SAND TRAP LOUVERS
SERIES STL SAND TRAP LOUVERS

Series STL sand trap louvers are specialty louvers, designed to be the primary filters for air intakes in areas where sand and dust are prevalent.

The STL louver consist of two rows of interlocking vertical blades that catches up to 93% of sand and dust, where it drops down on to emptying holes or sloped sill then ejected through the louver face by gravity.

DESIGN FEATURES

<table>
<thead>
<tr>
<th>Material</th>
<th>Aluminum Construction.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blades</td>
<td>Vertically mounted aerodynamic profiles 100mm face</td>
</tr>
<tr>
<td>Core</td>
<td>Fixed</td>
</tr>
<tr>
<td>Frame</td>
<td>Offset as standard. recessed or flanged as optional</td>
</tr>
<tr>
<td>Finish</td>
<td>Mill as standard. Epoxy powder coating as optional</td>
</tr>
<tr>
<td>Mass/m² face area</td>
<td>17 kg</td>
</tr>
<tr>
<td>Free Area</td>
<td>35 % ( varies per size )</td>
</tr>
</tbody>
</table>

Important note
It is possible to have two identical louvers of same free area but with different airflow characteristics.

AMCA TESTING

Series STL sand trap louvers have been tested against AMCA 511 Certified Rating Program
The test was carried out in October 2016 by AMCA

"Energy Industrial Co. certifies that the STL-A04 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 AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to wind driven sand and air performance ratings only."
PERFORMANCE DATA

Sand Rejection Performance

- 80% effective at 1.0 m/s draw velocity
- Sand is blown at louver at 20-25 m/s in the sand injection tube
- Tested louver size 1220mm x 1220mm
- The sand grading used is between 76μm - 699μm as per AMCA 500 L, Annex H, Table 8.
- Based on this data, we recommend 1.0 m/s draw velocity is the maximum used when sizing up sand trap louvers to assure good performance

<table>
<thead>
<tr>
<th>Drawn Velocity m/s</th>
<th>Sand Rejection Effectiveness %</th>
<th>Penetration Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>80.05</td>
<td>C</td>
</tr>
<tr>
<td>2.5</td>
<td>43.80</td>
<td>D</td>
</tr>
<tr>
<td>4.0</td>
<td>14.87</td>
<td>D</td>
</tr>
<tr>
<td>5.5</td>
<td>4.40</td>
<td>D</td>
</tr>
<tr>
<td>7.0</td>
<td>1.35</td>
<td>D</td>
</tr>
</tbody>
</table>

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Airflow Performance

Actual Test Data

<table>
<thead>
<tr>
<th>Test</th>
<th>Free Area Velocity m/s</th>
<th>Air Flow Rate m³/s</th>
<th>Pressure Drop Pa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.04</td>
<td>0.44</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>2.27</td>
<td>0.96</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>3.86</td>
<td>1.64</td>
<td>67</td>
</tr>
<tr>
<td>4</td>
<td>5.37</td>
<td>2.28</td>
<td>134</td>
</tr>
<tr>
<td>5</td>
<td>6.45</td>
<td>2.74</td>
<td>193</td>
</tr>
</tbody>
</table>

Free Area of 1220mmX 1220mm = 0.425 m²
Free Area Velocity (m/s) = Air flow rate (m³/s) / Free Area (m²)
Test done in Intake mode.

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### Dimensional Drawings

#### STLO - Offset
- The neck side of the Louver sits in the wall, while the front side is resting on the wall.
- Approx. 17kg/m²

#### STLR - Recessed
- Whole louver sits inside the wall opening.
- Approx. 17kg/m²

#### STLF - Flanged
- Louver frame sits inside the wall aperture, while the front flange rest on the wall by screws, see STLO option in this catalogue.
- Flange size is 38mm as STD. unless specified by customer.
- Approx. 17kg/m²
Additional Filters

Series STL sand trap louvers are available with a full range of disposable and replaceable filters.

The aluminum washable filter with frame is secured behind the louver blades, with clip angles and bolts.

For filter maintenance simply, unscrew the bolts, to allow the filter and its frame to come away from the louver.

- The filter media is 5/8 " as STD. unless specified by client.
  Please see chart below.

**Note:**
When calculating the sand trap louver pressure drop, please add the pressure drop of the filter to the total Pd.,

Graph below is not certified by AMCA.

Filter Pressure Drop Performance

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Installations / Fixings

Predrilled face fixing holes - FH

8mm fixing holes predrilled into the louver frame before powder coating for quick and easy fitting on site.

Number and layout of fixing holes will be appropriate to louver size. arrangements can be specified.

This option is only available with flanged louvers.

Fixings are shown for illustration only.

Rear mounted concealed - FL

Fixing lugs will be welded to the rear of the louver frame extending 50mm from the rear of the louver neck.

These can be drilled and bolted through providing an easy to access, concealed fixing point.

This option is only available with the STLO model.

Fixings are shown for illustration only.

Volume control

Sand trap louver can be factory fitted with a rear mounted VC aluminum volume control damper providing a sand trap louver with guaranteed performance and a volume control damper in one easy to fit unit.

If required, VCD's can be replaced with shut off dampers. The same format damper, fitted with additional seals, these provide much greater levels of shut off than standard volume control dampers.

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Series STL-A04
Sand Trap Louvers

Finish

Mill aluminum.
Epoxy powder coating to any RAL colour.

RAL (Powder coated) Colours

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OTHER PRODUCTS

Centrifugal Products

- **Domex**
  Centrifugal Roof Exhausters

- **Fumex Fatrap**
  Kitchen Hood Centrifugal Roof Exhausters

- **Zephyr**
  Ceiling and Inline Fans

- **Dynamo**
  Centrifugal Blowers

- **Centrex Inliner**
  Centrifugal Inline Fan

- **LC Dynafan**
  Low Contour Centrifugal Roof Exhausters

- **ESI**
  Efficient Silent Inline Fan

- **Fume Exhaust**
  Curb Mounted Centrifugal Fans

Axial / Gravity Products

- **Breezeway**
  Propeller Wall Fan

- **Hi-Ex**
  Power Roof Ventilator

- **Tubeaxial**
  Inline Fans

- **Vaneaxial**
  Inline Fans

- **Powered Airette**
  Axial Roof Ventilators

- **Airette**
  Gravity Intake/Relief Hood

- **Domex Axial**
  Axial Roof Ventilators

- **Axcentrix**
  Bifurcator Fan