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LOUVERS ■



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LOUVERS

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Cover Page Photo

King Abdullah University of Science and Technology, Jeddah

EXHAUST AIR LOUVER

CONSTRUCTION:

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

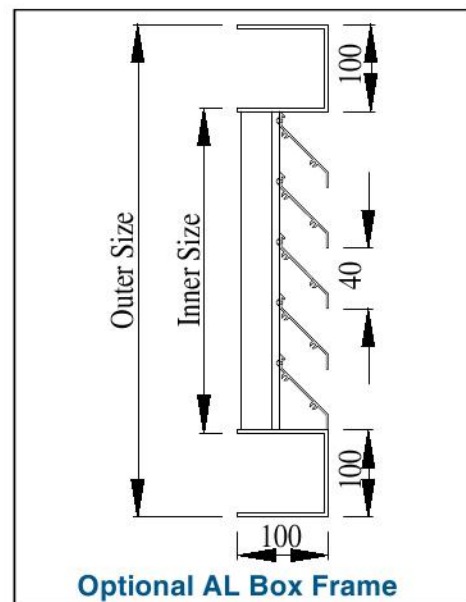
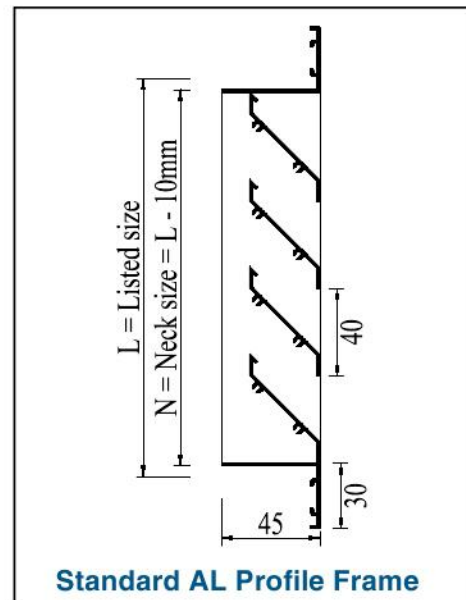
Blade pitch: 40 mm standard.

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 45% effective pressure area.
- Multiple sections will be assembled as per request.
- Standard finishes and fixing details are on section 14.7



EXHAUST AIR LOUVER WITH DAMPER

CONSTRUCTION:

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

Blade pitch: 40 mm standard.

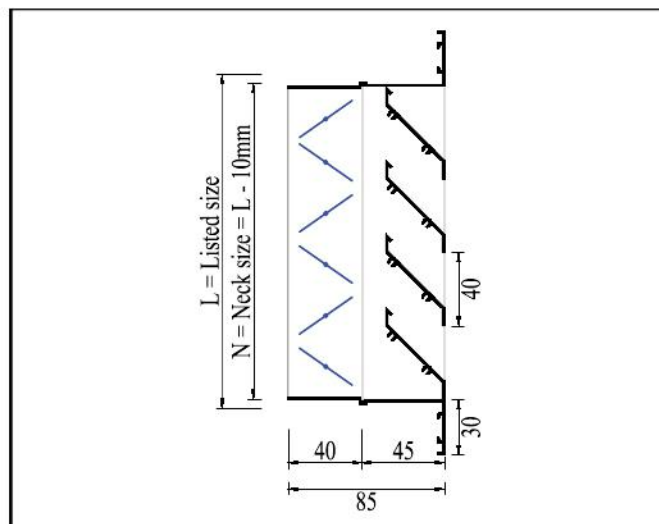
Flange width: 30 mm standard.

Damper frame and Blade: High quality extruded aluminium profile of thickness 1.2 mm.

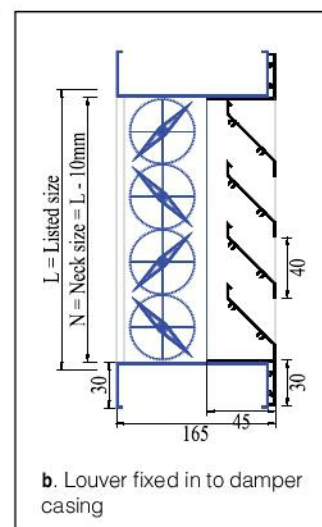
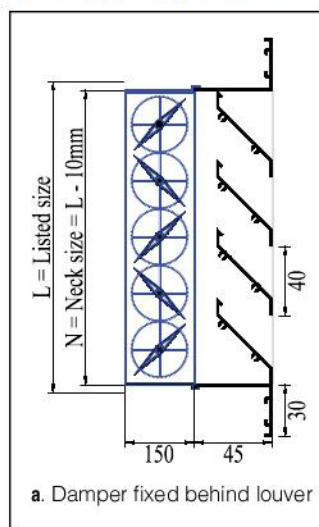


Description:

- 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 45% effective pressure area.
- Damper frame and blade is made of high quality extruded aluminium profile of thickness 1.2 mm. Damper blades can be controlled manually using the lever provided.
- Sizes above 900 mm x 900 mm will be supplied with AVCD model volume control damper (refer section 16.1, chapter 16) with G.I frame and Aluminium blade for rigidity.
- Multiple sections will be assembled as per request.
- Standard finishes and fixing details are on section 14.7



Damper Options



FRESH AIR LOUVER

CONSTRUCTION:

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

Blade pitch: 40 mm standard.

Flange width: 30 mm standard.

Filter frame: Aluminium.

Filter media: Expanded Aluminium Media of thickness 25 mm as standard.



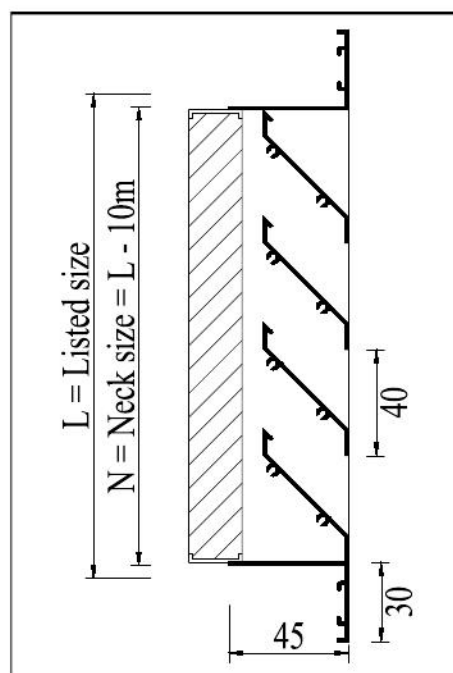
Description:

- 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.
- Louver is fixed with a removable/washable filter with aluminium mesh as the filter media.
- Weather resistant structure with blades inclined at an angle of 45° to protect against rain water penetration.
- Assembly provides around 45% effective pressure area.
- Multiple sections will be assembled as per request.
- Standard finishes and fixing details are on section 14.7



Filter Options

- Filter thickness: 12mm or 45mm
- Synthetic filter media: 1" or 2 "in GI or aluminium frame.



models: **AFLR**

FRESH AIR LOUVER WITH DAMPER



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CONSTRUCTION:

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

Blade pitch: 40 mm standard.

Flange width: 30 mm standard.

Filter frame: Aluminium.

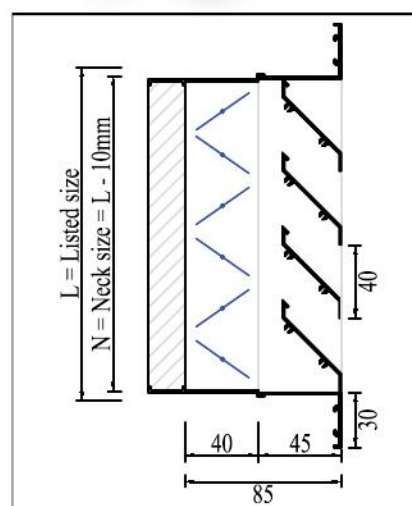
Filter media: Expanded Aluminium Media of thickness 25 mm as standard.

Damper: Opposed blade damper to control the air volume



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.
- Louver is fixed with a removable/washable filter with aluminium mesh as the filter media.
- Weather resistant structure with blades inclined at an angle of 45° to protect against rain water penetration.
- Assembly provides around 45% effective pressure area.
- Damper frame and blade is made of high quality extruded aluminium profile of thickness 1.2 mm. Damper blades can be controlled manually using the lever provided.
- Sizes above 900 mm x 900 mm will be supplied with AVCD model volume control damper (refer chapter 16) with G.I frame and Aluminium blade for rigidity.
- Standard finishes and fixing details are on section 14.7



Filter Options

- Filter thickness: 12 mm or 45 mm
- Synthetic filter media: 1" or 2" in GI or aluminium frame.

LOUVER DATA SHEET

Table 14.1 - Face Velocity v/s Pressure drop

Face Velocity in m/sec	1.25	1.5	2.0	2.5	3.0	3.5	3.75	4.0	4.5
Exhaust in mm of water	0.248	0.331	0.564	0.814	1.151	1.595	1.825	2.143	3.290
Intake in mm of water	-0.35	-0.57	-0.83	-1.21	-1.69	-2.35	-2.69	-3.27	-3.85

Note: Intake Pressure drop includes pressure drop across filters.
Reading are taken when the damper is in fully opened condition.

Table 14.2 - Effective Pressure area in sq.m

		Width in mm												
Height in mm	300	350	400	450	500	550	600	650	700	750	800	850	900	1000
300	0.038	0.049	0.055	0.063	0.077	0.084	0.091	0.098	0.105	0.11	0.119	0.119	0.125	0.139
350	0.049	0.057	0.065	0.073	0.082	0.089	0.097	0.106	0.1114	0.122	0.13	0.138	0.147	0.163
400	0.055	0.065	0.074	0.084	0.093	0.102	0.111	0.121	0.13	0.14	0.148	0.158	0.167	0.186
450	0.063	0.073	0.084	0.094	0.105	0.115	0.125	0.136	0.146	0.156	0.167	0.178	0.188	0.209
500	0.069	0.082	0.093	0.105	0.116	0.128	0.139	0.152	0.163	0.175	0.186	0.198	0.209	0.23
550	0.077	0.089	0.102	0.115	0.128	0.14	0.153	0.166	0.179	0.191	0.204	0.218	0.23	0.256
600	0.084	0.097	0.111	0.125	0.139	0.153	0.167	0.181	0.195	0.209	0.223	0.237	0.251	0.279
650	0.091	0.106	0.121	0.136	0.152	0.166	0.181	0.196	0.212	0.227	0.242	0.257	0.272	0.302
700	0.098	0.114	0.13	0.146	0.163	0.179	0.195	0.212	0.228	0.244	0.26	0.277	0.293	0.325
750	0.105	0.122	0.14	0.156	0.175	0.191	0.209	0.227	0.244	0.261	0.279	0.296	0.314	0.349
800	0.11	0.13	0.148	0.167	0.186	0.204	0.223	0.242	0.26	0.279	0.297	0.316	0.335	0.372
850	0.119	0.138	0.158	0.178	0.197	0.217	0.237	0.257	0.277	0.296	0.316	0.335	0.356	0.395
900	0.125	0.147	0.167	0.188	0.209	0.23	0.251	0.272	0.293	0.314	0.335	0.356	0.376	0.418
1000	0.139	0.163	0.186	0.21	0.23	0.256	0.279	0.302	0.325	0.349	0.372	0.395	0.418	0.464

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

HEAVY DUTY LOUVER

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CONSTRUCTION:

Louver frame and blades: High quality extruded aluminium profile of 2.2mm thickness.

Blade pitch: 80 mm standard.

Flange width: 40 mm standard.

**Description:**

- Designed to provide more than 65% effective pressure area thereby having lesser pressure drop.
- Used in heavy duty applications that require extremely sturdy construction.
- Composed of frame and horizontal blade assembly made of high quality extruded aluminium profile with the advantages of durability and corrosion resistance.
- Blades are fixed to the main frame using screws and riveted to the mullions for bigger sizes to have better rigidity.
- Weather resistant structure with blades inclined at an angle of 45o to protect against rain water penetration.
- Multiple sections will be assembled as per request.
- Standard finishes and fixing details are on section 14.7

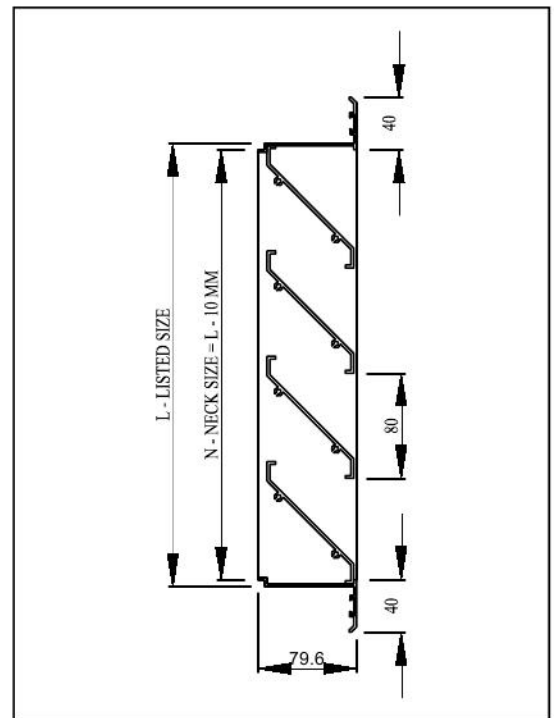


Table 14.3 - Face Velocity vs Total Pressure Drop Across the Louver

Face velocity in m/sec	1.25	1.5	2.0	2.5	3.0	3.5	3.75	4.0	4.5
Exhaust in mm of water	0.19	0.26	0.32	0.48	0.79	1.1	1.52	2.0	2.6

Table 14.4 - Effective Pressure Areas in sq.m

		WIDTH IN MM												
HEIGHT IN MM	300	350	400	450	500	550	600	650	700	750	800	850	900	1000
300	0.059	0.076	0.085	0.098	0.10	0.11	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.21
350	0.076	0.08	0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.2	0.21	0.22	0.25
400	0.08	0.10	0.11	0.13	0.14	0.15	0.17	0.18	0.2	0.21	0.23	0.24	0.25	0.28
450	0.098	0.11	0.13	0.14	0.16	0.17	0.19	0.21	0.22	0.24	0.25	0.27	0.29	0.32
500	0.10	0.12	0.14	0.16	0.18	0.19	0.21	0.23	0.25	0.27	0.28	0.30	0.32	0.35
550	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.35	0.39
600	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.32	0.34	0.36	0.39	0.43
650	0.14	0.16	0.18	0.21	0.23	0.25	0.28	0.30	0.32	0.35	0.37	0.39	0.42	0.46
700	0.15	0.17	0.20	0.22	0.25	0.27	0.30	0.35	0.35	0.37	0.40	0.43	0.45	0.50
750	0.16	0.18	0.21	0.24	0.27	0.29	0.32	0.35	0.37	0.40	0.43	0.46	0.48	0.54
800	0.17	0.20	0.23	0.25	0.28	0.31	0.34	0.37	0.40	0.43	0.46	0.49	0.52	0.57
850	0.18	0.21	0.24	0.27	0.30	0.33	0.36	0.39	0.43	0.46	0.49	0.52	0.55	0.61
900	0.19	0.22	0.25	0.29	0.32	0.35	0.39	0.42	0.45	0.48	0.55	0.55	0.58	0.65
1000	0.21	0.25	0.28	0.32	0.35	0.39	0.43	0.46	0.50	0.54	0.57	0.61	0.65	0.72

SURFACE FINISH AND FIXING DETAILS

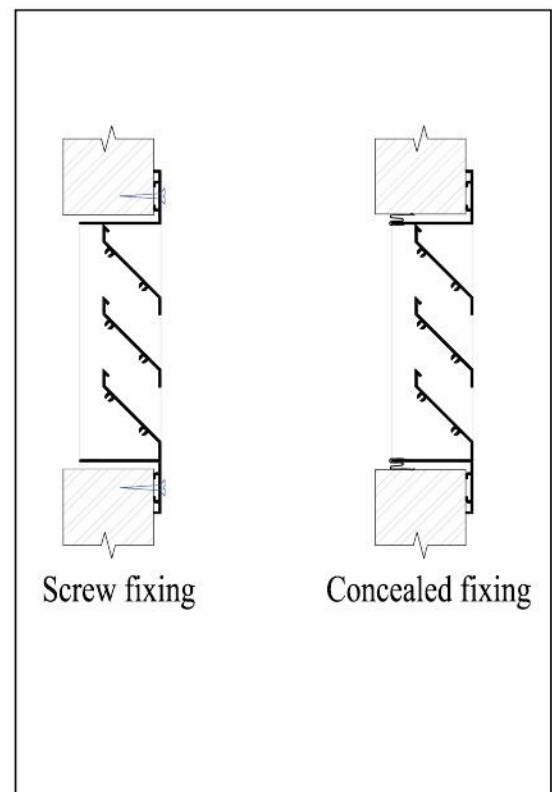
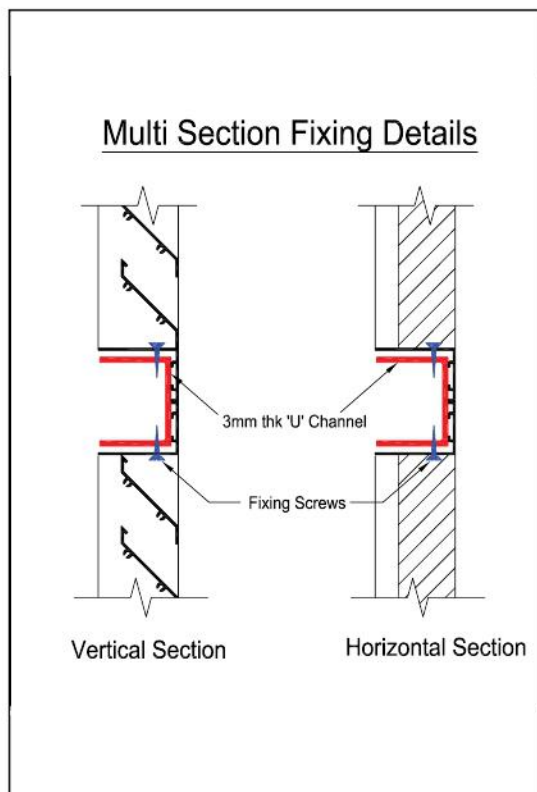
Standard Finishes:

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

Options:

- Flange width: 12, 16, 24mm flange widths are optional
- 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
- Frame and Blade: 2mm thick profile available for Models AL, ALR, AFL, AFLR for heavy duty applications.
- Damper: AVCD Model volume control damper.

Fixing Details



Product Summary

Model	Product Description	Remarks
AL	Exhaust Air Louver	
ALR	Exhaust Air Louver with Damper	
AFL	Fresh Air Louver	with 1" filter
AFLR	Fresh Air Louver with Damper	with 1" filter
AHL	Heavy duty Louver	

Product Order Checklist

- Model
- Length and width in mm x mm
- Quantity
- Colour (RAL 9010, 9016, Anodized aluminium finish or other RAL colours)
- Thickness for models AL, ALR, AFL, AFLM

G.I LOUVER



S.S LOUVER





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