

### Application & Features

- Sand Trap Louvers are specially designed for use in areas where airborne sand and dust are inevitable.
- It is used in industrial, commercial and domestic applications. It has a high degree of separation of sand and large dust particles, even in cases of high dust concentrations.
- The vertically arranged blades and the sand drain holes ensure the sand trap louver is self-cleaning and maintenance-free.
- These sand trap louver is designed to separate large particles at low air velocities, thus avoiding excessive dust loading of conventional filters.
- Suitable for installation in inlet of fresh air intake ducts, air handling units and external wall openings.
- Rear mounted volume control damper, filters are available as optional.
- Tested by AMCA as per AMCA-500L " Laboratory Methods of Testing Louvers for Rating" for the air performance.

### Construction Details

- I Frame** : 1.5mm thickness extruded aluminium frame.
- I Blades** : 1.5mm thickness extruded aluminium, vertically arranged, double lined inverted U shaped blades.
- I Screen** : 7 x 12mm Galvanized steel bird screen ( standard)/ Aluminium insect screen ( optional).
- I Drain Holes** : 20mm dia self emptying sand drain holes at the bottom of the louver
- I Installation** : Vertically on external wall or duct intake terminal
- I Shape** : Square or Rectangular
- I Size** : Minimum size - 300 x300 mm Maximum size 2400 x 2400 mm ( single section)
- I Filter** : 12mm, 25mm and 50mm thickness Aluminium washable filter ( optional).
- I Damper** : Opposed blade, galvanized steel volume control damper (optional).
- I Finish** : Electrostatic polyester powder coated RAL9010 finish (standard). Other colors are available as optional

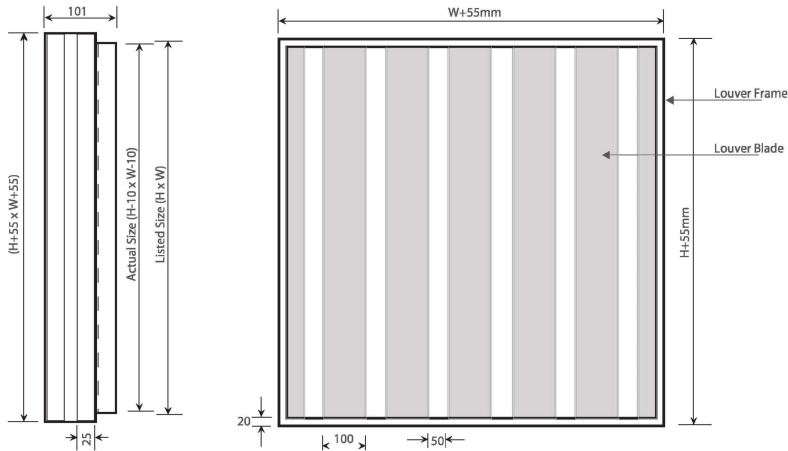


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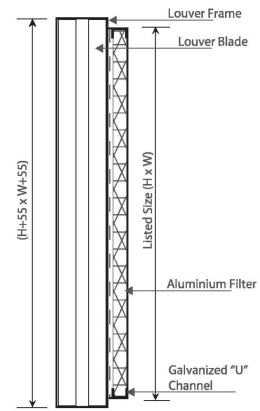
# Air Louvers

# Sand Trap Louver

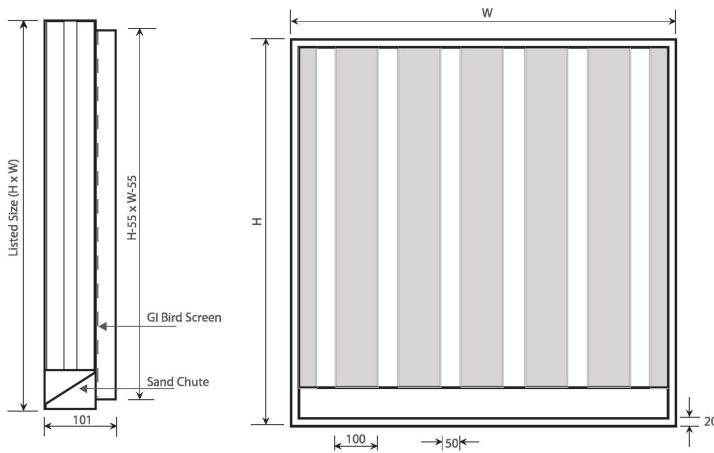
Model: STL-A [Standard]



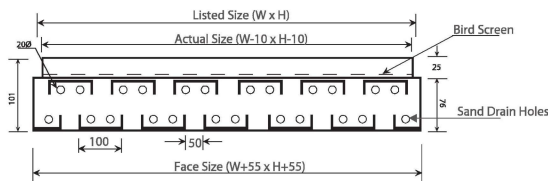
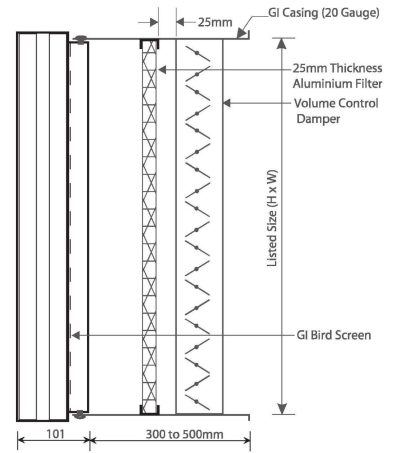
Model: STL-A+F [Sand Trap Louver with Filter]



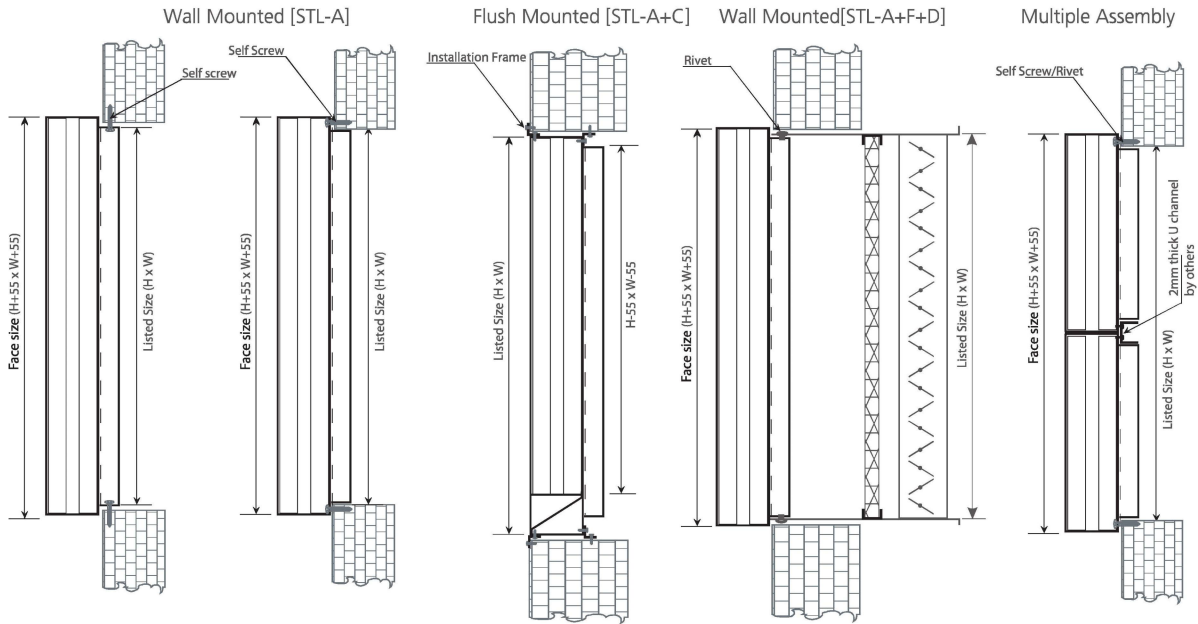
Model: STL-A+C [Sand Trap Louver with Sand Chute]



Model: STL-A+F+D [Sand Trap Louver with Filter and Damper]



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## Optional Constructional Specification

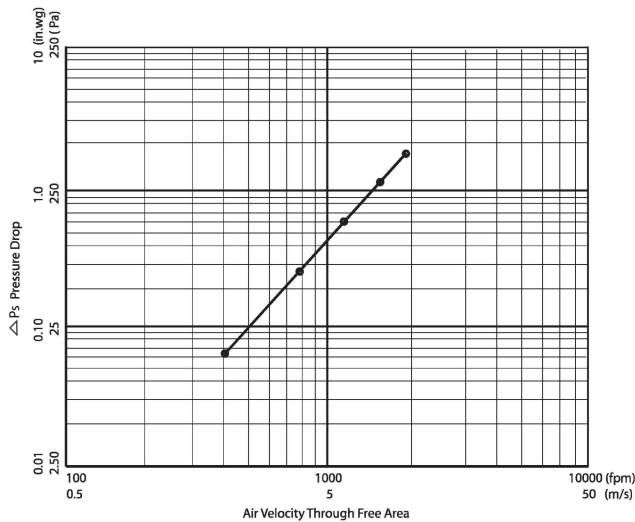
Galvanized Steel Construction	: 1.2mm thickness galvanized steel frame and blade [Model: STL-A//GI]
Stainless Steel Construction	: 1.0mm thickness, stainless steel frame and blade, Grade: 304 [Model: STL-A//SS]
Extra Heavy Duty Construction	: 2.0mm thickness, Extruded Aluminium frame and blades [Model: STL-A//HD]
Filter	: 12mm thickness aluminium washable filter [Model: STL-A//F-12] 25mm thickness aluminium washable filter [Model: STL-A//F-25] 50mm thickness aluminium washable filter [Model: STL-A//F-50]
Sand Chute	: With sand chute for flush mounting [Model: STL-A//C]
Flange	: With 30mm flange fitted on outer frame [Model: STL-A//SF-30]
Damper	: With galvanized steel, opposed blade volume control damper [Model: STL-A//D]
Finish	: Anodized finish [Model: STL-A//AD]



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Free Area Chart [STL-A]:

H \ W		Height Inches (mm)															
		12 300	18 450	24 600	30 750	36 900	42 1050	48 1200	54 1350	60 1500	66 1650	72 1800	78 1950	84 2100	90 2250	96 2400	
Width Inches (mm)	12 300	0.17 0.02	0.27 0.03	0.38 0.04	0.48 0.04	0.59 0.05	0.69 0.06	0.80 0.07	0.90 0.08	1.01 0.09	1.11 0.10	1.22 0.11	1.32 0.12	1.43 0.13	1.53 0.14	1.64 0.15	
	18 450	0.31 0.03	0.50 0.05	0.69 0.06	0.89 0.08	1.08 0.10	1.27 0.12	1.46 0.14	1.65 0.15	1.85 0.17	2.04 0.19	2.23 0.21	2.42 0.22	2.61 0.24	2.80 0.26	3.00 0.28	
	24 600	0.45 0.04	0.73 0.07	1.00 0.09	1.28 0.12	1.56 0.14	1.83 0.17	2.11 0.20	2.39 0.22	2.67 0.25	2.94 0.27	3.22 0.30	3.50 0.32	3.77 0.35	4.05 0.38	4.33 0.40	
	30 750	0.59 0.05	0.95 0.09	1.31 0.12	1.67 0.16	2.04 0.19	2.40 0.22	2.76 0.26	3.12 0.29	3.49 0.32	3.85 0.36	4.21 0.39	4.57 0.42	4.94 0.46	5.30 0.49	5.66 0.53	
	36 900	0.73 0.07	1.18 0.11	1.62 0.15	2.07 0.19	2.52 0.23	2.97 0.28	3.42 0.32	3.87 0.36	4.32 0.40	4.77 0.44	5.22 0.48	5.67 0.53	6.12 0.57	6.57 0.61	7.02 0.65	
	42 1050	0.86 0.08	1.40 0.13	1.93 0.18	2.47 0.23	3.00 0.28	3.54 0.33	4.07 0.38	4.61 0.43	5.14 0.48	5.68 0.53	6.21 0.58	6.75 0.63	7.28 0.68	7.81 0.73	8.36 0.78	
	48 1200	1.00 0.09	1.63 0.15	2.25 0.21	2.87 0.27	3.49 0.32	4.11 0.38	4.74 0.44	5.36 0.50	5.98 0.56	6.60 0.61	7.22 0.67	7.84 0.73	8.47 0.79	9.09 0.84	9.71 0.90	
	54 1350	1.14 0.11	1.85 0.17	2.56 0.24	3.26 0.30	3.97 0.37	4.68 0.43	5.39 0.50	6.09 0.57	6.80 0.63	7.51 0.70	8.21 0.76	8.92 0.83	9.63 0.89	10.33 0.96	11.05 1.03	
	60 1500	1.28 0.12	2.07 0.19	2.86 0.27	3.65 0.34	4.45 0.41	5.24 0.49	6.04 0.56	6.83 0.63	7.62 0.71	8.41 0.78	9.20 0.85	10.00 0.93	10.79 1.00	11.58 1.08	12.38 1.15	
	66 1650	1.42 0.13	2.30 0.21	3.18 0.30	4.06 0.38	4.94 0.46	5.82 0.54	6.70 0.62	7.58 0.70	8.45 0.79	9.34 0.87	10.21 0.95	11.09 1.03	11.97 1.11	12.85 1.19	13.74 1.28	
	72 1800	1.56 0.14	2.53 0.23	3.49 0.32	4.45 0.41	5.42 0.50	6.38 0.59	7.35 0.68	8.31 0.77	9.27 0.86	10.24 0.95	11.20 1.04	12.17 1.13	13.13 1.22	14.10 1.31	15.07 1.40	
	78 1950	1.70 0.16	2.75 0.26	3.80 0.35	4.85 0.45	5.91 0.55	6.95 0.65	8.01 0.74	9.06 0.84	10.11 0.94	11.16 1.04	12.21 1.13	13.27 1.23	14.32 1.33	15.37 1.43	16.43 1.53	
	84 2100	1.84 0.17	2.98 0.28	4.11 0.38	5.24 0.49	6.29 0.59	7.52 0.70	8.66 0.80	9.79 0.91	10.93 1.02	12.07 1.12	13.20 1.23	14.34 1.33	15.48 1.44	16.61 1.54	17.76 1.65	
	90 2250	1.97 0.18	3.20 0.30	4.42 0.41	5.64 0.52	6.86 0.64	8.08 0.75	9.31 0.86	10.53 0.98	11.75 1.09	12.98 1.21	14.19 1.32	15.42 1.43	16.64 1.55	17.86 1.66	19.09 1.70	
	96 2400	2.12 0.20	3.43 0.32	4.74 0.44	6.05 0.56	7.36 0.68	8.61 0.81	9.99 0.93	11.29 1.05	12.60 1.17	13.92 1.29	15.22 1.41	16.54 1.54	17.85 1.66	19.15 1.78	20.48 1.90	



Test Results:			
Free Area Velocity		Pressure Drop	
fpm	m/s	inch.wg	Pa
400	2.0	0.06	15
800	4.0	0.27	68
1200	6.0	0.59	148
1600	8.0	1.05	263
2000	10.0	1.66	415

AMCA Standard 500-L Intake Test  
Figure 5.5 setup for size - 48" x 48"  
Data is corrected to standard air density

**Selection Example**

Given:  
Airflow: 2850cfm  
Free area velocity : 600fpm ( Assumed)

**Calculation:**

$$\begin{aligned} \text{Free Area} &= \text{Airflow} / \text{louver free area velocity} \\ &= 2850 / 600 \\ &= 4.75 \text{ ft}^2 \end{aligned}$$

From Free Area Chart, selected size of the louver is 48" X 48"  
From the graph, Louver pressure drop = 0.15 In.wg



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