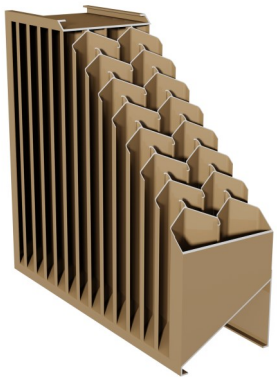
Model—SA-820V

203mm DEEP SAND LOUVER

Ontario Specialty Architectural Products FZE certifies that the Sand Trap Louver Model "SA-820V" 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 the AMCA Certified Ratings Program. The AMCA Certified Ratings seal applies to Air Performance, Water Penetration and Wind Driven Sand Performance ratings only.

PERFORMANCE:

- Free Area is **51%** based on a test sample of 48in (1220mm) x 48in (1220mm)
- Beginning point of water penetration (@0.01oz / ft² of free area) - **876 fpm (4.5 m/s)**
- Pressure drop @ beginning point of water penetration (@0.01oz / ft² of free area) - **0.39 in. wg (96.6 Pa)**
- Intake pressure drop @ 1,000 fpm free area velocity—**0.5 in. wg (123.4 Pa)**
- Discharge loss coefficient Classification—**Class 3**



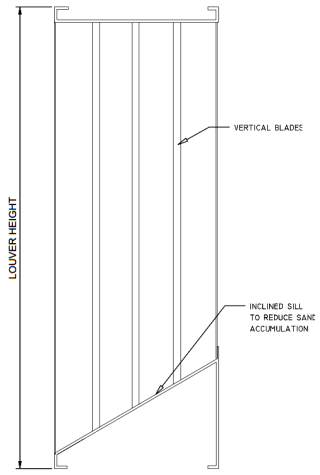
SAND REJECTION PERFORMANCE:

Sand Trap louver was subjected to wind driven sand at an airflow speed of 20-25 m/s measured in the injection tube with various masses and delivery rates. In addition to the simulated wind, air is drawn through the louver at a range of different velocities as specified below.

After each sand delivery, the fans are kept running for a further 2 minutes. The sand grading used for this is between 1µm - 699µm as per AMCA 500-L.

Airflow Rate (m³/s)	*0.688	**0.77**	**1.91**	**2.22**	**2.66**
Free Area Velocity (m/s)	*0.925	**1.04**	**2.56**	**2.99**	**3.57**
Core Area Velocity (m/s)	*0.5	**0.6**	**1.4**	**1.6**	**1.9**
Weight of Sand (kg)	*1	**1**	**1**	**2**	**2**
Discharge Duration (s)	*200	**200**	**75**	**100**	**70**
Sand Feed Rate (kg/s)	*0.005	**0.005**	**0.013**	**0.020**	**0.029**
Louver Effectiveness (%)	*58.60%	**54.30%**	**4.90%**	**2.65%**	**1.60%**
Penetration Class	*D	**D**	**D**	**D**	**D**

NOTE: The test data at **0.5 m/s, core area velocity*, were obtained in a laboratory accredited by AMCA for AMCA 500-L Pressure Drop. These test data (*) are outside the specification of the standard and will not be accepted for the purposes of certification.



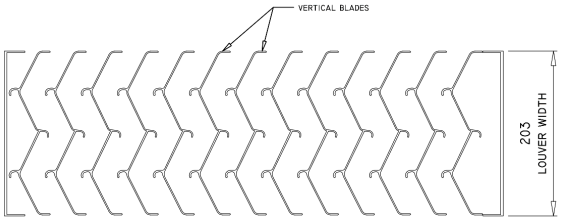
SECTION

Suggested Specifications:

General: Furnish and install where indicated on drawings 8" (203mm) High Performance Sand Louver Model as manufactured by Ontario Specialty Architectural Products.

System Description:

203mm deep extruded aluminum construction; frame with channel profile; joints mechanically fastened, with continuous recessed caulking channel each side; capable of long vertical spans; tested for sand rejection in accordance with BS EN 13181:2001 standards & air performance as per AMCA 500-L standards.



SECTIONAL PLAN

Material & Finishes:

1. SA-820V comprises 200mm wide vertical sand trap blades in 203mm deep extruded aluminum frames.
   a. Blades: Vertical—Sand trap
   b. Frame depth: 203.2mm deep
2. Metal Thickness: Frame 2 mm; blades 1.60 mm
3. Finish: PE-SDF / PVDF / Anodize after fabrication
4. Color: As scheduled.
5. Mullions: Exposed
6. Screens: Bird mesh / Insect mesh
7. Screen location: Interior
8. Screening Material: Aluminium / Stainless Steel

Louver Construction:

1. Wind Load Resistance: Design to resist +ve and –ve wind load of ___ psf (___kPa) without damage or permanent deformation.
2. Blades: One piece extrusions with reinforcing bosses, supported and lined up with heavy-gage extruded aluminum blade braces, positively interlocked to each blade and mechanically secured to structure by aluminum and stainless steel fastenings.
3. Exposed edges and ends of metal dressed smooth, free from sharp edges.
4. Exposed connections and joints constructed to exclude water.

Optional Accessories:

- Extended Sill Flashing
- Insulated and Non-insulated Bank-off Panels
- Sub-frames
- Visible Mullions
- Invisible mullions for continuous blade and appearance.

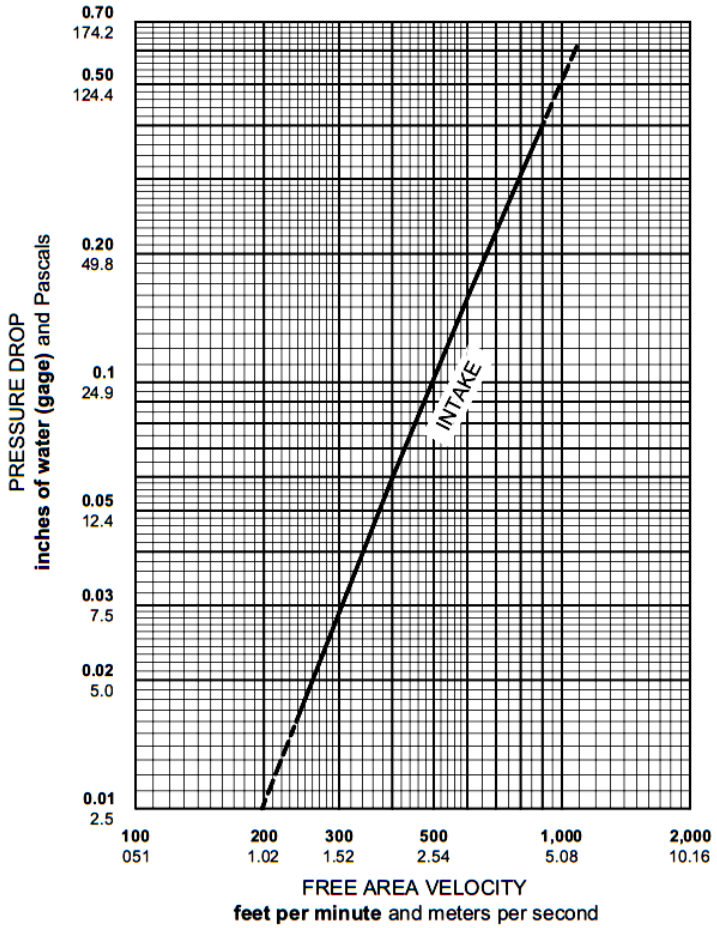
Warranty:

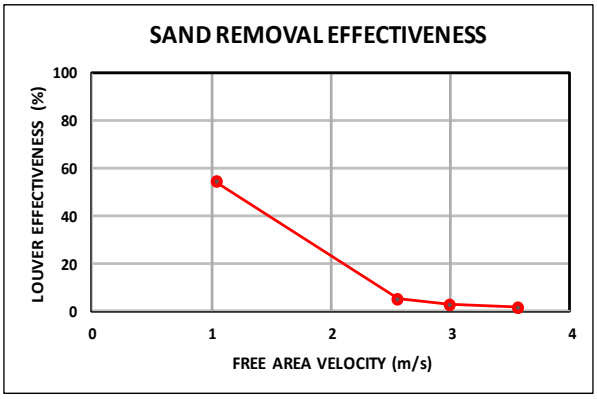
OSA louvers warranted for 2 years against defective material and workmanship, and 20 Years for Finishes.

Model—SA-820V

203mm DEEP SAND LOUVER

HEIGHT (IN & *mm*)	FREE AREA (ft² and *m²*) WIDTH (IN & *mm*)									
	12	**24**	**36**	**48**	**60**	**72**	**84**	**96**	**108**	**120**
	305	*610*	*914*	*1219*	*1524*	*1829*	*2134*	*2438*	*2743*	*3048*
12	**0.21**	**0.65**	**1.09**	**1.54**	**1.98**	**2.42**	**2.86**	**3.31**	**3.75**	**4.19**
305	*0.02*	*0.06*	*0.10*	*0.14*	*0.18*	*0.23*	*0.27*	*0.31*	*0.35*	*0.39*
24	**0.50**	**1.56**	**2.63**	**3.69**	**4.75**	**5.81**	**6.88**	**7.94**	**9.00**	**10.06**
610	*0.05*	*0.15*	*0.24*	*0.34*	*0.44*	*0.54*	*0.64*	*0.74*	*0.84*	*0.94*
36	**0.79**	**2.48**	**4.16**	**5.84**	**7.52**	**9.20**	**10.89**	**12.57**	**14.25**	**15.93**
914	*0.07*	*0.23*	*0.39*	*0.54*	*0.70*	*0.86*	*1.01*	*1.17*	*1.32*	*1.48*
48	**1.09**	**3.39**	**5.69**	**8.16**	**10.29**	**12.60**	**14.90**	**17.20**	**19.50**	**21.80**
1219	*0.10*	*0.31*	*0.53*	*0.76*	*0.96*	*1.17*	*1.38*	*1.60*	*1.81*	*2.03*
60	**1.38**	**4.30**	**7.22**	**10.14**	**13.07**	**15.99**	**18.91**	**21.83**	**24.75**	**27.67**
1524	*0.13*	*0.40*	*0.67*	*0.94*	*1.21*	*1.49*	*1.76*	*2.03*	*2.30*	*2.57*
72	**1.67**	**5.21**	**8.75**	**12.30**	**15.84**	**19.38**	**22.92**	**26.46**	**30.00**	**33.54**
1829	*0.16*	*0.48*	*0.81*	*1.14*	*1.47*	*1.80*	*2.13*	*2.46*	*2.79*	*3.12*
84	**1.92**	**5.99**	**10.07**	**14.14**	**18.21**	**22.29**	**26.36**	**30.43**	**34.50**	**38.58**
2134	*0.18*	*0.56*	*0.94*	*1.31*	*1.69*	*2.07*	*2.45*	*2.83*	*3.21*	*3.59*
96	**2.21**	**6.91**	**11.60**	**16.29**	**20.98**	**25.68**	**30.37**	**35.06**	**39.75**	**44.45**
2438	*0.21*	*0.64*	*1.08*	*1.51*	*1.95*	*2.39*	*2.82*	*3.26*	*3.70*	*4.13*
108	**2.55**	**7.95**	**13.35**	**18.75**	**24.15**	**29.55**	**34.95**	**40.35**	**45.75**	**51.15**
2743	*0.24*	*0.74*	*1.24*	*1.74*	*2.24*	*2.75*	*3.25*	*3.75*	*4.25*	*4.75*
120	**2.80**	**8.73**	**14.66**	**20.59**	**26.53**	**32.46**	**38.39**	**44.32**	**50.25**	**56.19**
3048	*0.26*	*0.81*	*1.36*	*1.91*	*2.47*	*3.02*	*3.57*	*4.12*	*4.67*	*5.22*

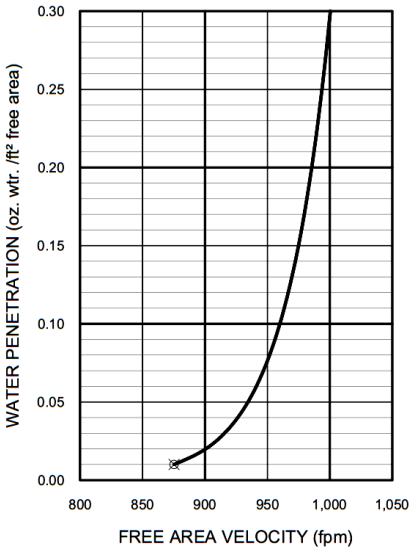




Test Data: Grading of the sand used for wind driven sand performance tests shall be as per Annex H, Table 8, of ANSI/ AMCA Standard 500-L.

WATER PENETRATION

Standard Air = 0.75 lb. / ft³



The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The point of zero water penetration is defined as that velocity where the water penetration curve projects through .01 oz of water penetration per sq. ft. of louver area. **The beginning point of water penetration for SA-820V is 876 fpm free area velocity**.

Test Data

- Published data is in accordance with ANSI/AMCA 500-L, Figure 5.5. The AMCA Certified Ratings Seal applies to Air Performance in the intake & exhaust airflow directions. Data corrected to standard air density. Test Sample Size 48”x48” .
- Ratings include the effects of a drain pan.

Blast Data

- Model SA-820V is designed to withstand up to 12 psi blast pressure at an impulse of 89 psi-msec.