

R5455 / 5" STORM RESISTANT LOUVER

STORM RESISTANT LOUVERS

MIGUSHIELD

ARCHITECTURAL LOUVERS



Architectural Louvers	R5455 / 5" Storm Resistant Louver
Louver Type	Mullion or Continuous Line
Louver Depth	5" (127 mm)
Blade Angle	45°
Free Area - 4'x4' Unit	7.54 sq.ft. (0.70m ²)
Percentage Free Area	47.1 %
Free Area Velocity at Beginning Point of Water Penetration [0.01 oz/ft ²]	1100 FPM (5.59 m/s)
Air Volume at Beginning Point of Water Penetration 4'x4' Unit [test duration of 15 minutes]	8294 CFM (4.0 m ³ /s)
Pressure Drop at Beginning Point of Water Penetration	0.40 in. H ₂ O (39.5 Pa)
Notes	Tested without bird screens
Wind Driven Rain Water Penetration Data [29 mph (13 m/s) wind velocity with a 3 in/hr (75 mm/hr) rainfall rate]:	
Effectiveness Ratio: 99.8 % (Class "A" Rating)	Core Ventilation Rate: 0.7 m/s (133 fpm) Free area velocity: 1.4 m/s (276 fpm)
Effectiveness Ratio: 98.9 % (Class "B" Rating)	Core Ventilation Rate: 1.0 m/s (192 fpm) Free area velocity: 2 m/s (388 fpm)

System Description

Extruded aluminum construction; frame with channel profile; corner joints mitered and Mechanically fastened, with continuous recessed channel each side.

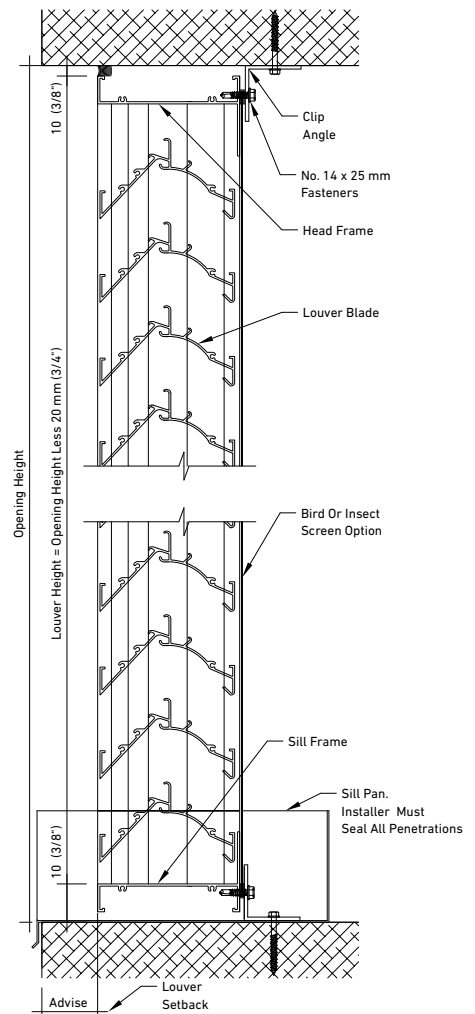
Material

Head, sill, jambs and mullions shall have a minimum thickness of 0.080" (2.0 mm) 6063-T5 aluminum alloy. Blades shall be continuous, 0.090" (2.3 mm) 6063-T5 aluminum alloy with a storm hook design. Louvers shall be supplied with a 1/2" (12 mm), 19 gauge (1 mm) welded and regalvanized wire mesh in a mill finish, aluminum frame. Fasteners shall be standard zinc plated steel or stainless steel.

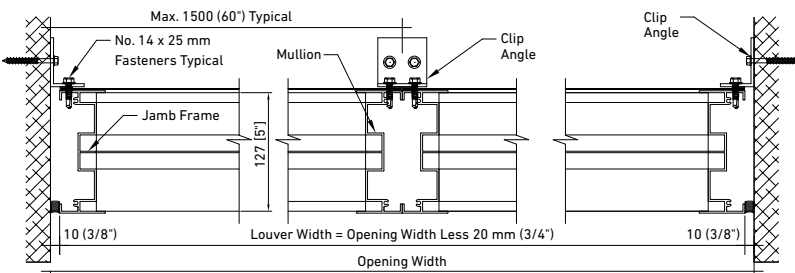
Structural Design

Structural supports shall be designed and furnished by the louver manufacturer to support a wind load of 20 psf (958 Pa), unless specified otherwise. Any louver opening greater than 10' (3 m) high, will require a horizontal girt, at mid span by others.

VERTICAL SECTION



HORIZONTAL SECTION



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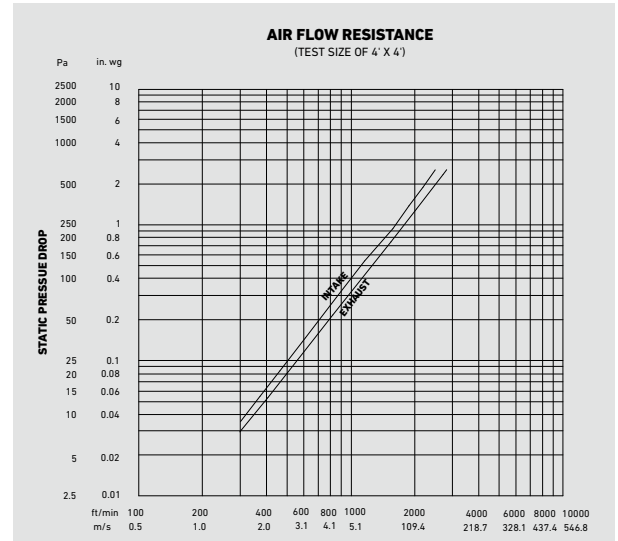
Louver height in inches/millimeters	Louver width in inches/millimeters				
	12 305	24 610	36 914	48 1219	60 1524
Free area in square ft/square meters					
12 305	0.30 0.03	0.67 0.06	1.05 0.10	1.42 0.13	1.79 0.17
24 610	0.66 0.06	1.46 0.14	2.27 0.21	3.08 0.29	3.89 0.36
36 914	1.13 0.11	2.52 0.23	3.91 0.36	5.31 0.49	6.70 0.62
48 1219	1.71 0.16	3.81 0.35	5.91 0.55	7.54 0.70	10.11 0.94
60 1524	1.99 0.19	4.45 0.41	6.90 0.64	9.36 0.87	11.81 1.10
72 1829	2.47 0.23	5.51 0.51	8.55 0.79	11.58 1.08	14.62 1.36
84 2134	2.94 0.27	6.57 0.61	10.19 0.95	13.81 1.28	17.43 1.62
96 2438	3.52 0.33	7.86 0.73	12.19 1.13	16.52 1.54	20.86 1.94
108 2743	3.74 0.35	8.34 0.78	12.94 1.20	17.55 1.63	22.15 2.06
120 3048	4.20 0.39	9.37 0.87	14.54 1.35	19.71 1.83	24.88 2.31
132 3353	4.67 0.43	10.42 0.97	16.17 1.50	21.92 2.04	27.67 2.57
144 3658	5.51 0.48	11.48 1.07	17.81 1.66	24.14 2.24	30.48 2.83

Finishes

- PE-SDF
- PVDF
- Anodize after fabrication

Options & Accessories

- Bird Screen
- Insect Mesh



Wind Driven Rain Performance

Core velocity m/s (f/m)	0 (0)	0.7 (133)	1.0 (192)	1.4 (279)	1.9 (382)	2.4 (473)	3.0 (595)	3.5 (697)
Free area velocity m/s (f/m)	0 (0)	1.4 (268)	2.0 (388)	2.9 (563)	3.9 (770)	4.8 (953)	6.1 (1199)	7.1 (1404)
Effectiveness classification	A	A	B	B	C	C	C	D
Effectiveness ratio	99.8%	99.4%	98.9%	97.2%	94.8%	92.3%	85.7%	74.7%

Discharge Loss Coefficient Class (intake) = 3

This test is based on a 1 m x 1 m (39.37" x 39.37") louver core size, at a rainfall rate of 76 mm/hr (3 in/hr), with wind driven rain applied to the face of the louver at a velocity of 13 m/s (29 mph). The above table shows the effectiveness against water penetration at each corresponding ventilation airflow rate.

Note:

1. Core area is the open area of the louver face (face area less louver frames). Core velocity is the airflow velocity through the core area of the louver (1 m x 1 m).
2. Wind Driven Rain Penetration Classes:

Class	A	B	C	D
Effectiveness	100% to 99%	98.9% to 95%	94.9% to 80%	Below 80%

3. Discharge loss coefficient is calculated by dividing a louver's actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louver's airflow characteristics. The higher the coefficient, the less resistance to airflow.

Class	1	2	3	4
Discharge Loss Coefficient	0.4 and above	0.3 to 0.399	0.2 to 0.299	0.199 and below

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