

EME420MD

Wind-Driven Rain Resistant Louver

High Performance Extruded Aluminum Construction

Miami Dade Approved, TDI Listed, Florida Product Approval, AMCA Certified



APPLICATION

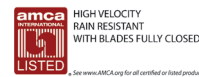
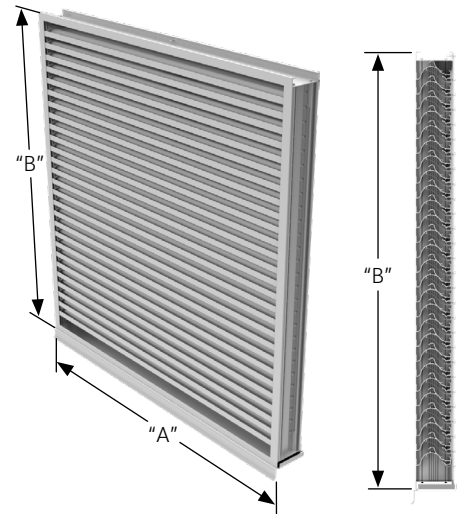
The EME420MD is a Miami Dade approved 4" deep mechanically fastened, extruded aluminum, double drainable, horizontal, stationary louver designed to protect air intake and exhaust openings in exterior walls in hurricane conditions. This louver offers exceptional protection against wind-driven rain under the most severe conditions. It's designed with a drainable gutter system that channels water from the blades to downspouts in the jambs, where water is exhausted out of the front of the louver.

STANDARD CONSTRUCTION

Frame	4" (102) deep, 6063T6 extruded aluminum with .081" (2.1) nominal wall thickness. Downspouts provided in jamb frames.
Blades	6063T6 extruded aluminum .063" (1.6) nominal wall thickness. Double drainable blades are sightproof.
Sill	0.08" formed extended sill with end dams.
Screen	5/8" x .040" (16 x 1) expanded flattened aluminum bird screen in removable frame.
Finish	Mill.
Minimum Size	12"w x 12"h (305 x 305).
Maximum Factory Assembly Size	Single section: 88" (2235) x 144" (3658) - Unlimited Width by 144" Height. 120" (3048) x 60" (1524) - Unlimited Width by Unlimited Height. Field Assembly: Unlimited width x 144"h (3658). Multiple section louvers will be shipped in single sections and must be joined together in the field by the installer. Section joint splice hardware is provided. Unlimited width by Unlimited height is available with maximum section sizes less than or equal to 120" (3048) x 60" (1524). Openings taller than the maximum louver height will need to be divided into multiple openings with suitable structural members. Structural members are not designed or provided by Ruskin.
Approximate Shipping Weight	10 lbs. per sq. ft. (49 kg/m ²).
Installation	The EME420MD must be installed per the appropriate Installation Detail. Reference the appropriate separate Installation Instruction Sheet.

FEATURES

- ▶ Various Frame construction for use in cast-in-place concrete, grout filled CMU
- ▶ Various Installation applications for concrete, grout filled CMU, Steel, Aluminum and Wood
- ▶ Maximum windload ±120 PSF (5.74 kPa)
- ▶ Horizontal blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses
- ▶ 40% Free Area
- ▶ Excellent pressure drop performance
- ▶ Aluminum construction for low maintenance and high resistance to corrosion
- ▶ Published performance ratings based on testing in accordance with AMCA Publication 511 & 512
- ▶ Beginning point of water penetration at .01 oz. /sq. ft. is above 996 fpm (304m/min)
- ▶ AMCA 540 Listed for Basic Protection
- ▶ Miami-Dade NOA Approval # 22-1227.01, expires 2/14/23
- ▶ AMCA 550 with AMCA 550 Approved Damper
- ▶ Florida Product Approved 2017 FBC # 21829.4
- ▶ Texas Department of Insurance (TDI) Listed-LVR-10



VARIATIONS

- ▶ Front or rear security bars
- ▶ Filter racks
- ▶ Universal sleeve
- ▶ Blank off panels
- ▶ Integral flange
- ▶ Drip cap
- ▶ A variety of bird and insect screens
- ▶ 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

Consult Ruskin for other special requirements.

NOTES:

- Dimensions in inches, parenthesis () indicate millimeters.
- Units can be furnished actual size or with size deducts.

PERFORMANCE DATA



**HIGH VELOCITY
RAIN RESISTANT
WITH BLADES FULLY CLOSED**

See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

Ruskin certifies that the EME420MD shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program.



**IMPACT
RESISTANT
LOUVER**
Basic Protection Level D

See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

The AMCA Listing Label applies to wind Born Debris Impact Resistant and High Velocity Wind Driven Rain Resistant Louvers (with optional CD40, CD50 or SD60 damper in the closed position)

FREE AREA GUIDE

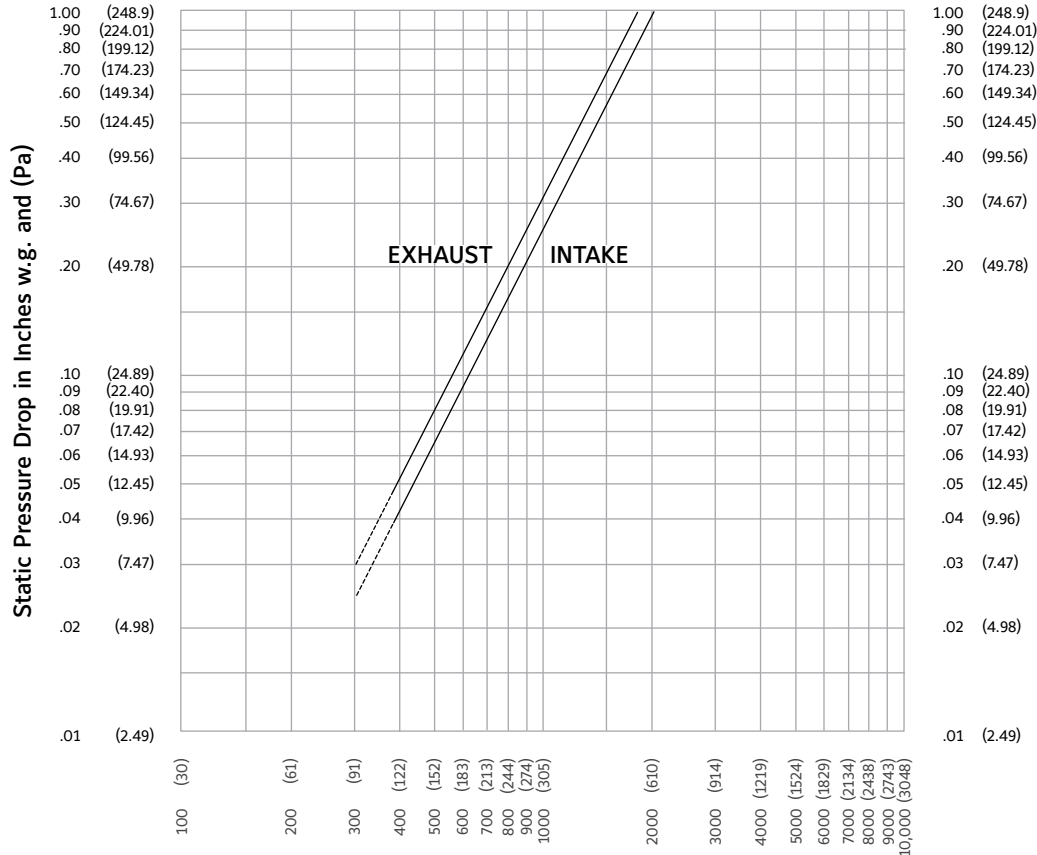
Free Area Guide shows free area in ft² and m² for various sizes of EME420MD.

Width – Inches and Meters

HEIGHT	Width – Inches and Meters																		
	12 0.30	18 0.45	24 0.60	30 0.75	36 0.90	42 1.05	48 1.20	54 1.35	60 1.50	66 1.65	72 1.80	78 1.95	84 2.10	90 2.25	96 2.40	102 2.55	108 2.70	114 2.85	120 3.00
12 0.30	0.15 0.01	0.25 0.02	0.35 0.03	0.45 0.04	0.56 0.05	0.66 0.06	0.76 0.07	0.86 0.08	0.96 0.09	1.07 0.10	1.17 0.11	1.27 0.12	1.37 0.13	1.47 0.14	1.57 0.15	1.68 0.16	1.78 0.17	1.88 0.17	1.98 0.18
18 0.45	0.35 0.03	0.58 0.05	0.82 0.08	1.06 0.10	1.30 0.12	1.54 0.14	1.77 0.16	2.01 0.19	2.25 0.21	2.49 0.23	2.72 0.25	2.96 0.28	3.20 0.30	3.44 0.32	3.67 0.34	3.91 0.36	4.15 0.39	4.39 0.41	4.63 0.43
24 0.60	0.54 0.05	0.92 0.09	1.29 0.12	1.67 0.15	2.04 0.19	2.41 0.22	2.79 0.26	3.16 0.29	3.53 0.33	3.91 0.36	4.28 0.40	4.65 0.43	5.03 0.47	5.40 0.50	5.77 0.54	6.15 0.57	6.52 0.61	6.89 0.64	7.27 0.68
30 0.75	0.69 0.06	1.17 0.11	1.64 0.15	2.12 0.20	2.59 0.24	3.07 0.29	3.55 0.33	4.02 0.37	4.50 0.42	4.97 0.46	5.45 0.51	5.92 0.55	6.40 0.60	6.87 0.64	7.35 0.68	7.82 0.73	8.30 0.77	8.78 0.82	9.25 0.86
36 0.90	0.89 0.08	1.50 0.14	2.11 0.20	2.73 0.25	3.34 0.31	3.95 0.37	4.56 0.42	5.17 0.48	5.78 0.54	6.39 0.59	7.00 0.65	7.62 0.71	8.23 0.77	8.84 0.82	9.45 0.88	10.06 0.94	10.67 0.99	11.28 1.05	11.89 1.11
42 1.05	1.09 0.10	1.84 0.17	2.58 0.24	3.33 0.31	4.08 0.38	4.82 0.45	5.57 0.52	6.32 0.59	7.07 0.66	7.81 0.73	8.56 0.80	9.31 0.87	10.05 0.94	10.80 1.00	11.55 1.07	12.30 1.14	13.04 1.21	13.79 1.28	14.54 1.35
48 1.20	1.24 0.12	2.09 0.19	2.94 0.27	3.78 0.35	4.63 0.43	5.48 0.51	6.33 0.59	7.18 0.67	8.03 0.75	8.88 0.83	9.73 0.90	10.58 0.98	11.43 1.06	12.27 1.14	13.12 1.22	13.97 1.30	14.82 1.38	15.67 1.46	16.52 1.54
54 1.35	1.44 0.13	2.42 0.23	3.41 0.32	4.39 0.41	5.38 0.50	6.36 0.59	7.34 0.68	8.33 0.77	9.31 0.87	10.30 0.96	11.28 1.05	12.27 1.14	13.25 1.23	14.24 1.32	15.22 1.42	16.21 1.51	17.19 1.60	18.18 1.69	19.16 1.78
60 1.50	1.63 0.15	2.75 0.26	3.88 0.36	5.00 0.46	6.12 0.57	7.24 0.67	8.36 0.78	9.48 0.88	10.60 0.99	11.72 1.09	12.84 1.19	13.96 1.30	15.08 1.40	16.20 1.51	17.32 1.61	18.44 1.72	19.56 1.82	20.68 1.92	21.81 2.03
66 1.65	1.78 0.17	3.01 0.28	4.23 0.39	5.45 0.51	6.67 0.62	7.90 0.73	9.12 0.85	10.34 0.96	11.56 1.08	12.79 1.19	14.01 1.30	15.23 1.42	16.45 1.53	17.68 1.64	18.90 1.76	20.12 1.87	21.34 1.98	22.57 2.10	23.79 2.21
72 1.80	1.98 0.18	3.34 0.31	4.70 0.44	6.06 0.56	7.41 0.69	8.77 0.82	10.13 0.94	11.49 1.07	12.85 1.19	14.21 1.32	15.56 1.45	16.92 1.57	18.28 1.70	19.64 1.83	21.00 1.95	22.36 2.08	23.71 2.21	25.07 2.33	26.43 2.46
78 1.95	2.18 0.20	3.67 0.34	5.17 0.48	6.66 0.62	8.16 0.76	9.65 0.90	11.14 1.04	12.64 1.18	14.13 1.31	15.63 1.45	17.12 1.59	18.61 1.73	20.11 1.87	21.60 2.01	23.10 2.15	24.59 2.29	26.09 2.43	27.58 2.56	29.07 2.70
84 2.10	2.38 0.22	4.01 0.37	5.64 0.52	7.27 0.68	8.90 0.83	10.53 0.98	12.16 1.13	13.79 1.28	15.42 1.43	17.05 1.59	18.68 1.74	20.31 1.89	21.94 2.04	23.57 2.19	25.20 2.34	26.83 2.49	28.46 2.65	30.09 2.80	31.72 2.95
90 2.25	2.53 0.23	4.26 0.40	5.99 0.56	7.72 0.72	9.45 0.88	11.19 1.04	12.92 1.20	14.65 1.36	16.38 1.52	18.11 1.68	19.84 1.85	21.58 2.01	23.31 2.17	25.04 2.33	26.77 2.49	28.50 2.65	30.24 2.81	31.97 2.97	33.70 3.13
96 2.40	2.72 0.25	4.59 0.43	6.46 0.60	8.33 0.77	10.19 0.95	12.06 1.12	13.93 1.30	15.80 1.47	17.67 1.64	19.53 1.82	21.40 1.99	23.27 2.16	25.14 2.34	27.00 2.51	28.87 2.69	30.74 2.86	32.61 3.03	34.47 3.21	36.34 3.38
102 2.55	2.92 0.27	4.93 0.46	6.63 0.64	8.93 0.83	10.94 1.02	12.94 1.20	14.94 1.39	16.95 1.58	18.95 1.76	20.95 1.95	22.96 2.14	24.96 2.32	26.96 2.51	28.97 2.69	30.97 2.88	32.97 3.07	34.98 3.25	36.98 3.44	38.99 3.63
108 2.70	3.07 0.29	5.18 0.48	7.28 0.68	9.39 0.87	11.49 1.07	13.60 1.26	15.70 1.46	17.81 1.66	19.91 1.85	22.02 2.05	24.12 2.24	26.23 2.44	28.34 2.64	30.44 2.83	32.55 3.03	34.65 3.22	36.76 3.42	38.86 3.61	40.97 3.81
114 2.85	3.27 0.30	5.51 0.51	7.75 0.72	9.99 0.93	12.23 1.14	14.47 1.35	16.72 1.55	18.96 1.76	21.20 1.97	23.44 2.18	25.68 2.39	27.92 2.60	30.16 2.81	32.40 3.01	34.65 3.22	36.89 3.43	39.13 3.64	41.37 3.85	43.61 4.06
120 3.00	3.47 0.32	5.84 0.54	8.22 0.76	10.39 0.99	12.97 1.21	15.35 1.43	17.73 1.65	20.11 1.87	22.48 2.09	24.86 2.31	27.24 2.53	29.61 2.75	31.99 2.98	34.37 3.20	36.75 3.42	39.12 3.64	41.50 3.86	43.88 4.08	46.25 4.30

PRESSURE DROP

Pressure Drop testing performed on 48" x 48" (1219 x 1219) unit



Ratings do not include the effect of a bird or insect screen.

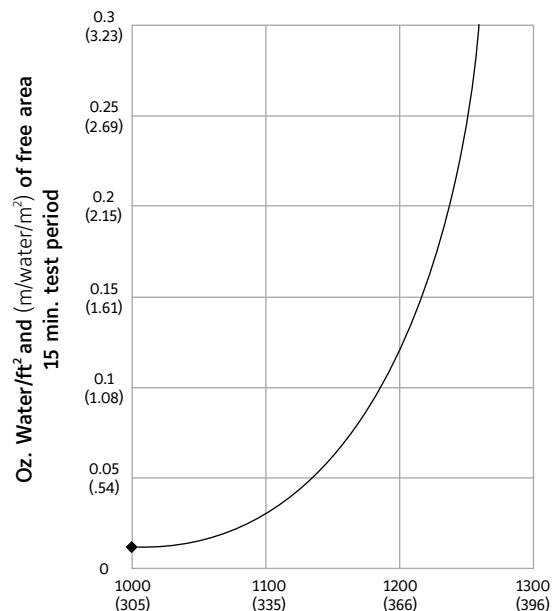
Air Velocity in feet and (meters) per minute through Free Area
(Data corrected to standard air density and AMCA figure or figures testes to 5.5)

WATER PENETRATION GRAPH

AMCA Standard 500 provides a reasonable basis for testing and rating louvers. Testing to AMCA 500-L is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where louvers must operate.

The louver system should be designed with a reasonable safety factor for louver performance. To ensure protection from water carryover design with a performance level somewhat below maximum desired pressure drop and .01 oz./sq. ft. of water penetration.

Test size 48" wide X 48" high (1219 X 1219)
Beginning point of water penetration at .01 oz. /sq. ft. is above 996 fpm (304 m/min).



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, water penetration ratings and wind driven rain ratings only.

WIND-DRIVEN RAIN PERFORMANCE

Test size is 1m x 1m (39" x 39") core area, 1.04m x 1.12m (41" x 44") nominal. Free Area of test louver is 5.45 ft² (.51m²).

29 mph (13 m/s) wind & 3" (76) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.9%	A
0 (0)	0 (0)	0 (0)	99.9%	A
0 (0)	0 (0)	0 (0)	99.9%	A
283 (1.4)	3052 (86.4)	726 (221.3)	99.9%	A
376 (1.9)	4049 (114.7)	964 (293.8)	99.9%	A
464 (2.4)	4992 (141.4)	1190 (362.7)	99.1%	A
578 (2.9)	6224 (176.3)	1482 (451.9)	96.5%	B
681 (3.5)	7334 (207.7)	1746 (532.2)	93.2%	C

50 mph (22 m/s) wind & 8" (203) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.9%	A
101 (.5)	1084 (30.7)	259 (78.9)	99.8%	A
175 (.9)	1889 (53.5)	349 (136.9)	99.7%	A
296 (1.5)	3189 (90.3)	759 (231.3)	99.3%	A
390 (2.0)	4199 (118.9)	1000 (304.8)	98.3%	B
491 (2.5)	5289 (149.8)	1259 (383.7)	97.2%	B
567 (2.9)	6104 (172.9)	1454 (443.2)	96.0%	B
687 (3.5)	7392 (209.3)	1762 (537.1)	91.6%	C

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 (1m x 1m).
2. Free Area of test size is calculated per AMCA standard 500-L.

3. Wind Driven Rain Penetration Classes:

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

4. The EME420MD provides Class A performance at all velocities up to and including 3.5 m/s core velocity.

AMCA550 DAMPER OPTIONS

CONTROL DAMPER

CD40 (Thin Line Control Damper)

(The CD40 combines the lowest leakage attainable-6cfm/sq.ft. at 4"w.g. with thin line, 4" overall depth when the damper is completely open.)

- ▶ Damper Frame and Blade Depth 4"
- ▶ Max Single Section 60" x 72"
- ▶ Opposed Blade
- ▶ Mill Finish
- ▶ Factory-Installed, pneumatic and electric actuators
- ▶ SP100 Switch Package
- ▶ Jack shafted or Extended Shaft option
- ▶ Concealed Linkage

CD50

(The CD50 is a low Leak, extruded aluminum damper designed with air foil blades for higher velocities and pressure HVAC systems. It meets the leakage requirements of the International energy Conservation Code by leaking less than 3cfm.sq.ft. at 1" of static pressure and is AMCA licensed as a Class 1A damper)

- ▶ Air Leakage AMCA Class 1A
- ▶ Damper Frame Depth is 5" and Blade width is 6"
- ▶ Max Single Section 60" x 72"
- ▶ Opposed Blade
- ▶ Mill Finish
- ▶ Factory-Installed, pneumatic and electric actuators
- ▶ SP100 Switch Package
- ▶ Jack shafted or Extended Shaft option
- ▶ Concealed Linkage

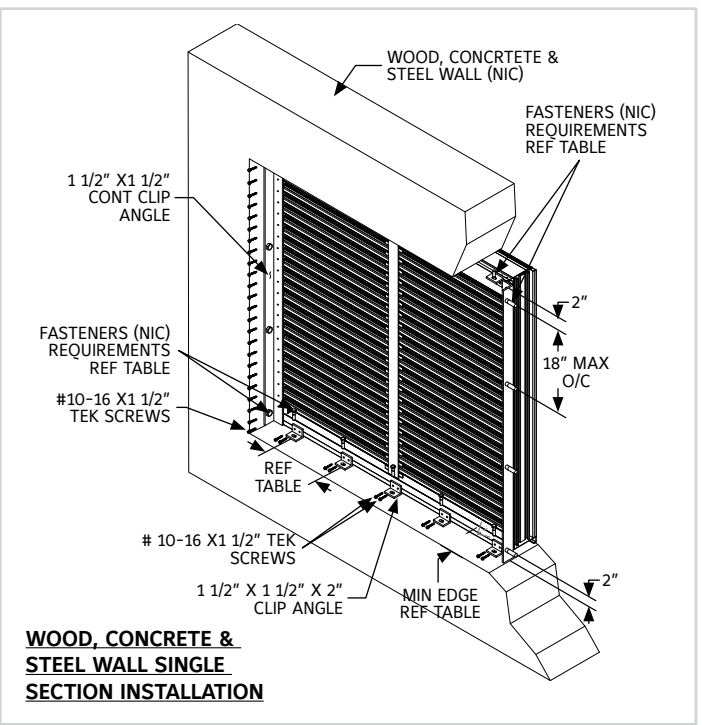
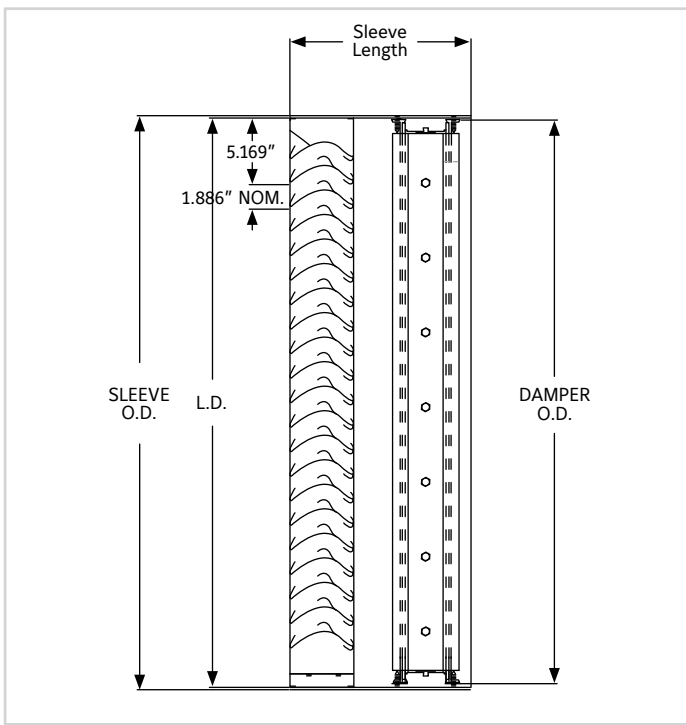
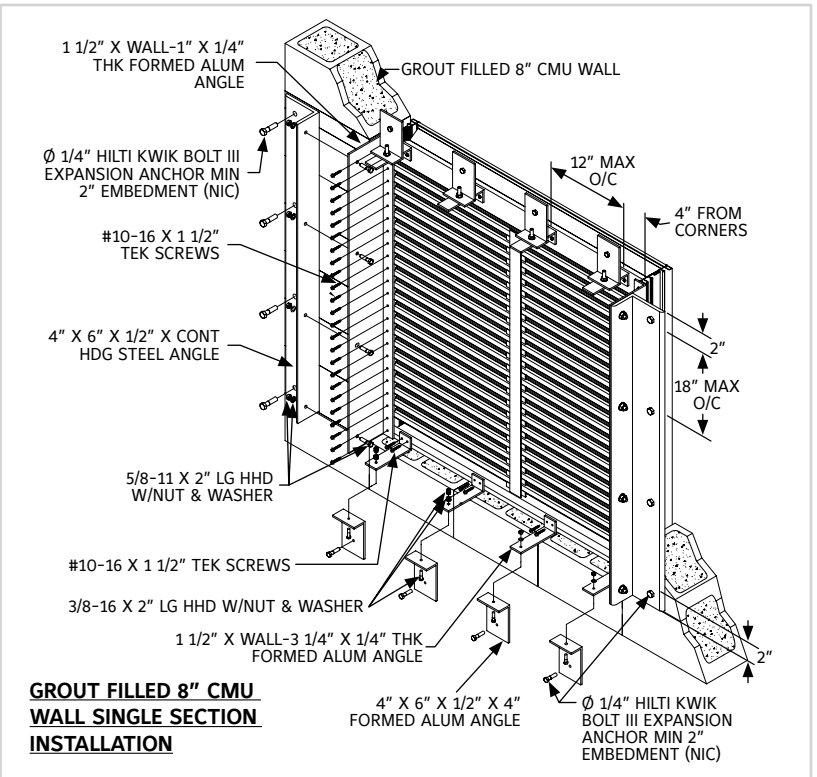
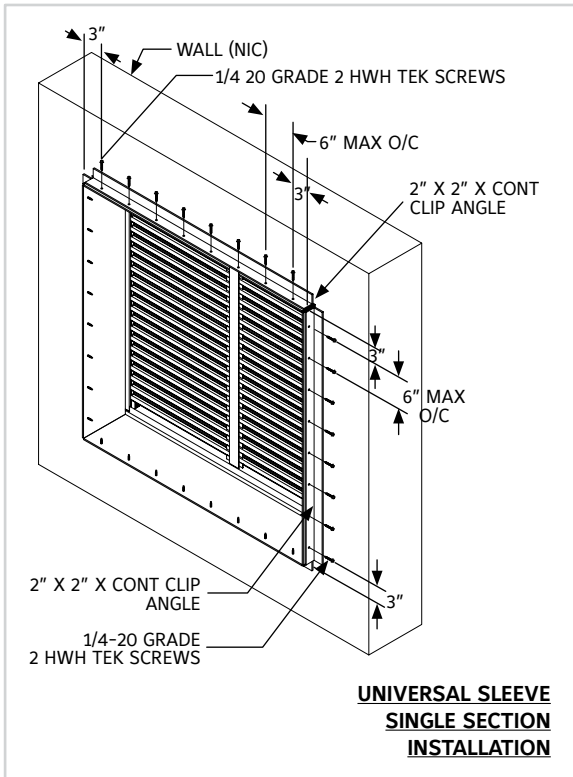
SMOKE DAMPER

SD60 (UL555S Leakage Class 1 Damper)

(The SD60 is an ultra-low leakage rated smoke damper used in ducts that penetrate smoke rated barriers.)

- ▶ Air Leakage Class 1
- ▶ Damper Frame Depth is 5" and Blade width is 6"
- ▶ Max Single Section 48" x 72"
- ▶ Opposed Blade
- ▶ Mill Finish
- ▶ Factory-Installed, pneumatic and electric actuators
- ▶ SP100 Switch Package
- ▶ Jack shafted or Extended Shaft option
- ▶ Concealed Linkage

SHIP SECTION DETAILS



GENERAL NOTES:

1. Reference separate Installation Instruction Sheet for the proper installation method. Miami-Dade and Florida product approvals are contingent upon proper installation. It is the installing contractor's responsibility to ensure that the louvers are installed properly.
2. Some orders may require special submittal and/or shop drawings provided by Ruskin. Reference these drawings for additional installation information.
3. Continuous angles and fasteners are supplied and are shipped loose.
4. Louvers are provided with steel channel supports to be installed behind the visible mullions.
5. Louvers wider than the maximum single section width will be shipped in multiple sections and will require field assembly.

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Double drainable stationary louver meeting the performance criteria established by the Florida Building Code and Miami-Dade County standards TAS 201 (Large Missile Impact), TAS 202 (Uniform Static Air Pressure) and TAS 203 (Cyclic Wind Loading). Combination louver damper are listed by AMCA.

Louvers shall be manufactured in an ISO 9001 certified factory.

Louvers shall be Ruskin Model EME420MD extruded 6063T6 aluminum alloy construction as follows:

Material

Frame: .081" (2.1) wall thickness, caulking surfaces provided.

Blades: .063"(1.6) wall thickness.

Extended Sill: .081" (2.1) wall thickness, with upturned side panels to prevent water leakage.

Screen: 5/8" x .040" (16 x 1) expanded, flattened aluminum bird screen in removable frame.

Finish: Select finish specification from Ruskin Finishes Brochure.

Structural Design

Integral structural supports shall be designed and furnished by the louver manufacturer to carry a wind load of not less than ± 120 psf (6.7 kPa).

LINKS TO IMPORTANT DOCUMENTS

Document Title
Paint Finishes and Color Guide
Limited Warranty Document



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