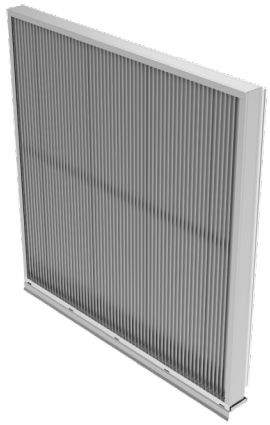
AML3

Airflow Measuring Stationary Louver
Extruded Aluminum

RUSKIN
AUTHORITY IN AIR CONTROL

APPLICATION

Ruskin Model AML3 airflow measuring louver combines the functionality of a wind-driven rain louver and an air measuring station in one compact assembly. Its 4" (102) nominal depth requires less installation space than separate louvers and air measurement devices. The patented AML3 features a wind-driven rain resistant vertical blade design that allows high airflow with minimal water penetration and pressure drop. May be used in any build envelope penetration for intake air.



CERTIFICATE NUMBER AJA07/11923

Patent # 6,149,515

STANDARD CONSTRUCTION

Frame	4" (101.6) deep, 6063T6 high yield extruded aluminum with .062" (1.6) nominal wall thickness.
Extended Sill	.081" (2.1) formed aluminum with end dams.
Blades	6063T6 high yield extruded aluminum with .040" (1) nominal wall thickness. Blades are mounted vertically and spaced approximately 3/4" (19) center to center.
Sensor Blade	6063T6 high yield extruded aluminum, clear anodize finish.
Sensor Port Fittings	Brass.
Pressure Transducer	RU274 R2VDC, 0-5 or 0-10 VDC output, 0-1.0' wc (250 Pa) Range.
Accuracy	3% Deviation Average Across Measurement Range.
Power Requirements	24 VAC or VDC ±10%.
Output Signal	0-5 or 0-10 VDC output (field selectable).
Finish	Mill.
Approximate Shipping Weight	5 lbs. per sq. ft. (24 kg/m^2).
Velocity Requirements	Minimum 345 FPM (1.75 m/s) Free Area Velocity. Maximum 2,024 FPM (10.3 m/s) Free Area Velocity.
Minimum Size	12"w x 12" h (305 x 305).
Maximum Size	Shall be 48"w x 72"h (1219 x 1829). Lifting lugs provided on louvers 48"w x 72"h (1219 x 1829) and larger. Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.

FEATURES

- Pressure Transducer provided
- 45% free area
- Closely spaced vertical blades prevent the penetration of wind-driven rain, reducing damage and additional operating expenses
- Published performance ratings based on testing in accordance with AMCA Publication 511
- Visible mullion construction. Hidden mullions and continuous blade construction are not available

Ruskin AML3 helps satisfy the requirements for minimum outside air as required by the following

- ASHRAE 62.1, 90.1 and 189.1
- California Title 24
- International Mechanical Code (IMC)
- International Energy Conservation Code (IECC)

VARIATIONS

Variations to the basic design of this louver are available additional cost. They include:

- Ruskin Control Dampers may be installed 3" (76) behind sensing blades. Dampers may be provided with electric or manual actuators
- Optional finishes available at additional cost. Please see Paint Finishes and Color Guide and Finish Type Model Chart for more details. Contact louversales@ruskin.com with questions
- **Additional Transducer Model Options:** AMS8100, AMS8100LR, and DPT-IQ

NOTES:
- Values in parentheses ( ) are millimeters unless otherwise indicated.
- Units can be furnished actual size or with size deducts.

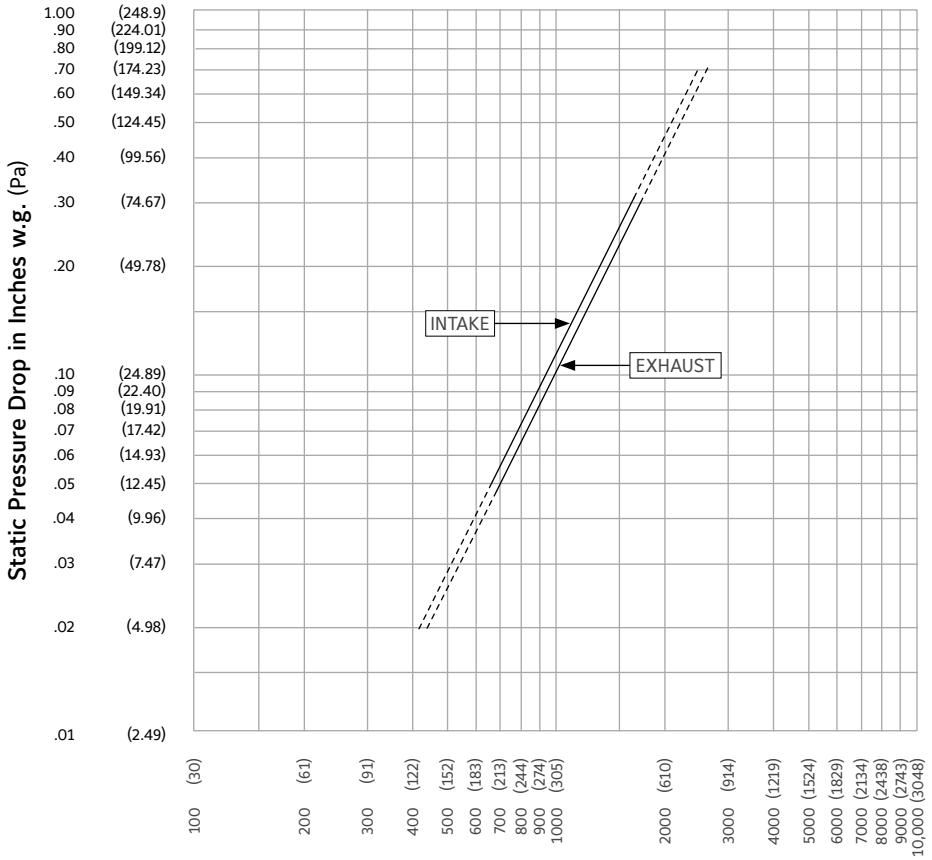
FREE AREA GUIDE

Free Area Guide shows free area in ft^2 and m^2 for various sizes of AML3.

Width – Inches and Meters

Height – Inches and Meters	**12** 0.30	**18** 0.45	**24** 0.60	**30** 0.75	**36** 0.90	**42** 1.05	**48** 1.20
12 0.30	**0.22** 0.02	**0.37** 0.03	**0.52** 0.05	**0.67** 0.06	**0.82** 0.08	**0.97** 0.09	**1.12** 0.10
18 0.45	**0.43** 0.04	**0.72** 0.07	**1.00** 0.09	**1.29** 0.12	**1.57** 0.15	**1.86** 0.17	**2.15** 0.20
24 0.60	**0.64** 0.06	**1.06** 0.10	**1.48** 0.14	**1.91** 0.18	**2.33** 0.22	**2.75** 0.26	**3.18** 0.30
30 0.75	**0.84** 0.08	**1.40** 0.13	**1.96** 0.18	**2.52** 0.23	**3.08** 0.29	**3.64** 0.34	**4.20** 0.39
36 0.90	**1.05** 0.10	**1.74** 0.16	**2.44** 0.23	**3.14** 0.29	**3.84** 0.36	**4.54** 0.42	**5.23** 0.49
42 1.05	**1.25** 0.12	**2.09** 0.19	**2.92** 0.27	**3.76** 0.35	**4.59** 0.43	**5.43** 0.50	**6.26** 0.58
48 1.20	**1.46** 0.14	**2.43** 0.23	**3.40** 0.32	**4.38** 0.41	**5.35** 0.50	**6.32** 0.59	**7.29** 0.68
54 1.35	**1.66** 0.15	**2.77** 0.26	**3.88** 0.36	**4.99** 0.46	**6.10** 0.57	**7.21** 0.67	**8.32** 0.77
60 1.50	**1.87** 0.17	**3.12** 0.29	**4.36** 0.41	**5.61** 0.52	**6.86** 0.64	**8.11** 0.75	**9.35** 0.87
66 1.65	**2.08** 0.19	**3.46** 0.32	**4.85** 0.45	**6.23** 0.58	**7.61** 0.71	**9.00** 0.84	**10.38** 0.97
72 1.80	**2.28** 0.21	**3.80** 0.35	**5.33** 0.50	**6.85** 0.64	**8.37** 0.78	**9.89** 0.92	**11.41** 1.06
78 1.95	**2.49** 0.23	**4.15** 0.39	**5.81** 0.54	**7.47** 0.69	**9.12** 0.85	**10.78** 1.00	**12.44** 1.16
84 2.10	**2.69** 0.25	**4.49** 0.42	**6.29** 0.58	**8.08** 0.75	**9.88** 0.92	**11.68** 1.09	**13.47** 1.25
90 2.25	**2.90** 0.27	**4.83** 0.45	**6.77** 0.63	**8.70** 0.81	**10.64** 0.99	**12.57** 1.17	**14.50** 1.35
96 2.40	**3.11** 0.29	**5.18** 0.48	**7.25** 0.67	**9.32** 0.87	**11.39** 1.06	**13.46** 1.25	**15.53** 1.44

PRESSURE DROP



Air Velocity in feet (meters) **per minute through Free Area**

Pressure Drop testing performed on 48" x 48" (1219 x 1219) unit.
Ratings do not include the effect of a bird screen.

WIND-DRIVEN RAIN PERFORMANCE

Test size is: 39" x 39" (.99 x .99) core area, 41" x 41" (1.04 x 1.04) nominal. Free Area of test louver is 5.18 ft.^{2} (.48m^2).

Wind Velocity mph (kph)	Rainfall Rate In./hr. (mm/hr.)	Core Velocity$_1$ FPM (m/s)	Airflow cfm (m^3/min)	Free Area Velocity$_2$ fpm (m/sec.)	Effectiveness Ratio	Class$_3$	Discharge Loss Class$_4$ Intake
29 (46.4)	3 (76)	967 (5)	10,412 (294)	2,010 (10.0)	99%	A	1
50 (80.5)	8 (203)	974 (5)	10,484 (296)	2,024 (10.1)	99%	A	1

NOTES:

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. 5 m/s (1000 FPM) is the maximum core velocity utilized in this test.
2. Free Area of test size is calculated per AMCA standard 500-L.
3. Wind-Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

4. The AML3 provides class A performance at all velocities up to and including 5 M/s (1000 FPM) core velocity.
5. Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

   Discharge Loss Classes:

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

   (The higher the coefficient, the less resistance to airflow.)

Ruskin Company certifies that the louver 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 the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings and wind driven rain ratings only.

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall possess stationary vertical blades designed to prevent the penetration of wind driven rain (WDR). Louver blades shall be contained within a 3" (76) frame. Louver components (heads, jambs, sill, blades) shall be extruded 6063T6 High Yield Strength aluminum alloy construction and factory assembled complete with air measuring device in an ISO9001 certified facility. Transducer shall be factory mounted and piped to high and low brass pressure fittings from the sensor averaging ports. All sensor tubing shall terminate in solid brass barbed fittings. Complete assembly shall be constructed, piped and calibrated prior to shipment. Louver design shall limit section sizes to 48" x 96" (1219 x 2438) and shall withstand a wind load of 30 psf (1.44 kPa). Air Measuring Louver shall be in all respects equivalent to Ruskin Model AML3.

LINKS TO IMPORTANT DOCUMENTS

Document Title
Paint Finishes and Color Guide
Limited Warranty Document

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