

Model PL-5800 - 3/8" (9.53 mm) Hole Pattern 7.5" (190.5 mm) Perforated Vertical Storm Resistant Louver

PATENT PENDING

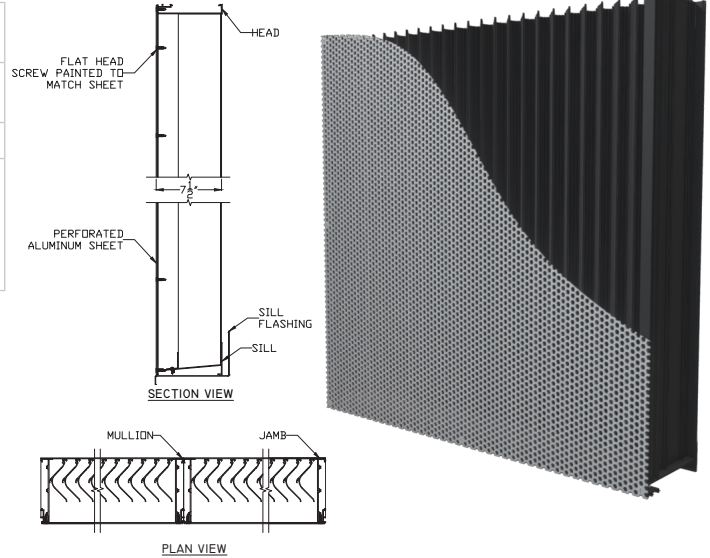
Material:

Material:	Louver 6063-T6 Alloy Perforated Sheet 3003 H14 aluminum
Nominal Thickness:	Heads, Jambes & Mullions: 0.10" (2.54 mm) Sill 0.08" (2.03 mm)
Nominal Blade Thickness:	0.06" (1.52 mm)
Additional Options (at additional cost):	Rear bird or Insect screen Continuous clip angles for attachment Sheet blank off, Insulated blank off Sill pans, Flange frames Integrated glazing frames

**Test Summary:
For a 4 Foot by 4 Foot Unit.**

Tested with mill finish and no rear bird or insect screen

- Free area = 7.59 ft² (0.71 m²)
- Percent free area = 47.4%
- Intake pressure drop at 1000 FPM free area velocity = 0.18 in. H₂O (44.7 Pa)
- To maintain a CLASS A (99%) effectiveness rating* with:
 - a 29.1 mph wind speed an rainfall rate of 3 in/hr
 - Max. intake core velocity 5.0 m/s (990 FPM)
 - Max. intake free area velocity 9.9 m/s (1,941 FPM)
 - a 50 mph wind speed and rainfall rate of 8 in/hr
 - Max. intake core velocity 5.0 m/s (987 FPM)
 - Max. intake free area velocity 9.8 m/s (1,936 FPM)



Discharge Coefficient
Intake Cd = 0.30 (Class 2)

Application and Design

PL-5800 (3/8" holes) was tested utilizing a test protocol derived from AMCA 550 with the exception that the louver was tested with a perforated plate across the airflow, which is not allowed in the standard. Less than 1% of the total water penetrated through the louver and perforated plate throughout the duration of the test.

Wind Driven Rain Performance: Tested with 1m² core area, mill finish and no rear bird or insect screen*

The louver test was based on a 39.370" (1.0 m) x 39.370" (1.0 m) core area unit tested at a rainfall rate of 3" per hour (75 mm/hr) and with a wind directed to the face of the louver at a velocity of 29.1 mph (13 m/s) as well as a rainfall rate of 8" per hour (203 mm) and a wind velocity of 50 mph (23.3 m/s). The test data shall show the water penetration effectiveness rating at each corresponding ventilation rate.

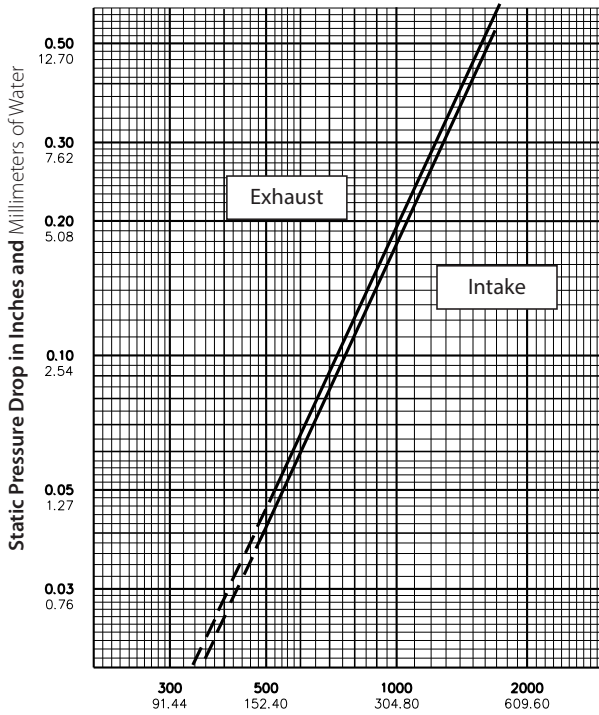
29.1 mph (13 m/s) & 3" (75 mm) rain per hour

Core Velocity Through Cal. Plate (m/s):	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Core Velocity Through Louver (ft/min):	0	98	197	295	394	492	591	689	799	886	990
Free Area Velocity (ft/min):	0	193	386	579	772	965	1159	1351	1567	1737	1941
Rating Effectiveness:	A	A	A	A	A	A	A	A	A	A	A
Effectiveness Ratio (%):											100

50 mph (22.3 m/s) & 8" (203 mm) rain per hour

Core Velocity Through Cal. Plate (m/s):	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.1	4.5	5.0
Core Velocity Through Louver (ft/min):	0	98	197	295	394	492	591	689	799	895	987
Free Area Velocity (ft/min):	0	193	386	579	772	965	1158	1351	1567	1755	1936
Rating Effectiveness:	A	A	A	A	A	A	A	A	A	A	A
Effectiveness Ratio (%):									99.9	99.8	99.8
Effectiveness Rating:	A = 1 to 0.99			B = 0.989 to 0.95			C = 0.949 to 0.80			D = Below 0.80	

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Air Velocity in Feet and Meters per Minute Through Free Area

Data corrected to standard air density.
48" x 48" (121.92cm x 121.92cm) louver tested to figure 5.5.

Free Area Table (Free area in sq. feet and sq. meters)

For additional sizes, please visit:

<https://www.c-sgroup.com/louvers-airflow-tool>

Width in Inches and Meters

Height in Inches and Meters	Width in Inches and Meters							
	18 0.46	24 0.61	30 0.76	36 0.91	42 1.07	48 1.22	54 1.37	60 1.52
18 0.46	0.92	1.24	1.56	1.88	2.21	2.53	2.80	3.12
24 0.61	0.09	0.12	0.15	0.18	0.21	0.24	0.26	0.29
30 0.76	1.28	1.73	2.19	2.64	3.09	3.54	3.92	4.37
36 0.91	0.12	0.16	0.20	0.25	0.29	0.33	0.36	0.41
42 1.07	1.65	2.23	2.81	3.39	3.97	4.56	5.04	5.62
48 1.22	0.15	0.21	0.26	0.32	0.37	0.42	0.47	0.52
54 1.37	2.01	2.73	3.44	4.15	4.86	5.57	6.16	6.87
60 1.52	0.19	0.25	0.32	0.39	0.45	0.52	0.57	0.64
66 1.68	2.38	3.22	4.06	4.90	5.74	6.58	7.28	8.12
72 1.83	0.22	0.30	0.38	0.46	0.53	0.61	0.68	0.75
78 1.98	2.75	3.72	4.69	5.65	6.62	7.59	8.40	9.37
84 2.13	0.26	0.35	0.44	0.53	0.62	0.71	0.78	0.87
90 2.29	3.11	4.21	5.31	6.41	7.51	8.61	9.52	10.62
96 2.44	0.29	0.39	0.49	0.60	0.70	0.80	0.88	0.99
102 2.59	3.48	4.71	5.93	7.16	8.39	9.62	10.64	11.87
108 2.74	0.32	0.44	0.55	0.67	0.78	0.89	0.99	1.10
114 2.90	3.85	5.20	6.56	7.92	9.27	10.63	11.76	13.12
120 3.05	0.36	0.48	0.61	0.74	0.86	0.99	1.09	1.22
126 3.21	4.21	5.70	7.18	8.67	10.16	11.64	12.88	14.37
132 3.37	0.39	0.53	0.67	0.81	0.94	1.08	1.20	1.33
138 3.53	4.58	6.19	7.81	9.42	11.04	12.66	14.00	15.62
144 3.69	0.43	0.58	0.73	0.88	1.03	1.18	1.30	1.45
150 3.85	4.94	6.69	8.43	10.18	11.92	13.67	15.12	16.87
156 3.99	0.46	0.62	0.78	0.95	1.11	1.27	1.40	1.57
162 4.15	5.31	7.18	9.06	10.93	12.81	14.68	16.24	18.12
168 4.31	0.49	0.67	0.84	1.02	1.19	1.36	1.51	1.68
174 4.47	5.68	7.68	9.68	11.69	13.69	15.69	17.36	19.37
180 4.63	0.53	0.71	0.90	1.09	1.27	1.46	1.61	1.80
186 4.79	6.04	8.18	10.31	12.44	14.57	16.71	18.48	20.62
192 4.95	0.56	0.76	0.96	1.16	1.35	1.55	1.72	1.92
198 5.11	6.41	8.67	10.93	13.19	15.46	17.72	19.60	21.86
204 5.27	0.60	0.81	1.02	1.23	1.44	1.65	1.82	2.03
210 5.43	6.77	9.17	11.56	13.95	16.34	18.73	20.72	23.11
216 5.59	0.63	0.85	1.07	1.30	1.52	1.74	1.93	2.15
222 5.75	7.14	9.66	12.18	14.70	17.22	19.74	21.84	24.36
228 5.91	0.66	0.90	1.13	1.37	1.60	1.83	2.03	2.26

Upper Numerals English Units/Lower Numerals Metric Units