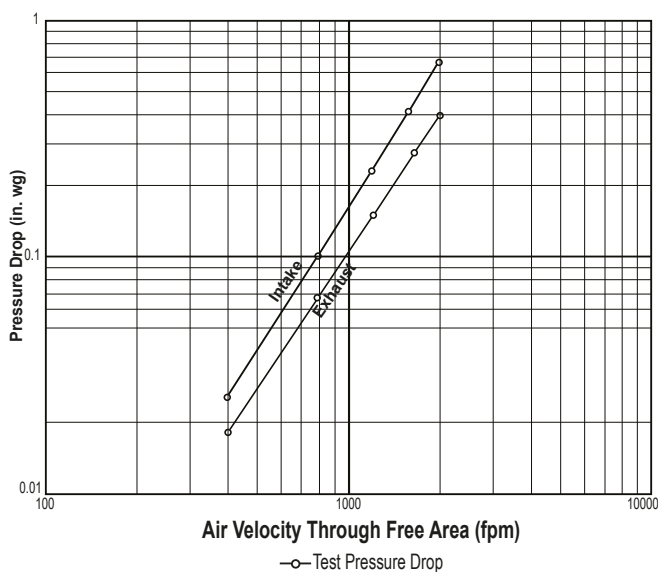
- Frame : 2mm / 3mm thickness extruded profiled Aluminium channels.
- Blade : 1.2mm / 2mm / 2.3mm thickness extruded Aluminium Blades.
- Screen : Bird Wire Mesh (Standard); Insect Screen (Optional)
- Filter : 25mm and 50mm thickness Aluminium washable.
- Coating : Heavy duty Louver with Powder Coating Finish is optional
- Construcion : Aluminium Construction (Standard)



Tecnalco Industries : certified that model AHT-S Weather Louver is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with the requirements of the AMCA Certified ratings program. The AMCA seal applies to air performance and water penetration for Weather Louvers only.

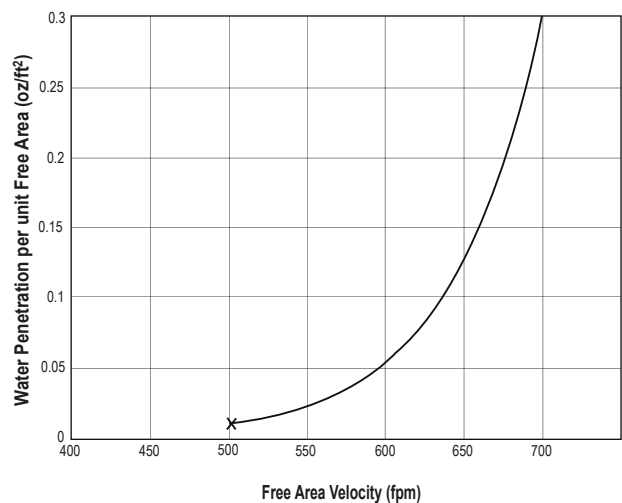


Pressure Drop V/S Free Area Velocity Graph
Size : 48" x 48"



Water Penetration Data v/s free Area Velocity Graph

Test size : 48" x 48"
Test Period : 15mnts



-Water Penetration per Free Area x Beginning of Water Penetration
The beginning point of water Penetration @ 501.6 fpm

AMCA500-L Tested Weather Louvers

Water Penetration
Test Results

Velocity		Net Weight	
(fpm)	(M/S)	Oz/Ft ²	gm ²
452.1	2.29	0.005	0.0131
506.0	2.57	0.009	0.0237
566.2	2.87	0.044	0.1158
610.1	3.09	0.047	0.1237

Air Performance Data
Test Results

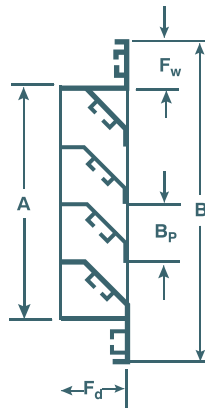
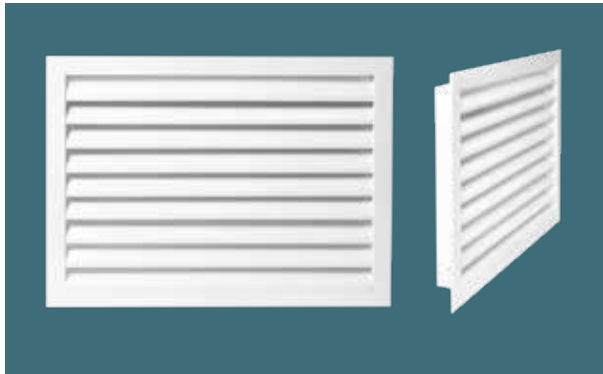
Velocity		Pressur Drop	
(fpm)	(M/S)	(inch W.G)	Pa
397	2.01	0.026	6.46
790	4.01	0.101	25.13
1190	6.04	0.231	57.48
1578	8.016	0.413	102.77
1978	10.04	0.666	165.72

ENGINEERING AND PERFORMANCE DATA

Dimension : L & W are in mm.
Area is in Sqm.

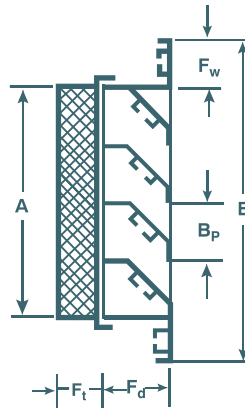
L x W →	300	450	600	750	900	1050	1200	1500	1800	2100	2400
300	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.20	0.24	0.28	0.32
450	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.30	0.36	0.42	0.48
600	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.40	0.48	0.56	0.64
750	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.50	0.60	0.70	0.80
900	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.60	0.72	0.84	0.96
1050	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.70	0.84	0.98	1.12
1200	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.80	0.96	1.12	1.28
1500	0.20	0.30	0.40	0.50	0.60	0.70	0.80	1.00	1.20	1.40	1.60
1800	0.24	0.36	0.48	0.60	0.72	0.84	0.96	1.20	1.44	1.68	1.93
2100	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.40	1.68	1.97	2.25
2400	0.32	0.48	0.64	0.80	0.96	1.12	1.28	1.60	1.93	2.25	2.57

AIR LOUVRES (OR) EXTERNAL LOUVRES



ALT- S (or) AHT- S

TECNALCO model ALT- 'S' or AHT-'S' is an intake or exhaust air louvre provided with a bird screen.



ALT-F (or) AHT -F

TECNALCO model ALT -'F' or AHT- 'F' is an intake or exhaust air louvre provided with a removable type filter. The filter thickness is 12.5 mm/ 25 mm for ALT-'F' and 25 mm / 50 mm for AHT-'F'

Standard sizes:

Any combination of L x W

L mm	W mm
200	150
300	200
400	300
500	400
600	500
700	600
800	700
900	800
1000	900
1100	1000
1200	

N = Nominal size = L x W

A = Neck size of the louvre = (L - 10) x (W - 10) = x x y

B = Overall size of the louvre = (x + 60) x (y + 60) → Light duty models

B = Overall size of the louvre = (x + 100)x (y +100)→ Heavy duty models

NOTE:

- In increments of 50 mm are also available as standard sizes of TECNALCO.
- The louvres other than mentioned sizes are available on request.

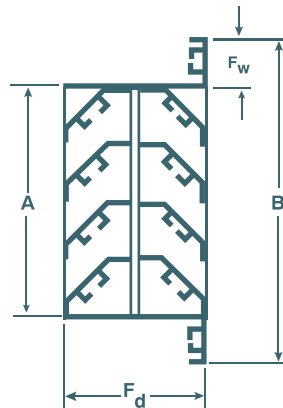
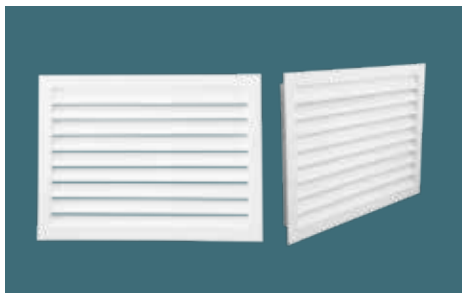
AIR LOUVRES (OR) EXTERNAL LOUVRES



ALT- FD (or) AHT- FD

TECNALCO model ALT - 'FD' or AHT -'FD' is an intake or exhaust air louvre provided with a removable type filter and opposed blade volume control damper. The damper can be operated with a screw driver after opening the louvre frame and removing the filter from the face of the louvre.

Fd = Frame depth = 85 mm



ALT - DB (or) AHT - DB

TECNALCO model ALT- 'DB' or AHT- 'DB' is an intake or exhaust air louvre with double bank type. In this model the louvre blades are placed on either side of the frame. Excellent for variable weather conditions.

Fd = Frame depth = 85 mm

Brief description of models:

Light duty constructions:

- ALT-'S' → Air louvre with fly screen optional.
- ALT-'F' → Air louvre with filter. Filter in - 12.5/25mm thickness.
- ALT-'FD' → Double frame air louvre with filter and damper. Filter can be easily removable type from face side of the louvre.
- ALT-'DB' → Double bank air louvre.
- W or L > 1200 → The louvre will be made in two pieces with centre partition.

Heavy duty constructions:

- AHT- 'S' → Air louvre with fly screen optional
- AHT- 'F' → Air louvre with filter. Filter in - 25 / 50 mm thickness.
- AHT- 'FD' → Double frame air louvre with filter and damper. Filter can be easily removable type from face side of the louvre.
- AHT- 'DB' → Double bank air louvre.
- W or L > 1800 → The louvre will be made in two pieces with centre partition.

For fixing details please refer page No. 7

ENGINEERING AND PERFORMANCE DATA

The tabulated performance data includes Air volume q_v , Effective pressure area A_k , Total pressure drop, Discharge velocity and Sound power level.

Air volume q_v : Air volumes are given in mt^3/sec .

Discharge velocity V_k : The effective discharge velocities given are related to the corresponding air volumes q_v and effective free area A_k .

Total pressure drop : The pressure drops given in the graph are related to the corresponding face velocities V mt/sec .

Outlet size :
Effective Pressure Area A_k : Outlet sizes are given in a separate table, within a tolerance of $\pm 10\%$, are related to the corresponding effective pressure areas A_k in mt^2 .

N.C. values: Noise data given in the graph is in terms of NC levels. These have been derived from sound power level data (dB re 10^{-12} watts)

Face Velocity :

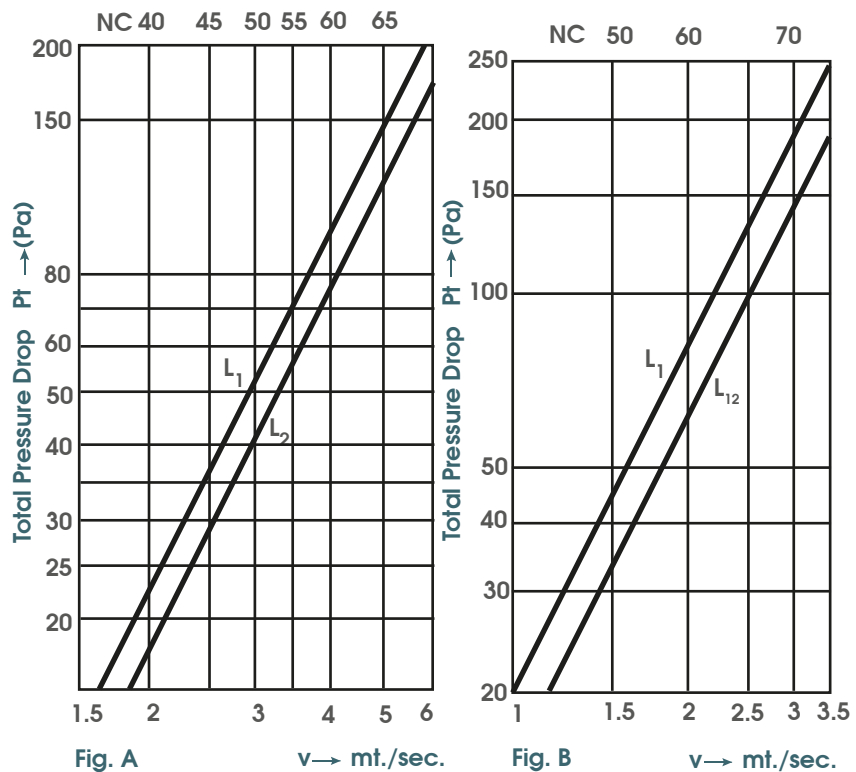
Fig. A - For models ALT-S/'F/ FD &

AHT - S/'F/FD

Fig. B - For models ALT-DB &

AHT - DB

L1 = For Intake Air stream
L2 = For Exhaust Air stream



Pressure drop vs. Face velocity

ENGINEERING AND PERFORMANCE DATA

Selection tables for TECNALCO models ALT- S/F/FD
Effective pressure area A_k in met^2

L x W →	300	350	400	450	500	550	600	650	700	750	800	850	900	1000
300	0.028	0.032	0.037	0.042	0.047	0.05	0.056	0.06	0.066	0.07	0.076	0.08	0.086	0.095
350	0.033	0.039	0.045	0.05	0.056	0.063	0.068	0.074	0.08	0.086	0.092	0.098	0.10	0.12
400	0.038	0.045	0.052	0.06	0.066	0.073	0.08	0.087	0.094	0.10	0.11	0.115	0.12	0.135
450	0.044	0.052	0.06	0.068	0.076	0.084	0.092	0.10	0.11	0.12	0.125	0.13	0.14	0.156
500	0.05	0.06	0.068	0.077	0.086	0.095	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17
550	0.056	0.066	0.076	0.086	0.096	0.10	0.116	0.126	0.136	0.146	0.157	0.166	0.17	0.19
600	0.06	0.072	0.08	0.09	0.10	0.117	0.128	0.139	0.15	0.16	0.17	0.18	0.19	0.21
650	0.067	0.079	0.09	0.10	0.116	0.12	0.14	0.15	0.164	0.176	0.188	0.2	0.21	0.235
700	0.073	0.086	0.099	0.11	0.125	0.14	0.152	0.165	0.178	0.19	0.20	0.21	0.23	0.25
750	0.078	0.092	0.107	0.12	0.135	0.15	0.16	0.17	0.19	0.20	0.22	0.23	0.25	0.27
800	0.084	0.1	0.115	0.13	0.145	0.16	0.175	0.19	0.20	0.22	0.23	0.25	0.26	0.30
850	0.09	0.106	0.122	0.14	0.155	0.17	0.187	0.2	0.22	0.236	0.25	0.26	0.28	0.32
900	0.096	0.11	0.13	0.147	0.165	0.18	0.20	0.21	0.23	0.25	0.26	0.28	0.30	0.34

LOUVRES FIXING DETAILS

Fixing Details as given

Type 'S' fixing:

A counter-sunk screw type fixing

- Recommended for sidewall applications

Type 'C' fixing:

Concealed type fixing with spring clip

- Recommended for sidewall applications.

NOTE:

- Standard supply is Type 'S' fixing

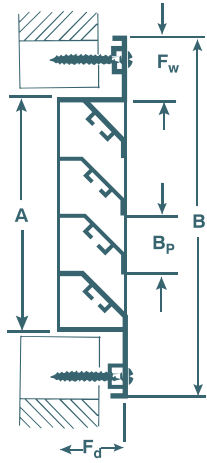
Available finishes:

- Natural anodised aluminium
- Powder coated colour finish. (Mention RAL colour number)
- Bronze anodised aluminium
- Mill finish aluminium

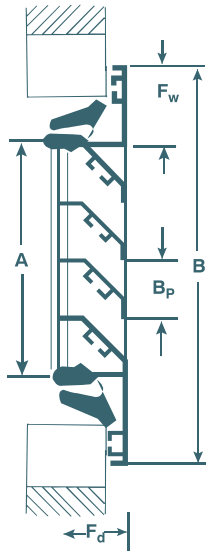
Ordering Data:

Specify:

1. TECNALCO type and model
2. Nominal size - L x W
3. Quantity
4. Type of fixing
5. Surface finish
6. Remarks



Type S fixing:



Type C fixing:

Example:

1.	2.	3.	4.	5.	6.
ALT'F'	1200 x 900	5 nos.	Type 'S' fixing	Natural anodised aluminium	—



TECNALCO

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