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LOUVER TYPE
SCV302

STORM CLASS™ LOUVER

Visible Mullion Louver Type	SCV302
Material	Extruded Aluminum
Stationary Blade	0.050 in. (1.27 mm)
Jambs	0.081 in. (2.06 mm)
Head/Sill	0.062 in. (1.57 mm)
Louver Depth	3 in. (76.2 mm)
Free Area – 4 ft. x 4 ft. Unit	8.13 sq. ft. (0.76 m^2)
Percent Free Area	50.8%
Free Area Velocity at Beginning Point of Water Penetration – 0.01 oz H_2O/sq. ft. Free Area	above 1,250 fpm (6.350 m/s)
Air Volume Flow Rate at Beginning Point of Water Penetration – 4 ft. x 4 ft. Unit	10,163 cfm (4.80 m^3/s)
Pressure Drop at Beginning Point of Water Penetration	0.276 in. H_2O (0.069 kPa)

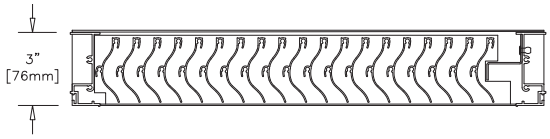
Wind-Driven Rain Water Penetration Data

Exterior Wind Velocity	29 mph (13 m/s)
Rainfall Rate	3 in. (75 mm)/hour
Effectiveness	99.8%
Core Ventilation Rate	983 fpm (5 .0 m/s)
Exterior Wind Velocity	50 mph (22 m/s)
Rainfall Rate	8 in. (200 mm)/hour
Effectiveness	99.4%
Core Ventilation Rate	886 fpm (4.5 m/s)

amca INTERNATIONAL LISTED
HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND 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.

amca WORLDWIDE CERTIFIED RATINGS
WATER PENETRATION
AIR PERFORMANCE
WIND DRIVEN RAIN
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.®
www.amca.org



RECOMMENDED SPECIFICATION

GENERAL
Furnish and install where indicated on plans or described in schedules Storm Class™ Louver Type SCV302 as designed and manufactured by The Airolite Company LLC, Schofield, Wisconsin. Louvers shall be furnished with bird screen, insect screen, supports, installation hardware and finishes as specified and as required for a complete installation.

SUBMITTALS
Manufacturer shall submit shop drawings incorporating key plans, elevations, sections and details showing profiles, angles and spacing of louver blades and frames; unit dimensions related to wall openings and construction; and, anchorage details and locations. Provide samples of manufacturer's finish and color charts showing the full range of colors available. Louver performance shall be certified in accordance with the AMCA 511 Certified Ratings Program for AMCA 500-L Air Performance, Water Penetration and Wind Driven Rain and shall be licensed to bear the AMCA Seal. Louvers shall be AMCA 540 Listed for large missile impact (Basic Protection) and shall be AMCA 550 Listed for High Velocity Wind Driven Rain.

PRODUCTS
Louvers shall be Storm Class™ type and rated to resist water penetration under wind-driven rain conditions. Louvers shall be 3-inches (76.2 mm) deep and assembled entirely from extruded aluminum components. Blades shall be 0.050-inch (1.27 mm) thick aluminum, jambs shall be 0.081-inch (2.06 mm) and head/sill shall be 0.062-inch (1.57 mm) thick aluminum. Blades shall be vertical with a center hook and spaced 0.875-inches (22.22 mm) on center.

STRUCTURAL DESIGN CRITERIA
Maximum single section size for model SCV302 is 60-inches (152 cm) wide x 96-inches (244 cm) high. Larger openings require field assembly of multiple louver sections to make up the overall opening size. Individual louver sections are designed to withstand a 25 PSF wind load (please consult Airolite if the louvers must withstand higher wind-loads). Structural reinforcing members may be required to adequately support and install multiple louver sections within a large opening. Structural reinforcing members along with any associated installation hardware is not provided by Airolite unless indicated otherwise by Airolite. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blank off panels are not subject to structural analysis unless indicated otherwise by Airolite. Additional information on louver installation may be found in AMCA Publication #501, Louver Application Manual.

PERFORMANCE RATINGS

FREE AREA:	8.13 Square Feet (0.76 m^2)
MINIMUM FREE AREA VELOCITY at Beginning Point of Water Penetration:	1,250 fpm (6.350 m/s)
MINIMUM AIR VOLUME FLOW RATE at Beginning Point of Water Penetration:	10,163 cfm (4.80 m^3/s)
MAXIMUM STATIC PRESSURE at Beginning Point of Water Penetration:	0.276 in. H_2O (0.069 kPa)

See page 3 for complete Wind-driven Rain Performance
See page 4 for complete finish options

LOUVER TYPE SCV302 PRODUCT DESCRIPTION & DETAILS

Wind-driven rain is rainfall that is carried by the wind and driven onto the building façade. It is a complex phenomenon of falling raindrops in a turbulent flow of air around a structure. Wind-driven rain is one of the critical factors that ultimately determine the long-term use and effectiveness of building envelopes. In 1999, AMCA Standard 500 was modified to recognize the phenomenon of wind-driven rain with a rigorous new test procedure that measures the effectiveness of louver performance under wind-driven rain conditions. Airolite Storm Class™ louvers are designed and rated to provide high volume intake and exhaust ventilation and prevent water penetration under the most severe wind-driven rain conditions. Airolite Storm Class™ Louver Type SCV302 is a 3- inch (76.2 mm) deep vertical blade louver rated to be 99.4% effective at a core ventilation rate of 886 fpm (4.5 m/s) when tested at a wind velocity of 50 mph (22 m/s) and 8-inch (200 mm) per hour rainfall. Airolite Storm Class™ Louver Type SCV302 is a highly effective louver certified in accordance with the AMCA 511 Certified Ratings Program for AMCA 500-L Air Performance, Water Penetration and Wind Driven Rain and shall be licensed to bear the AMCA Seal. Louvers shall be AMCA 540 Listed for large missile impact (Basic Protection) and shall be AMCA 550 Listed for High Velocity Wind Driven Rain. Please contact your local Airolite representative or the factory for assistance with the layout and design of support systems when required.

VERTICAL SECTION DETAIL

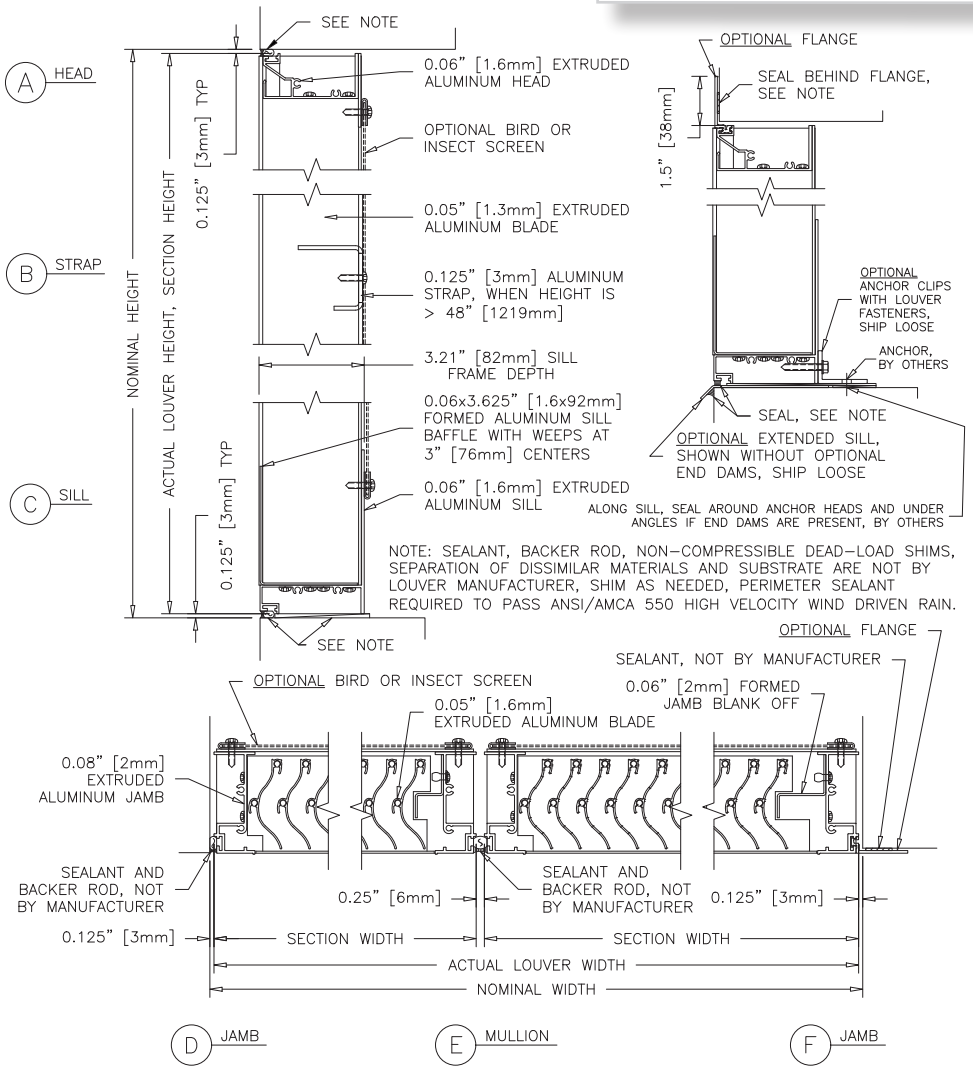
PLAN SECTION DETAIL

Minimum Section Size:

12 in. (30 cm) W x 8 in. (20 cm) H

Maximum Section Size:

60 in. (152 cm) W x 96 in. (244 cm) H



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LOUVER TYPE SCV302 PERFORMANCE RATINGS

FREE AREA CHART - in square feet

Louver Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	**48**	54	60
8	0.06	0.10	0.15	0.19	0.24	0.27	0.32	0.36	0.41
12	0.21	0.36	0.51	0.66	0.82	0.95	1.10	1.25	1.40
18	0.43	0.75	1.06	1.37	1.69	1.96	2.27	2.58	2.90
24	0.66	1.13	1.61	2.08	2.56	2.97	3.44	3.92	4.39
30	0.88	1.52	2.15	2.79	3.43	3.98	4.61	5.25	5.89
36	1.10	1.90	2.70	3.50	4.30	4.99	5.79	6.59	7.39
42	1.33	2.29	3.25	4.21	5.17	6.00	6.96	7.92	8.88
48	1.55	2.67	3.80	4.92	6.04	7.01	**8.13**	9.25	10.38
54	1.70	2.93	4.16	5.40	6.63	7.68	8.92	10.15	11.38
60	1.92	3.32	4.71	6.10	7.50	8.69	10.09	11.48	12.88
66	2.15	3.70	5.26	6.81	8.37	9.70	11.26	12.82	14.37
72	2.37	4.09	5.80	7.52	9.24	10.71	12.43	14.15	15.87
78	2.59	4.47	6.35	8.23	10.11	11.72	13.60	15.48	17.36
84	2.82	4.86	6.90	8.94	10.98	12.73	14.78	16.82	18.86
90	3.04	5.24	7.45	9.65	11.85	13.74	15.95	18.15	20.36
96	3.26	5.63	7.99	10.36	12.73	14.75	17.12	19.49	21.85

The Airolite Company, LLC certifies that the SCV302 louvers shown herein are 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 rain ratings.

HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND 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 Airolite Company, LLC certifies that the SCV302 louvers shown herein are 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. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant and High Velocity Wind-Driven Rain Resistant Louvers.

WATER PENETRATION

(Standard Air - .075 lb./ft.^{3})

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 beginning point of water penetration is defined as that velocity where the water penetration curve projects through 0.01 oz. of water (penetration) per sq. ft. of louver free area. These performance ratings do not guarantee a louver to be weather-proof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers. ***The beginning point of water penetration for Model SCV302 is above 1250 fpm (6.35 m/s) free area velocity.**

WIND-DRIVEN RAIN PERFORMANCE

75mm/h (3 in/hr) Rainfall & 13 m/s (29 mph) Wind Velocity				200mm/h (8 in/hr) Rainfall & 22 m/s (50 mph) Wind Velocity			
Ventilation Air Core Velocity m/s (fpm)	Free Area Ventilation Rate (fpm)	Water Pen. Effectiveness %	Water Pen. Classification	Ventilation Air Core Velocity m/s (fpm)	Free Area Ventilation Rate (fpm)	Water Pen. Effectiveness %	Water Pen. Classification
0.0 (0)	0.0 (0)			0.0 (0)	0.0 (0)		
0.5 (98)	0.8 (161)			0.5 (98)	0.8 (161)		
1.0 (197)	1.6 (324)			1.0 (197)	1.6 (324)		
1.5 (295)	2.5 (486)			1.5 (295)	2.5 (486)		
2.0 (394)	3.3 (649)			2.0 (394)	3.3 (649)		
2.5 (492)	4.1 (810)			2.5 (492)	4.1 (810)		
3.0 (591)	4.9 (973)			3.0 (591)	4.9 (973)		
3.5 (689)	5.8 (1134)			3.5 (695)	5.8 (1144)	99.6	A
4.0 (788)	6.6 (1297)	100.0	A	3.9 (776)	6.5 (1277)	99.4	A
4.5 (882)	7.4 (1452)	99.9	A	4.5 (886)	7.4 (1458)	99.4	A
5.0 (983)	8.2 (1618)	99.8	A	5.0 (978)	8.2 (1610)	97.3	B

Discharge Loss Coefficient Class (Intake) = 2

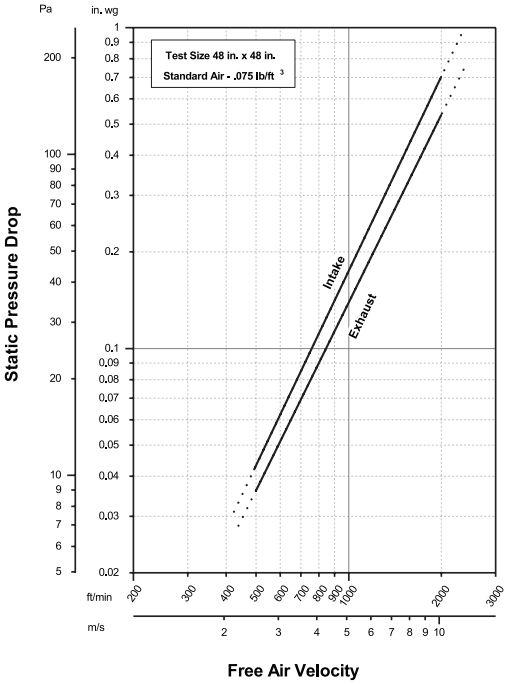
Weather louvers shall be classified by their ability to reject simulated rain. The table to the right shows different classifications based on the maximum simulated rain penetration per square meter (square feet) of louver. Water penetration rating at a given louver face velocity is determined by the water penetration while the louver is subjected to a selected simulated rainfall rate and wind velocity.

Discharge Loss Coefficient Classifications	
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

Wind-driven Rain Penetration Classes	
Class	Effectiveness
A	1 to 0.99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.80

AIRFLOW RESISTANCE

(Standard Air - .075 lb./ft.^{3})



Louver Type SCV302 resistance to airflow varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than the average velocity through the overall louver size. (Tested to AMCA Figure 5.5)

Pressure Drop Calculations *(in English units)*

Intake: $\Delta P = 10^{(2 \log_{10}(V)-6.753)}$

Exhaust: $\Delta P = 10^{(2 \log_{10}(V)-6.873)}$

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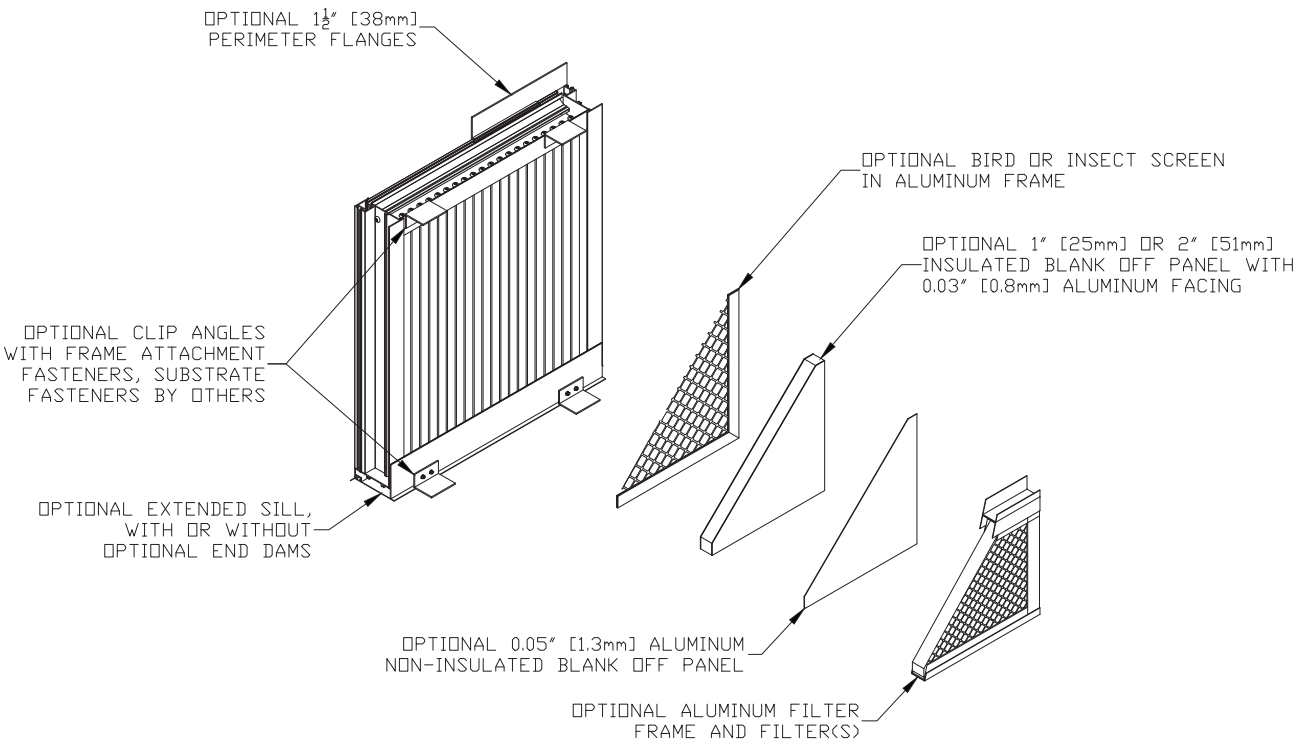
LOUVER TYPE SCV302
METHOD OF INSTALLATION & ACCESSORY OPTIONS



FINISHES

Finish Type	Description/Application	Color Selection	Standard Warranty (Aluminum)
AAMA 2605 100% Fluoropolymer (FEVE) 2-Coat 70% Kynar® (PVDF) 3-Coat 70% Kynar® (PVDF) 4-Coat 70% Kynar® (PVDF)	"**Best.**" The premier finish for extruded aluminum. Tough, long-lasting coating has superior color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.	**Standard Colors:** Any of the 27 standard colors shown can be furnished in 70% or 50% Kynar®, 100% Fluoropolymer or Baked Enamel. **Mica Colors:** Airolite offers 6 standard Mica colors for 70% Kynar® or 100% Fluoropolymer. **Custom Colors:** Custom color matching is available. Consult your Airolite representative for cost and/or lead-time implications if a custom color is required.	10 Years (20 Years Optional)
AAMA 2603 Baked Enamel	"**Good.**" Provides good adhesion and resistance to weathering, corrosion and chemical stain.		1 Year
AA-M10C22A42 Integral Color Anodize	"Two-step" anodizing is produced by following the normal anodizing step with a second, colorfast process.	Light, Medium, Dark or Extra Dark Bronze; Champagne; Black	5 years
AA-M10C22A41 Clear Anodize 215 R-1	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	5 years
AA-M10C22A31 Clear Anodize 204	Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack.	Clear	1 Year
Prime Coat	Louvers or architectural products shall be cleaned, pre-treated and receive a prime coat finish suitable for field painting. Airolite does not recommend prime coat or field painting of materials.		n/a
Mill	Materials may be supplied in natural aluminum or galvanized steel finish when normal weathering is acceptable and there is no concern for color or color change.		n/a

Finishes meet or exceed AAMA 2605, AAMA 2604, and AAMA 2603 requirements. Please consult www.airolite.com for complete information on standard and extended paint warranties. Paint finish warranties are not applicable to steel products.

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Submittal SCV302 September 2021

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