

# 03

## SAND TRAP LOUVER

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QATIF - AUJAM INDUSTRIAL  
AREA DHAHRAHAN - JUBAIL HI WAY  
P.O. BOX 10848 - QATIF 31911  
المقطيف - صناعية الأوجام - طريق المهران الجبل المسريع - ص.ب. ١٠٨٤٨ - المقطيف ٣١٩١١  
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**PERFORMANCE**  
for Metal Production  
مصنع واحة إنجاز للصناعات المعدنية

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## SAND TRAP LOUVER

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# SAND TRAP LOUVERS & FRISH AIR LOUVER



**STL**



**STL FLASH TYPE**



**STL + F+VCD**



**STL +F**

## SAND TRAP LOUVER WITH SCREEN

### CONSTRUCTION:

**Frame and blades:** 1.5 mm and 1.2 mm thick high quality extruded aluminium profiles.

**Bird screen:** 12 mm x 12 mm x 1 mm diameter G.I wire mesh as standard. 12 mm x 12 mm x 1.5 mm diameter aluminium wire mesh as option.

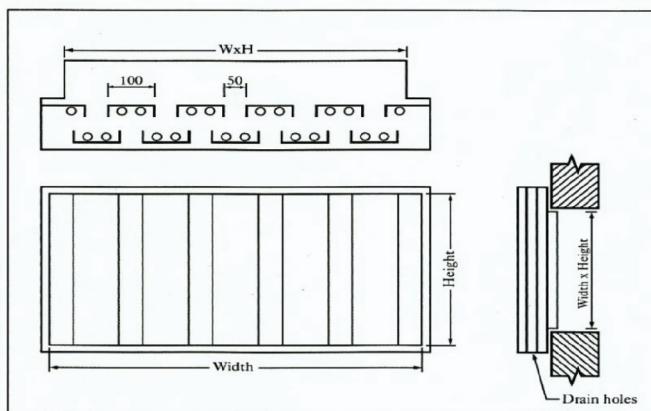
**Drain:** 20 mm diameter self drain holes at the bottom of the louver.

### Description:

- The frame and blades are of high quality extruded aluminium profiled construction with the advantages of corrosion resistance and rigidity.
- Composed two sets of inverted U-channels mounted vertically on two opposite rows.
- Drain holes of diameter 20 mm are provided in two rows at the bottom of the louver for emptying filtered sand and dust.
- Can be manufactured from G.I or SS as option.
- Designed to separate sand and dust from the air stream.
- Generally used for ventilation applications and at inlet duct of air handling unit.

### Standard finishes:

- Natural aluminium anodized finish.
- Finish as per RAL colour code.
- Flexibility of finishing available as option.



## SAND TRAP LOUVER WITH FILTER

### CONSTRUCTION:

**Frame and blades:** 1.5 mm and 1.2 mm thick high quality extruded aluminium profiles.

**Bird screen:** 12 mm x 12 mm x 1 mm diameter G.I wire mesh as standard. 12 mm x 12 mm x 1.5 mm diameter aluminium wire mesh as option.

**Drain:** 20 mm diameter self drain holes at the bottom of the louver.

**Filter frame:** 20 gauge aluminium sheet.

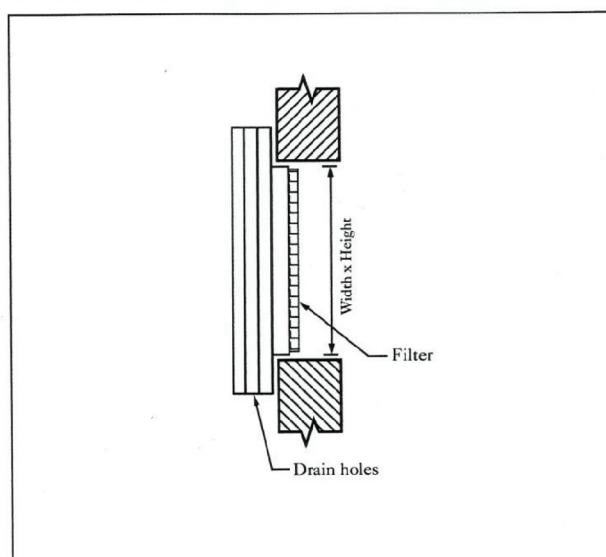
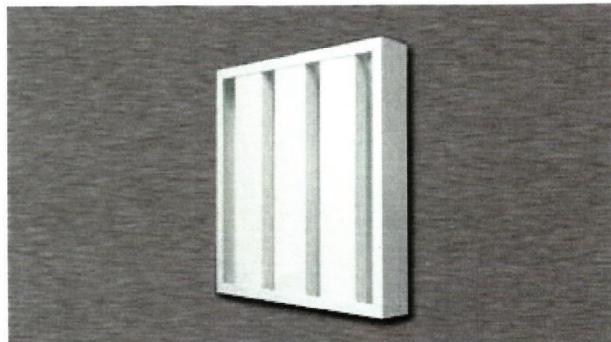
**Filter media:** Expanded aluminium media. Synthetic filter is optional.

### Description:

- The frame and blades are of high quality extruded aluminium profiled construction with the advantages of corrosion resistance and rigidity.
- Composed two sets of inverted U-channels mounted vertically on two opposite rows.
- Drain holes of diameter 20 mm are provided in two rows at the bottom of the louver for emptying filtered sand and dust.
- Fixed with a removable washable extruded aluminium filter with aluminium mesh as the filter media.
- Filters are available at 12, 25 and 50 mm thickness as required.
- Total assembly is designed to operate at medium and high velocities with high dust holding capacity at low resistance to air flow.
- Can be manufactured from G.I or SS as option.
- Design to separate sand and dust from the air stream. Generally used for ventilation applications and at inlet duct of air handling unit.

### Standard finishes:

- Natural aluminium anodized finish.
- Finish as per RAL colour code.
- Flexibility of finishing available as option.



## SAND TRAP LOUVER WITH DAMPER

### CONSTRUCTION:

**Frame and blades:** 1.5 mm and 1.2 mm thick high quality extruded aluminium profiles.

**Bird screen:** 12 mm x 12 mm x 1 mm diameter G.I wire mesh as standard. 12 mm x 12 mm x 1.5 mm diameter aluminium wire mesh as option.

**Drain:** 20 mm diameter self drain holes at the bottom of the louver.

**Damper:** Galvanized steel sheet construction.

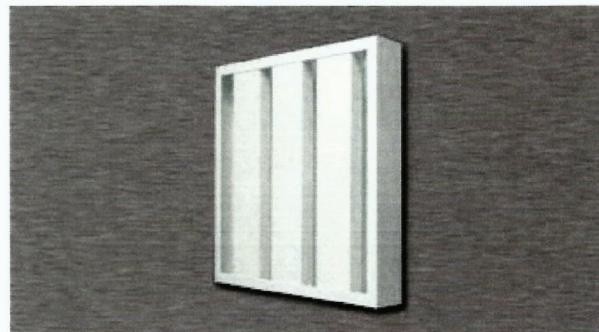
**Damper blades:** High quality extruded aluminium profiles.

### Description:

- Manufactured from high quality extruded aluminium profiles with the advantages of corrosion resistance and rigidity.
- Composed two sets of inverted U-channels mounted vertically on two opposite rows.
- Drain holes of diameter 20 mm are provided in two rows at the bottom of the louver for emptying filtered sand and dust.
- Can be manufactured from G.I or SS as option.
- Fixed with a removable volume control damper to ensures positive control over the fresh air stream.
- Damper can be operated manually from the back of the louver or can be motor operated.
- Designed to separate sand and dust from the air stream. Generally used for ventilation applications and at inlet duct of air handling unit.

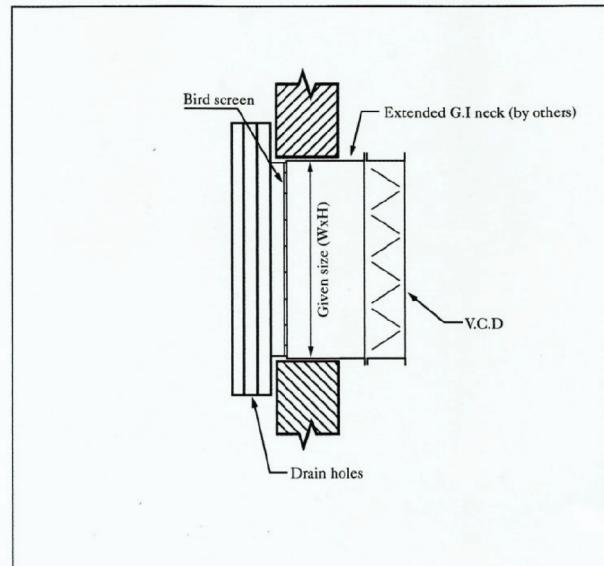
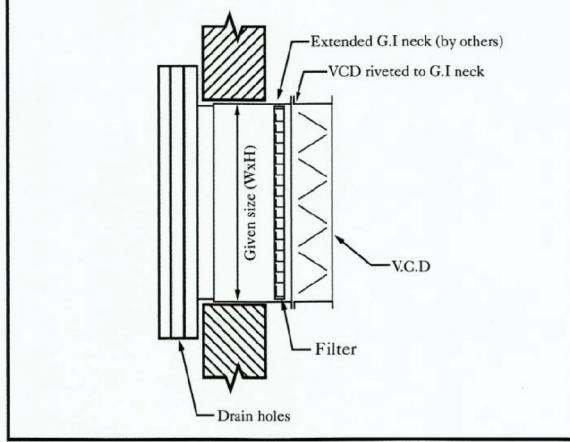
### Standard finishes:

- Natural aluminium anodized finish.
- Finish as per RAL colour code.
- Flexibility of finishing available as option.



Model : **ASTL + F + D**

*Sand trap louver with filter and GI Damper*



## SAND TRAP LOUVER FLASH MOUNTED

### CONSTRUCTION:

**Frame and blades:** 1.5 mm and 1.2 mm thick high quality extruded aluminium profiles.

**Bird screen:** 12 mm x 12 mm x 1 mm diameter G.I wire mesh as standard. 12 mm x 12 mm x 1.5 mm diameter aluminium wire mesh as option.

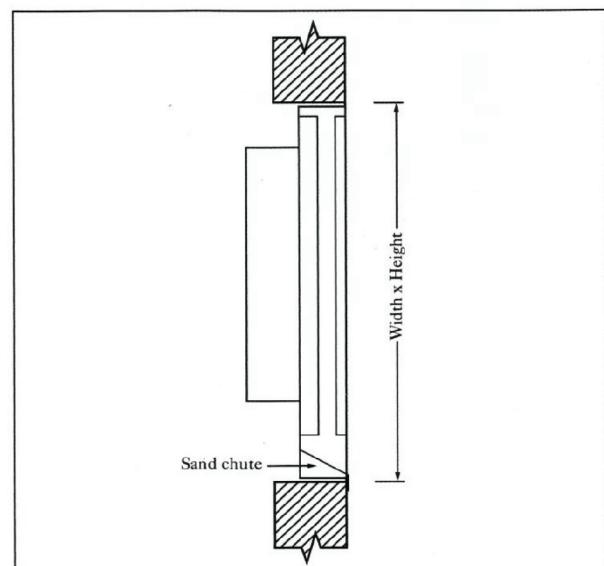
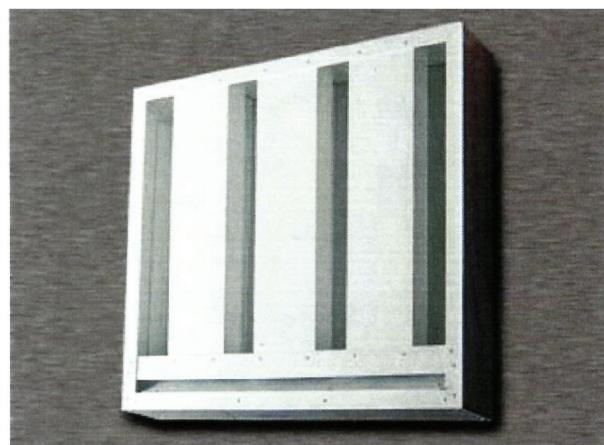
### Description:

- The frame and blades are of high quality extruded aluminium profiled construction with the advantages of corrosion resistance and rigidity.
- Composed two sets of inverted U-channels mounted vertically on two opposite rows.
- Surface of the louver is fixed flush on the plane of the wall. The filtered sand will be drained through a sand chute.
- Sand chute is an inclined tray fixed at the bottom of the louver for sand drain.
- Designed to separate sand and dust from the air stream.
- Generally used for ventilation applications and at inlet duct of air handling unit.
- Can be manufactured from G.I or SS as option.

**Sand chute:** Aluminium sheet tray of 1.2 mm thickness.

### Standard finishes:

- Natural aluminium anodized finish.
- Finish as per RAL colour code.
- Flexibility of finishing available on option.



## SAND TRAP LOUVER

### Product Summary:

Model	Product Description	Optional accessories
<b>ASTL</b>	Sand trap louver	
<b>ASTL+F</b>	Sand trap louver with filter	
<b>ASTL+D</b>	Sand trap louver with damper	
<b>ASTL+D+F</b>	Sand trap louver with filter and damper	
<b>ASTL-HD</b>	Sand trap louver Heavy Duty	
<b>AFSTL</b>	Flush mount sand trap louver	

### Product order checklist:

- Model number (please refer product summary above)
- Size
- Colour ( RAL 9010, 9016, Anodized aluminium finish or other RAL Colours)
- Quantity

### How to Size ASTL and AFSTL:

*Note: For optimum performance of sand trap louver with lower pressure drop and higher efficiency, we recommend a face velocity of up to 1m/s.*

For a known air quantity, calculate face area as follows:

$$\text{Face area (m}^2\text{)} = \frac{\text{Air quantity (m}^3\text{/sec)}}{\text{Face velocity (m/sec)}}$$



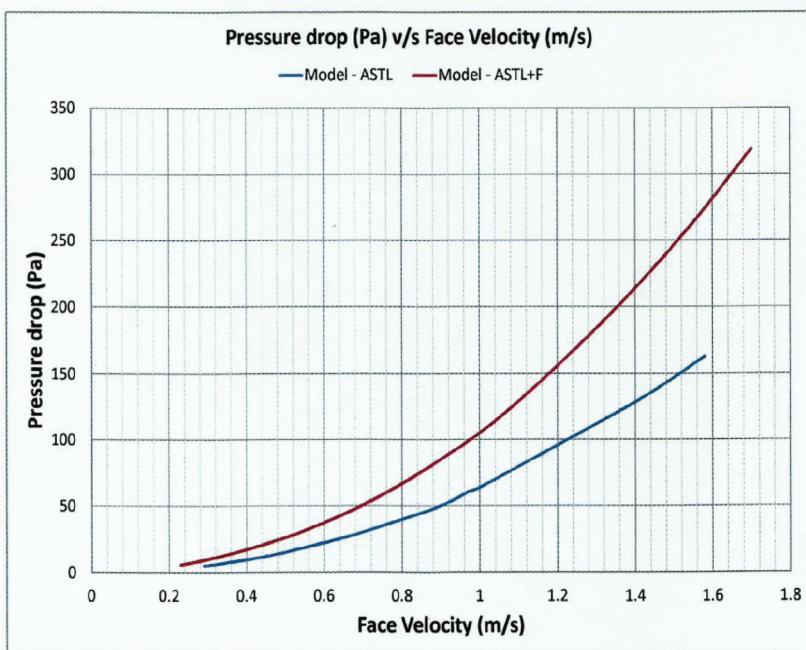
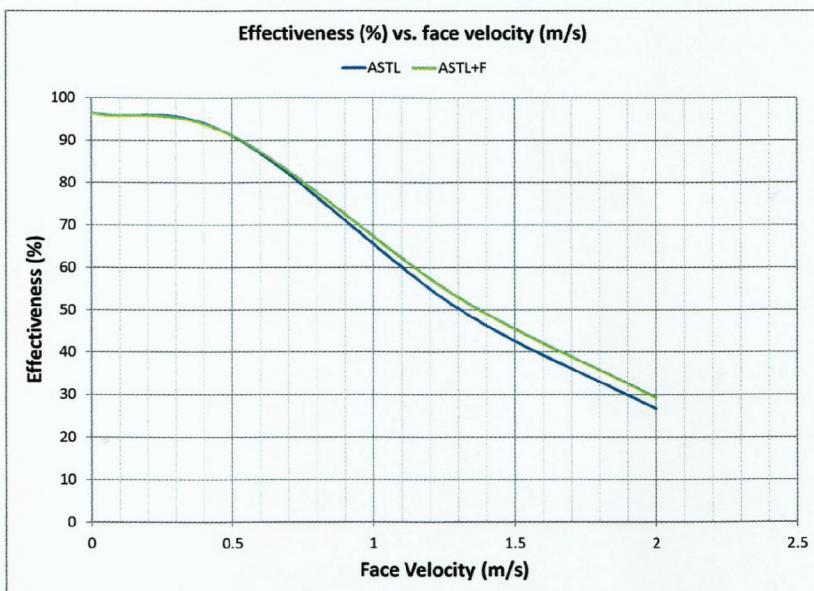
## SAND TRAP LOUVER

The length (m) and width (m) of sandtrap louver can be determined from the face area calculated with respect to the opening provided at the site.

If only free area is known, calculate face area as follows:

$$\text{Face area (m}^2\text{)} = \text{Free Area (m}^2\text{)} \times 2.7$$

The length (m) and width (m) of sandtrap louver can be determined from the face area calculated with respect to the opening provided at the site.



$$\text{Face Velocity (m/s)} = \frac{\text{Air quantity (m}^3/\text{sec)}}{\text{Face area (m}^2\text{)}}$$

$$\text{Free Area Velocity (m/s)} = \frac{\text{Air quantity (m}^3/\text{sec)}}{0.36 \times \text{Length(m)} \times \text{Width(m)}}$$

1 m<sup>3</sup>/sec = 1000 LPS (Litres per second)

Printed data based on face velocity and test results from accredited third-party testing laboratories.

## SAND TRAP LOUVER

### PERFORMANCE DATA

The tabulated performance data includes Air volume  $Q_v$ , Effective pressure area  $A_k$ , Total pressure drops and corresponding Face velocities.

**Air volume  $Q_v$**  : Air volumes are given in  $m^3/sec$ .

**Face velocity  $V_f$**  : The effective face velocities  $V_f$  given are related to the corresponding air volume  $Q_v$  and effective face area  $A_f$  for the corresponding sizes.

**Passage velocity  $V_k$**  : The effective passage velocity  $V_k$  given all related air volume  $Q_v$  and effective free area  $A_k$  for the corresponding face areas.

**Effective Pressure Area  $A_k$**  : Outlet sizes are given in the following table, within a tolerance of  $\pm 5\%$ , Are related to the corresponding effective pressure areas  $A_k$  in  $m^2$  for the corresponding size.

**Total pressure drop  $\Delta P_t$**  : The pressure drops given in the graph are related to the corresponding face velocities  $V_k$   $m/s$ .

**Performance Notes:**

Pressure given in  $Pa$ ,  $\Delta P_t$  ( $Pa$ ) indicated in the table is the total pressure drop, the difference in total pressure from face inlet to discharge side of the STL.

Test data obtained in accordance with ARI Standards 880-94, and ADC 1062 : GRD 84.



#### Selection tables

**Effective pressure areas  $A_k$  in  $m^2$**  For Model STL B 10 Series / 20 Series standard construction.

w x h mm	300	450	600	750	900	1050	1200	1350	1500
300	0.028	0.043	0.059	0.073	0.089	0.104	0.118	0.133	0.148
450	0.043	0.066	0.089	0.112	0.134	0.157	0.180	0.203	0.225
600	0.059	0.089	0.119	0.150	0.181	0.258	0.241	0.272	0.302
750	0.073	0.112	0.150	0.118	0.226	0.264	0.303	0.341	0.379
900	0.089	0.134	0.181	0.226	0.273	0.318	0.365	0.410	0.457
1050	0.096	0.145	0.196	0.246	0.296	0.345	0.395	0.444	0.495
1200	0.011	0.169	0.226	0.284	0.341	0.399	0.457	0.514	0.572
1350	0.126	0.191	0.257	0.322	0.387	0.452	0.518	0.583	0.648
1500	0.141	0.214	0.287	0.360	0.433	0.506	0.579	0.653	0.725

#### Sand Rejection Efficiency

Description	STL		STL + F1		STL+F1+D+F2+F3	
<b>Face Velocity</b>	0.5mt/s	1.0 mt/s	0.5 mt/s	1.0 mt/s	0.5 mt/s	1.0 mt/s
<b>Particle Size</b>	150 - 700	150 - 700	75 - 150	75 - 150	10 - 100	10 - 100
<b>% Efficiency</b>	80-85%	60-75%	90%	75%	98%	96%

# FRISH AIR LOUVER

## STORMPROOF STATIONARY WEATHER LOUVERS CHANNEL TYPE 2"

### SPECIFICATIONS

#### MATERIAL:

Extruded aluminum, A6063S-T5 alloy. Channel Frame and "Z" type 45° Blades, Divider Mullion frame for sectional louvers.

#### FACE OF LOUVER:

Full jamb section, with blades, head and sill contained in jamb.

#### SCREENS: (when indicated)

BIRD SCREEN –  $\frac{1}{2}$ " square mesh galvanized

INSECT SCREEN – Aluminum mesh.

#### FINISH :

Clear anodized or Powder Coated.

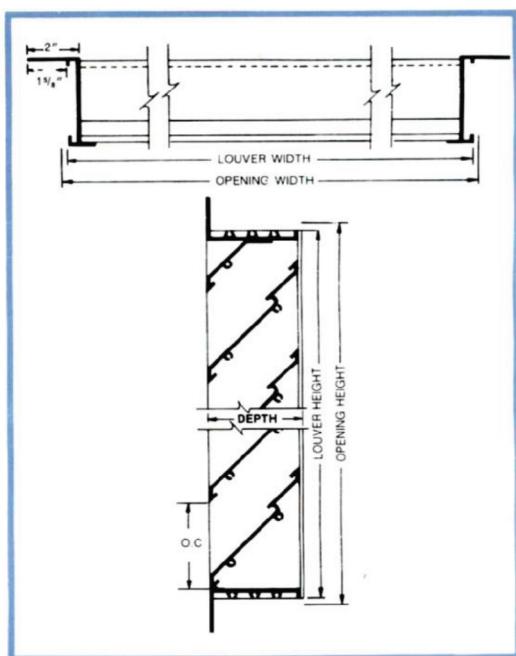
#### OPTIONAL

Special finishes.

Flange frame.

Special thickness of blade or frame.

Louvers will be fabricated  $\frac{1}{2}$ " smaller unless otherwise specified.





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