awv
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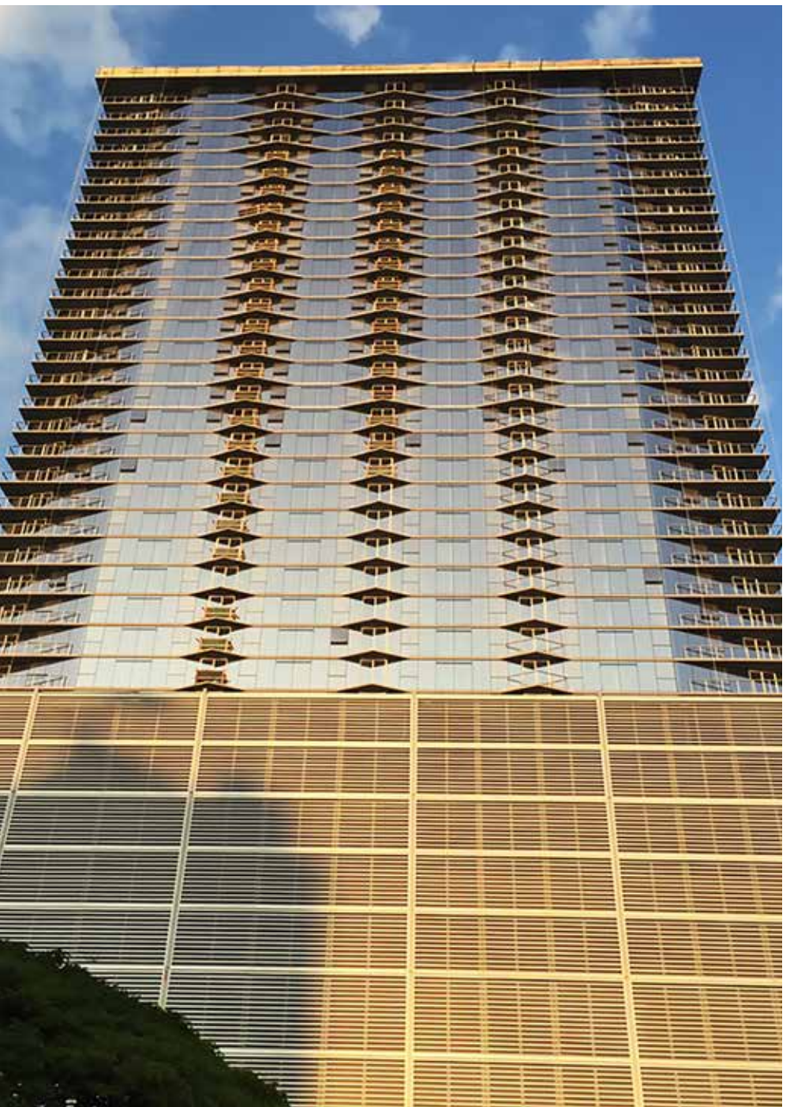
Architectural Products

Louvers
Grilles & Vision Screens
Sunshades
Penthouses



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AWV is headquartered in Bowling Green, Ohio and is a division of Mesktek, Inc. Our emphasis is to provide architectural products and solutions to enhance the beauty and performance of today's building designs.

AWV has more than 100 years of unsurpassed experience in the design and supply of architectural products. Our portfolio, with tens of thousands of successful projects, includes some of the largest, most complex projects in both new and renovation applications.

First office in Toledo, Ohio.

1904 AWV **FOUNDED**

AWV founded as a division of American Furnace and Foundry Company in Bloomington, In. Started as a regional contractor for the installation of gravity heating systems.

1940 AWV MOVED **TO TOLEDO**

AWV remained a contractor until the mid 1940's, when the development of forced warm air heating systems dictated a change in direction. This change was brought about by the purchase of AWV by Fred A. Merry, who diversified into the manufacturing of louvers, dampers, and shutters. Merry moved the company to Toledo, Ohio.

1963 FIRST **PATENT**

AWV patented the first drainable blade louver.

1968 PURCHASED BY **ENTELCO**

AWV became a wholly owned subsidiary of ENTELCO, (owned by the Toledo native Stranahan family), where an extensive representation was built throughout the US, Canada, Spain, Puerto Rico, and South Africa.

1978 TESTING **FACILITY**

Completion of AWV's 5,000 sq. ft. AMCA Certified testing facility at the Bradner, Ohio plant. This facility exceeds standards set by AMCA. AWV also took a leading role in the establishment of AMCA Division Five (louver, damper, and shutter group).

1980 AWV MOVED **TO MAUMEE**

AWV Headquarters moved from downtown Toledo, Ohio to brand new office facilities in Maumee, Ohio.

1987 AQUIRED BY **MESTEK**

AWV became one of five independently operating companies acquired by Mestek, Inc.

1990 LE-52 **PATENTED**

Patented the LE-52 Sightproof Drainable Blade Louver

2007 BRADNER **EXPANDS**

The Bradner, Ohio manufacturing facility opens a 50,000+ sq. ft. expansion

2012 FREEDOM **TOWER**

AWV provides stainless steel tunnel dampers for 1 World Trade Center, formerly known as the Freedom Tower, in New York City.

2014 FEMA **LOUVERS**

AWV designed and added 2 FEMA louvers, the LE-F5 and LF-F8 to the product line

2016 APPLE **CAMPUS**

AWV provides the majority of louvers for the new Apple 2 campus, including the new state-of-the-art R&D building.

2018 FIRST RATED FOR **AMCA 540-550**

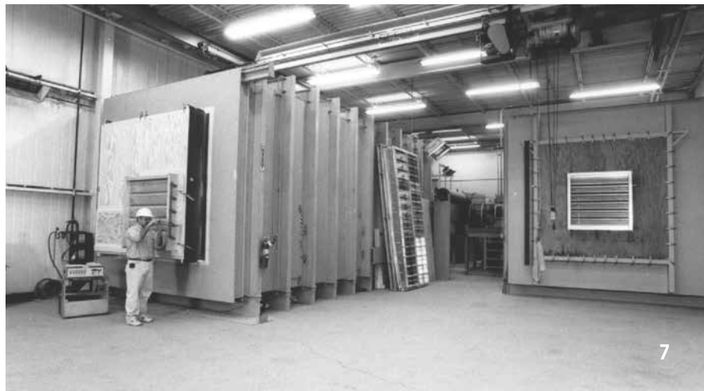
AWV designs the LE-36R, a hurricane louver. It passes AMCA's new tests for hurricane resilience: AMCA 540 and 550

2022 NEW **HQ**

AWV HQ has found its new home in the charming city of Bowling Green, Ohio! Offering all the top-tier services you know and trust from a new zip code.

Manufacturing facility in Bradner, Ohio.

On-site AMCA certified testing lab Bradner, Ohio.



STANDARD FINISHES

AWV architectural products can be provided in mill, anodized, baked enamel, PVDF (aka Kynar) and other special finishes. AWV is a licensed applicator for Akzo Nobel, PPG and Valspar to meet AAMA painting (2603, 2604 & 2605) specifications.

Clear anodizing provides a uniform satin finish that resists oxidation. The 204R1 clear provides a 0.4 mil coating, while the 215R1 clear provides a 0.7 mil coating for extra corrosion and abrasion resistance. Color anodizing is also available in light, medium, dark bronze or black in a 0.7 mil coating.

PVDF (aka Kynar) is a baked-on finish made of 70% PVDF resins and durable ceramic pigments that meets AAMA2605 specifications. PVDF is unsurpassed in its resistance to color fading and chalking from the damaging ultraviolet rays of the sun. It is resistant to general air pollution and will not whiten or pit when exposed to the elements.

PVDF finishes are available in a wide range of colors and glosses. Metallic, pearlescent, and other more exotic formulations are also available. Refer to AWV's Standard Finishes Color Selection brochure for our standard choice of colors. Special color matching can be provided by our in-house computerized paint color formulating system.

CUSTOM SHAPES

AWV offers louvers in any style and shape, not just square or rectangular. Full, half and quarter rounds, triangular and other shapes are available. Just send us a sketch of the shape and dimensions required and we'll engineer a solution.

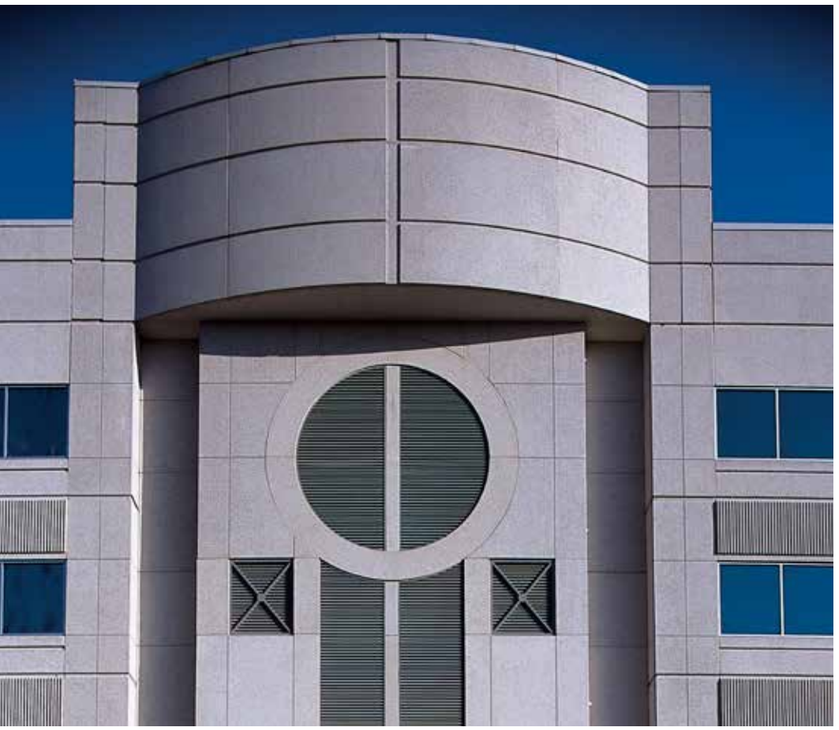
OPTIONS AND ACCESSORIES

AWV offers a wide selection of options and accessories to simplify installation and provide the functionality required.

- Exposed or hidden mullions
- Variable blade spacing and angles
- Electric, pneumatic and manual actuators, various actuator bracket mountings, linkage materials and bearings for adjustable louvers
- Welded and non-welded construction in varying material thicknesses
- Insect/bird screens and hinged access doors
- Sill extensions and blank-off panels of varying dimensions
- Mounting angles, glazing tabs and flanged frames

LEAD TIMES/QUICK DELIVERY

AWV offers competitive and short lead times. In addition, quick ship programs are available on selected models for extra fast delivery.



LUXE ANODIZE FINISH

Get a burnished, metallic look without anodizing. The Luxe Anodize finish uses our standard paint method, and applies the same dye options, to give your louvers the same anodized look. Luxe Anodize provides a cost-effective option that comes with a 20- year warranty and with shorter lead times than standard anodizing.

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Louvers

Children's Hospital of Pittsburgh

The purpose of louvers is to provide ventilation or exhaust air, while offering defense against vision, water and noise intrusion. In addition, the louver designs must give the architect aesthetic flexibility to enhance the building's appearance. AWV's broad line of architectural louvers address these design objectives.

Aesthetically Pleasing

AWV architectural louvers are designed with aesthetics in mind.

Reduced Energy Costs

AWV's louvers are highly aerodynamically efficient. The low air resistance reduces the fan energy required to introduce the ventilation air into or exhaust air out of the building.

Wide Range

AWV louvers are available in a wide variety of shapes, sizes, materials, finishes and coatings to meet the requirements of any project.

Durability

AWV can provide certified structural calculations when requested to ensure louver structural integrity. All architectural louvers are constructed of aluminum.

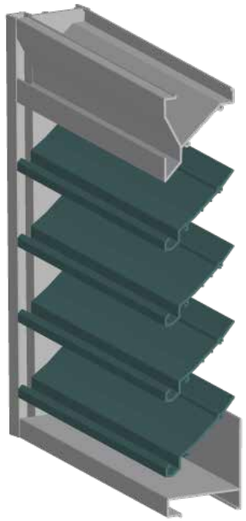
Enhanced and Proven Performance

AWV louvers are both efficient and have a remarkably high resistance to water intrusion. Our louvers have been completely tested for air performance and water penetration.

AWV is a member of the Air Movement and Control Association (AMCA) and our product performance is AMCA certified.

Fixed Drainable Louvers

Moses Cone Hospital North Tower - LE-23



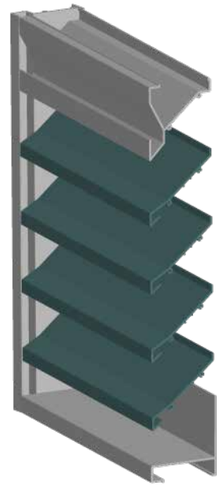
Fixed drainable extruded aluminum architectural louvers are offered in a variety of frame depths, blade angles and spacing. They provide excellent air and water resistance performance and are appropriate for both intake and exhaust applications.

Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade) Inches	Certification Rating			Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-21	Fixed Drainable	H	45.0	5.00	4.00	8.01	50	1025	0.20	8210	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-22	Fixed Drainable	H	45.0	5.00	4.00	8.37	52	1075	0.15	8998	0.125 / 0.125	Y	Y	-	12 x 12	60 x 96
LE-23	Fixed Drainable	H	37.5	3.50	4.00	8.90	56	1009	0.13	8980	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-24	Fixed Double Drainable	H	40.0	4.00	4.00	8.11	51	1026	0.16	8321	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-31	Fixed Drainable	H	37.5	4.00	6.00	9.24	58	1193	0.20	11023	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-32	Fixed Drainable	H	37.5	4.00	6.00	9.24	58	1193	0.20	11023	0.125 / 0.081	Y	Y	-	12 x 12	96 x 96
LE-33	Fixed Double Drainable	H	45.0	7.00	6.00	8.00	50	1033	0.19	8264	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-34	Fixed Double Drainable	H	45.0	6.00	6.00	7.71	48	1212	0.24	9345	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-52	Fixed Chevron Sight Proof Drainable	H	19.0	2.00	5.00	8.52	53	1098	0.33	9355	0.081 / 0.081	Y	-	Y	12 x 12	96 x 96

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size

The Guest House at Graceland - LE-27

Fixed Non-Drainable Louvers



Fixed non-drainable extruded aluminum architectural louvers are offered in a variety of frame depths, blade angles and spacing. Either horizontal or vertical blades are available. They are usually most appropriate for exhaust applications.

Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade) Inches	Certification Rating			Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-27	Fixed Non-drainable	H	45.0	4.00	4.00	9.03	56	779	0.09	7034	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-47	Fixed Non-drainable	H	45.0	5.00	4.00	8.21	51	822	0.18	6749	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-48	Fixed Non-drainable	H	45.0	5.00	4.00	8.21	51	822	0.18	6749	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-49	Fixed Non-drainable	H	30.0	3.50	4.00	9.17	57	902	0.11	8271	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-63	Fixed Non-drainable	H	45.0	7.00	6.00	7.92	50	1076	0.20	8522	0.081 / 0.081	Y	-	-	12 x 12	96 x 96
LE-81V	Fixed Inverted Y Sight Proof Non-drainable	V	45.0	4.00	4.00	4.78	30	-	0.28	3346	0.081 / 0.081	Y	-	Y	12 x 12	96 x 96
LE-81H	Fixed Inverted Y Sight Proof Non-drainable	H	45.0	4.00	4.00	4.57	29	691	0.25	3158	0.081 / 0.081	Y	-	Y	12 x 12	96 x 96
BV-10	Brick Vent Non-drainable	H	45	-	4.00	-	-	-	-	-	0.125 / 0.125	-	-	-	8 x 2½	24 x 7¾

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size

Adjustable Louvers

Adjustable extruded aluminum architectural louvers are offered in a variety of frame depths, blade angles and spacing. Both drainable and non-drainable models are available. They provide the ability to modulate the blade angles. Actuator options include manual, electric and pneumatic.

Cllose-King Indoor Practice Facility - LE-33A

Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness [Frame/Blade] Inches	Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					Min W x H Inches	Max W x H Inches
LE-21A	Adjustable Drainable	H	45.0	5.00	4.00	7.51	47	923	0.17	6932	0.081 / 0.081	12 x 12	60 x 96
LE-31A	Adjustable Drainable	H	37.5	4.00	6.00	9.49	59	1073	0.22	10182	0.081 / 0.081	12 x 12	48 x 96
LE-33A	Adjustable Drainable	H	45.0	7.00	6.00	7.86	49	929	0.20	7307	0.081 / 0.081	12 x 12	60 x 96
LE-47A	Adjustable Non-drainable	H	45.0	5.00	4.00	7.61	48	740	0.19	5631	0.081 / 0.081	12 x 12	60 x 96
LE-48A	Adjustable Non-drainable	H	45.0	5.00	4.00	7.61	48	740	0.19	5631	0.081 / 0.081	12 x 12	60 x 96
LE-63A	Adjustable Non-drainable	H	45.0	7.00	6.00	7.80	49	968	0.22	7553	0.081 / 0.081	12 x 12	60 x 96
LE-88A	Adjustable Non-drainable	H	70.0	5.00	6.00	10.41	65	739	0.19	7693	0.081 / 0.081	12 x 12	60 x 96

Notes:
Performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size

Combination Louvers

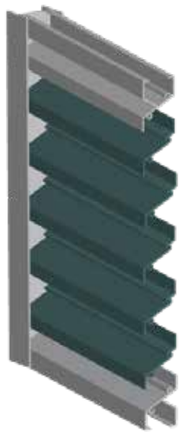
Combination extruded aluminum architectural louvers are offered in a variety of frame depths, blade angles and spacing. All combination models are drainable. Combination louvers offer stationary front blades with hidden adjustable rear blades. This provides adjustability while still giving the fixed sight lines on the visible exterior of the building.

Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade) Inches	Certification Rating			Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-32C	Combination Drainable	H	37.5	4.00	6.00	8.19	51	1250	0.15	10240	0.125 / 0.081	Y	Y	-	12 x 12	60 x 96
LE-45C	Combination Drainable	H	40.0	4.00	4.00	6.78	42	1250	0.17	8475	0.081 / 0.081	Y	-	-	12 x 12	60 x 96
LE-64B	Combination Drainable	H	30.0	5.00	6.00	7.04	44	1039*	0.12	7315	0.081 / 0.081	-	-	-	12 x 12	96 x 96
LE-65C	Combination Drainable	H	37.5	4.00	6.00	8.19	51	1250	0.15	10240	0.081 / 0.081	Y	-	-	12 x 12	60 x 96
LE-66C	Combination Drainable	H	45.0	6.19	6.00	6.46	40	1250	0.20	8075	0.081 / 0.081	Y	-	-	12 x 16	48 x 96

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size
*Pressure drop velocity only

Thin Line Louvers

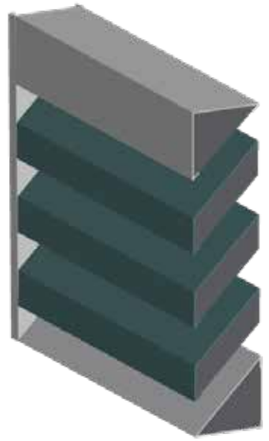
Thin line extruded aluminum architectural louvers are offered in a variety of frame depths, blade angles and spacing. Both drainable and non-drainable models are available. They are intended for use in applications where a limited louver frame depth is required. They easily integrate with most curtain wall and window framing systems.



Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade) Inches	Certification Rating			Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-15	Thin Line Fixed Non-drainable	H	45	2.00	1.50	7.540	47	519	0.05	3913	0.063 / 0.063	Y	-	-	12 x 12	96 x 96
LE-57	Thin Line Fixed Non-drainable	H	45	3.00	2.00	7.200	45	523	0.06	3766	0.063 / 0.063	Y	-	-	12 x 12	96 x 96
LE-58	Thin Line Fixed Drainable	H	45	2.50	2.00	7.770	49	872	0.15	6775	0.063 / 0.063	Y	-	-	12 x 12	96 x 96

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size

Acoustical Louvers



Acoustical fabricated aluminum architectural louvers are offered in a variety of frame depths, blade angles and spacing. All acoustical models are non-drainable. The airfoil blades are filled with fire and water resistant, sound absorbing insulation.

Sound Attenuation Ratings

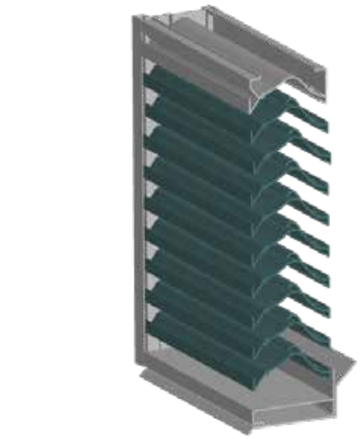
Model	Octave Band	1	2	3	4	5	6	7	8
	Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
LAA-66	Transmission Loss (dB)	1	6	6	9	13	15	14	14
	Free Field Noise Reduction (dB)	7	12	12	15	19	21	20	20
LAA-86	Transmission Loss (dB)	1	4	5	9	16	19	16	13
	Free Field Noise Reduction (dB)	7	10	11	15	22	25	22	19
LAA-88	Transmission Loss (dB)	1	5	6	9	13	16	13	11
	Free Field Noise Reduction (dB)	7	11	12	15	19	22	19	17
LAA-129	Transmission Loss (dB)	2	8	12	16	23	28	25	17
	Free Field Noise Reduction (dB)	8	14	18	22	29	34	31	23
LAA-1212	Transmission Loss (dB)	9	7	8	13	19	14	11	9
	Free Field Noise Reduction (dB)	15	13	14	19	25	20	17	15
LAA-1215	Transmission Loss (dB)	2	6	6	9	12	11	9	11
	Free Field Noise Reduction (dB)	8	12	12	15	18	17	15	17
LAA-12AF	Transmission Loss (dB)	7	6	7	13	15	13	10	9
	Free Field Noise Reduction (dB)	14	12	14	19	21	19	16	15

Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade/Perf) Inches	Certification Rating		Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	STC Class	Min W x H Inches	Max W x H Inches
LAA-66	Fixed Non-drainable	H	45.0	6.00	6.00	4.23	26	858	0.08	3629	0.080 / 0.061 / 0.032	Y	12	12 x 15	72 x 96
LAA-86	Fixed Non-drainable	H	45.0	6.00	8.00	4.24	27	990*	0.10	4198	0.080 / 0.061 / 0.032	-	14	12 x 17	72 x 96
LAA-88	Fixed Non-drainable	H	45.0	8.00	8.00	4.01	25	956	0.09	3834	0.080 / 0.061 / 0.032	Y	12	12 x 20	72 x 96
LAA-129	Fixed Non-drainable	H	45.0	9.00	12.00	2.38	15	990*	0.10	2356	0.080 / 0.061 / 0.032	-	21	12 x 24	72 x 96
LAA-1212	Fixed Non-drainable	H	45.0	12.00	12.00	3.46	22	1089	0.10	3931	0.080 / 0.061 / 0.032	Y	14	12 x 30	72 x 96
LAA-1215	Fixed Non-drainable	H	45.0	15.00	12.00	5.53	35	1173*	0.13	6487	0.080 / 0.061 / 0.032	-	10	12 x 36	72 x 96
LAA-12AF	Fixed Non-drainable	H	45.0	12.00	12.00	3.49	22	1127	0.06	4001	0.080 / 0.061 / 0.032	Y	13	12 x 24	72 x 96

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size
*Pressure drop velocity only

Wind-Driven Rain Louvers

Wind-driven rain architectural louvers are offered in a variety of frame depths, blade angles and spacing. All wind-driven rain louvers are drainable and provide the highest AMCA class A rating against the damaging effects of rain penetration. Either horizontal or vertical blades are available.



Duke Energy Center - LE-59

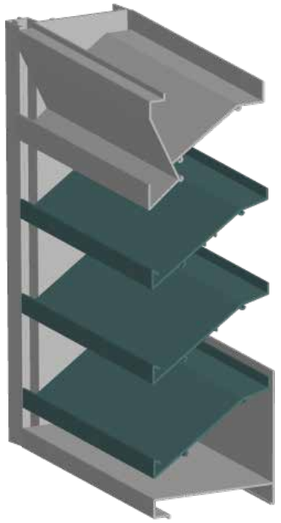
Model	Description	Blade		Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Core Velocity Feet/Minute
		Orientation H - Horiz. V - Vert.	Spacing Inches	Depth Inches	Sq. Ft.	%				
LE-29	Wind-Driven Rain Fixed Drainable	V	0.69	2.00	6.28	39	1250	0.32	7850	777
LE-42	Wind-Driven Rain Fixed Drainable	V	1.63	4.00	4.40	41	-	-	-	688
LE-44	Wind-Driven Rain Fixed Drainable	H	1.63	4.00	8.01	50	1250	0.55	10013	284
LE-53	Wind-Driven Rain Fixed Drainable	H	2.00	5.00	7.08	44	1250	0.31	8850	583
LE-54	Wind-Driven Rain Fixed Drainable	H	2.00	5.00	7.08	44	1250	0.31	8850	583
LE-59	Wind-Driven Rain Fixed Drainable	H	2.00	5.00	8.19	51	1250	0.31	10238	582
LE-62	Wind-Driven Rain Fixed Drainable	H	2.50	6.00	3.16	20	-	-	-	685
LE-67V	Wind-Driven Rain Fixed Drainable	V	1.63	6.00	7.73	48	1250	0.17	7200	688
LE-68V	Wind-Driven Rain Fixed Drainable	V	1.63	6.00	7.85	49	1250	0.16	9813	980
LE-69	Wind-Driven Rain Fixed Drainable	H	2.00	6.00	8.02	50	1250	0.44	10025	376
LE-73	Wind-Driven Rain Fixed Drainable	H	3.50	7.00	7.36	46	649	0.18	4777	201

Model	Description	Material Thickness (Frame/Blade) Inches	Wind-Driven Rain Performance @ 29 mph			Certification Rating			Single Panel Size	
			Class A, B, C, or D	Effectiveness	Coeffiecient of Discharge	AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-29	Wind-Driven Rain Fixed Drainable	0.061 / 0.056	A	99.2	class 3	Y	-	Y	12 x 12	96 x 96
LE-42	Wind-Driven Rain Fixed Drainable	0.081 / 0.081	A*	100.0	class 3	Y	-	Y	12 x 12	96 x 96
LE-44	Wind-Driven Rain Fixed Drainable	0.081 / 0.060	A	100.0	class 1	Y	-	Y	12 x 12	96 x 96
LE-53	Wind-Driven Rain Fixed Drainable	0.081 / 0.060	A	99.0	class 3	Y	-	Y	12 x 12	96 x 96
LE-54	Wind-Driven Rain Fixed Drainable	0.078 / 0.060	A	99.0	class 3	Y	Y	Y	12 x 12	60 x 96
LE-59	Wind-Driven Rain Fixed Drainable	0.081 / 0.060	A	99.5	class 2	Y	-	Y	12 x 12	96 x 96
LE-62	Wind-Driven Rain Fixed Drainable	0.081 / 0.081	A	99.7	class 3	Y	-	Y	12 x 12	96 x 96
LE-67V	Wind-Driven Rain Fixed Drainable	0.081 / 0.081	A*	99.5	class 1	Y	-	Y	12 x 12	96 x 96
LE-68V	Wind-Driven Rain Fixed Drainable	0.125 / 0.081	A	100.0	class 1	Y	Y	Y	12 x 12	96 x 96
LE-69	Wind-Driven Rain Fixed Drainable	0.081 / 0.060	A	100.0	class 1	Y	-	Y	12 x 12	96 x 96
LE-73	Wind-Driven Rain Fixed Drainable	0.081 / 0.081	A	99.0	class 4	Y	-	Y	12 x 12	96 x 96

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size
*Wind-driven rain performance @50 MPH

Hurricane Louvers

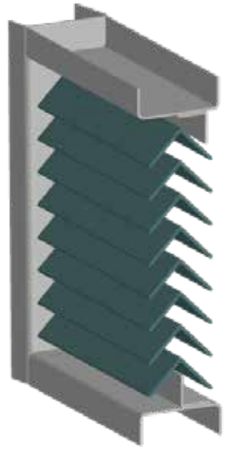
Hurricane Architectural louvers are offered in a variety of frame depths, blade angles and spacing. All hurricane rated louvers are Miami Dade County Certified.



Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade) Inches	Certification Raiting			Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-22	Hurricane Fixed Drainable	H	45.0	5.00	4.00	8.37	52	1075	0.15	8998	0.125 / 0.125	Y	Y	-	12 x 12	60 x 96
LE-32	Hurricane Fixed Drainable	H	37.5	4.00	6.00	9.24	58	1193	0.20	11023	0.125 / 0.081	Y	Y	-	12 x 12	96 x 96
LE-32C	Hurricane Combination Drainable	H	37.5	4.00	6.00	8.19	51	1250	0.15	10240	0.125 / 0.081	Y	Y	-	12 x 12	60 x 96
LE-54	Hurricane Wind-Driven Rain Fixed Drainable	H	-	2.00	5.00	7.08	44	1250	0.31	8850	0.078 / 0.060	Y	Y	Y	12 x 12	60 x 96
LE-68V	Hurricane Wind-Driven Rain Fixed Drainable	V	-	1.63	6.00	7.85	49	1250	0.16	9813	0.125 / 0.081	Y	Y	Y	12 x 12	96 x 96

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size

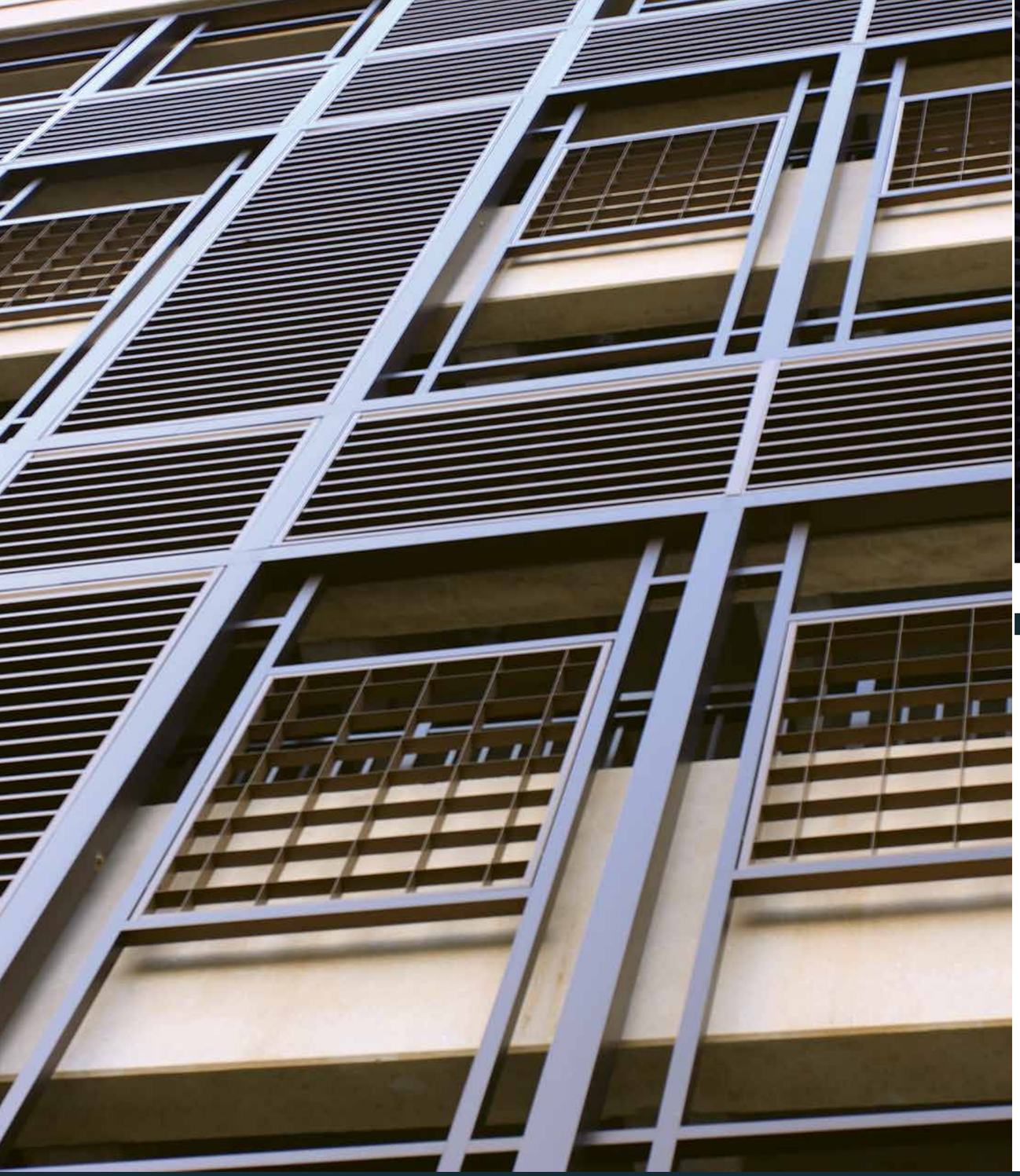
FEMA Louvers



AWV offers two different FEMA louvers in different frame depths. Both the LE-F5 and LF-F8 are high performance louvers which are compliant with FEMA 361 second edition and ICC 500-2008. FEMA louvers provide optimum protection for storm shelters and safe rooms.

Model	Description	Blade			Frame	Free Area		Water Penetration Rating (WPR) Feet/Minute	Pressure Drop @ WPR Inches W.C.	Air Flow SCFM	Material Thickness (Frame/Blade) Inches	Certification Raiting			Single Panel Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Sq. Ft.	%					AMCA	Miami Dade	Sight Proof	Min W x H Inches	Max W x H Inches
LE-F5	FEMA	H	-	-	5.50	7.89	49.3				0.25 / 0.25	Y	-	Y	12 x 12	90 x 90 Continuous Wide 78 x 90 Continuous High
LF-F8	FEMA	H	-	-	8.00	8.47	53				0.25 / 0.25	Y	-	Y	12 x 12	90 x 76 Continuous Wide 76 x 120 Continuous High

Notes:
AMCA certified performance based on 4' x 4' louver
Standard construction designed for 25 PSF (100 mph) wind load for maximum single panel size



Apple Campus 2 R&D Building - LS-47

Grilles / Vision Screens

AWV'S OFFERING

Aesthetically Pleasing

AWV architectural grilles and vision screens are designed with aesthetics in mind.

Wide Range

AWV products are available in a wide variety of shapes, sizes, materials, finishes and coatings to meet the requirements of any project.

Durability

AWV can provide certified structural calculations when requested to ensure structural integrity.

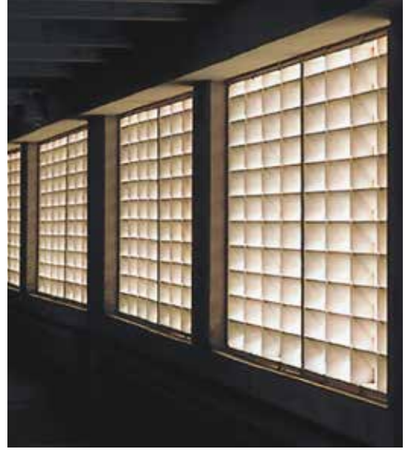
The purpose of architectural grilles is to offer the architect aesthetic flexibility to enhance the building's appearance. Common applications include:

- Decorative treatment on a building's façade.
- Parking garages for ventilation and limiting visibility into the garage.

Vision Screens are most often used to limit the visibility of mechanical equipment on or near the building. Whether for new construction or resurfacing of an existing building, AWV's broad line architectural grilles and vision screens address these design objectives.

Architectural Grilles

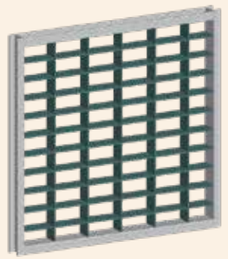
STYLES



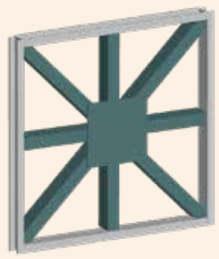
Egg Crate in varying dimensions

Starburst in varying dimensions

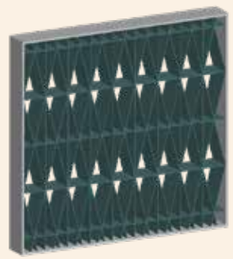
Diamond in varying dimensions



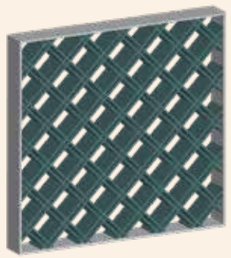
Double Lattice in varying dimensions



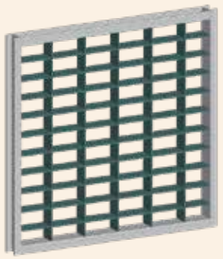
Module Bold in varying dimensions



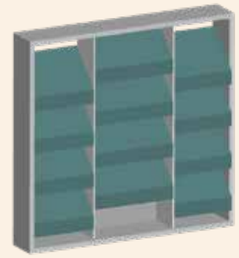
Myriad Staggered in varying dimensions



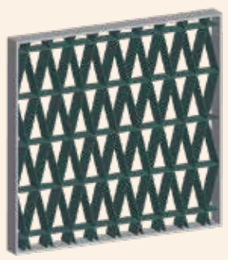
Lattice in varying dimensions

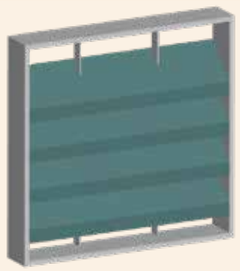


Myriad Continuous in varying dimensions



Sentry in varying dimensions

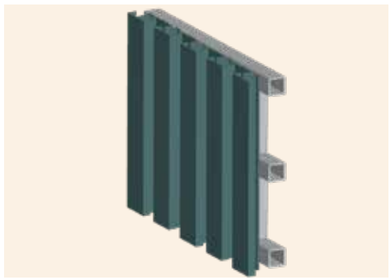




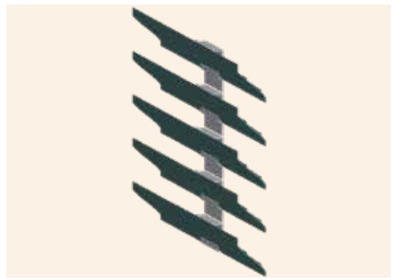
Architectural Vision Screens

STYLES

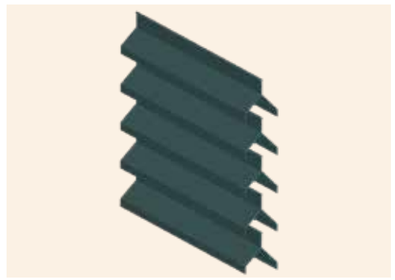
LS-10



LS-47

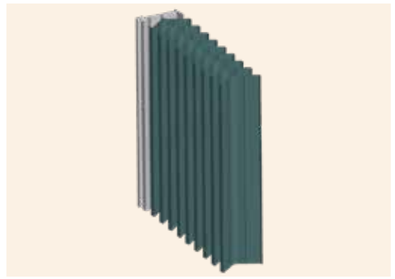


LS-81H

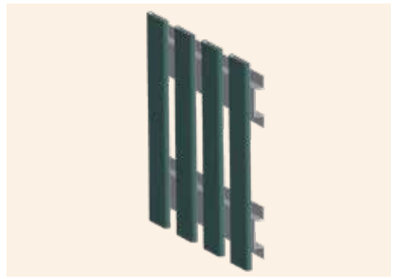


LS-40H

LS-52V



LS-81V



Sunshades

The purpose of fixed sunshades is to give the architect aesthetic flexibility to beautify the building's appearance, while providing a degree of solar shading. AWV offers an extraordinary range of fixed sunshades in a variety of shapes, finishes, and mounting arrangements for a dramatic aesthetic effect.

AWV'S OFFERING

Aesthetically Pleasing

AWV fixed sunshades are designed with aesthetics foremost in mind.

Wide Range

AWV fixed sunshades are available in a wide variety of shapes, patterns and sizes for the blades or in-fill panels, outriggers and fascia styles.

Reduced Energy Costs

AWV fixed sunshades provide a degree of solar shading reducing cooling loads and energy costs.

Durability

Virtually maintenance-free light weight extruded aluminum construction. AWV can provide certified structural calculations when requested to ensure sunshade structural integrity. AWV fixed sunshades are typically manufactured using non-welded construction, but welded construction can also be provided if desired.

SPECIFYING YOUR SUNSHADE

Specifying fixed sunshades has never been easier. Simply select the blades/infill grille or panel, outriggers, fascia and options.

To begin the section, chose either the blades or infill grilles/panels.

Choose Blades

Blade style and width size.

Number of blades.

Blade mounting angle
(i.e. 90 degrees is horizontal, 45 degrees is up, 135 degrees is down).

Choose Infill Grille/Panels

Grille or panel style.

Choose Outriggers

Outrigger projection depth, style and spacing along the length of the sunshade.

Outrigger mounting angle
(i.e. 90 degrees is horizontal, 45 degrees is up, 135 degrees is down).

Outrigger height at building façade and at end.

Choose Fascia (if any)

None - The sunshade will be terminated with the last blade.

Fascia style and size.

Choose Downrigger (if any)

Mounting height above sunshade.

Choose Overall Length

Choose Finish

Refer to AWV's Standard Finishes brochure.

Choose Special Options

Inside mitered corners (specify angle).

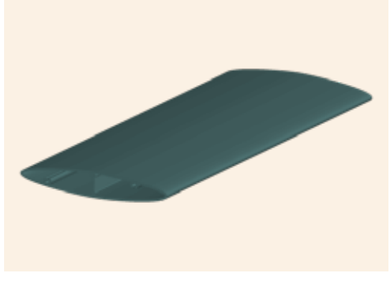
Outside mitered corners (specify angle).

Curved (specify radius).

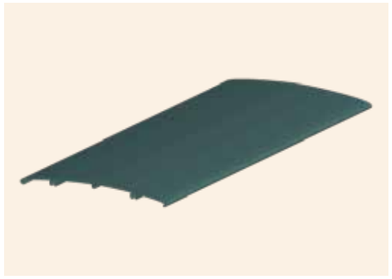
Sunshades

BLADE STYLES AND SIZES

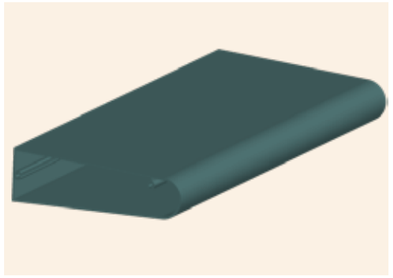
Full Airfoil – 2-12" widths in 1" increments, plus larger widths up to 24" in 4" increments.



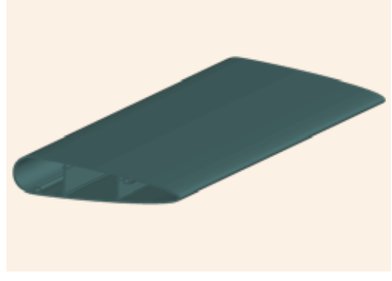
Half Airfoil – 6-12" widths in 1" increments



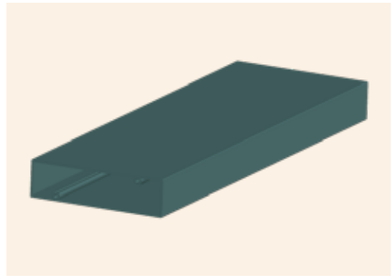
Wedge – 4-10" widths in 1" increments



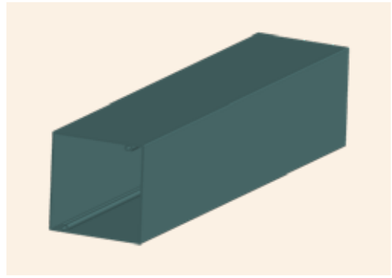
Tear Drop – 4-10" widths in 1" increments



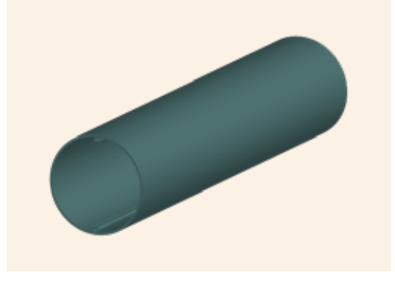
Rectangular Tube – 1-8" widths in 1" increments



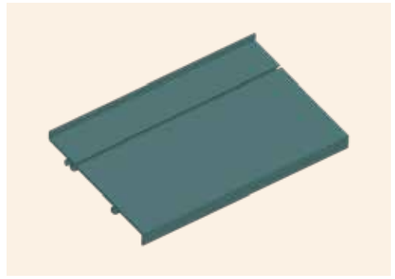
Square – 1' x 1"- 6" x 6" in 1" increments



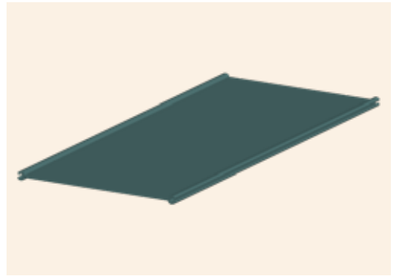
Round - 1-12" diameters in 1" increments



Louver – 2-8" width in 1" increments



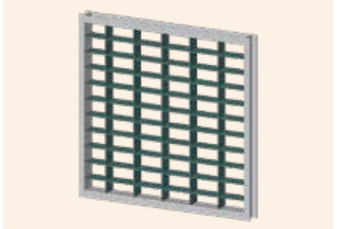
Flat – 4-8" widths in 1" increments



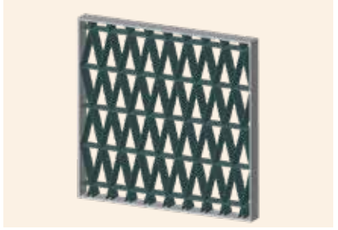
INFILL GRILLES

Instead of using blades, in-fill grilles are available in a variety of patterns.

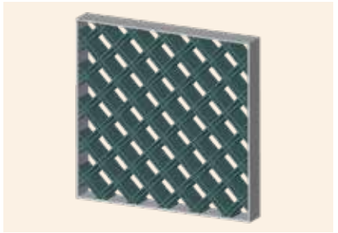
Egg Crate in varying dimensions



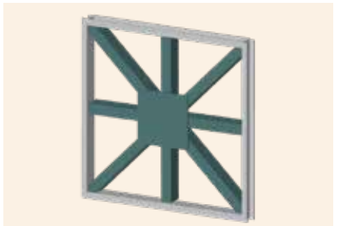
Lattice in varying dimensions



Double Lattice in varying dimensions



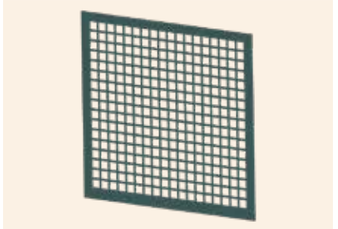
Starburst in varying dimensions



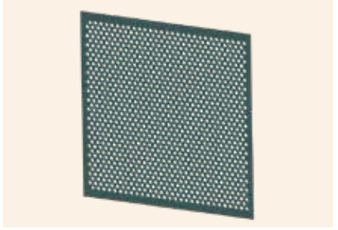
INFILL PERFORMATED PANELS

In-fill perforated panels are also available.

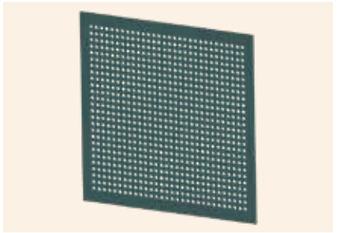
Square holes, straight centers in varying dimensions



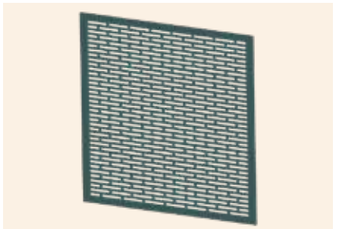
Round holes, 60° staggered centers in varying dimensions



Round holes, straight centers in varying dimensions



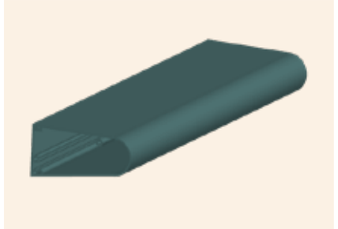
Slotted holes, staggered centers in varying dimensions



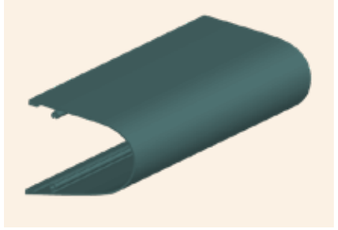
FACIA STYLES AND SIZES

The sunshade's last blade can terminate the sunshade or with a facia shape including.

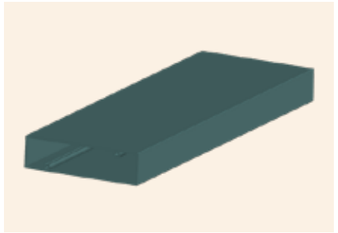
Wedge – 4-10" widths in 1" increments



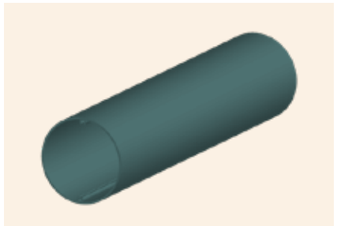
Bullnose – 4-10" widths in 1" increments



Rectangular – 1-8" widths in 1" increments



Round – 1-12" diameters in 1" increments

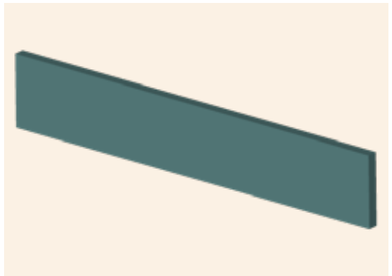


Sunshades

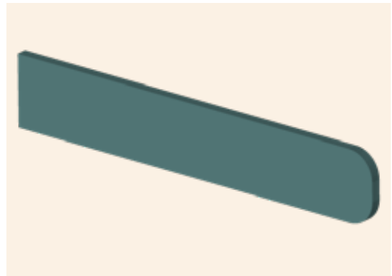
OUTRIGGER STYLES AND SIZES

The blades and facia are supported by outriggers mounted to the building's façade. An unlimited number of sizes and shapes are available. The following are a sampling.

Rectangular in varying dimensions

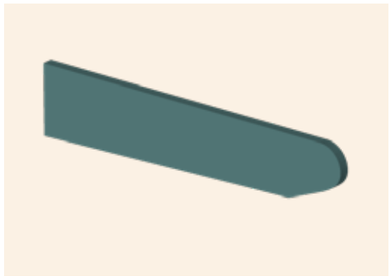


Rounded in varying dimensions

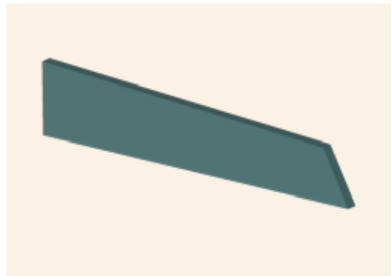


Curved in varying dimensions

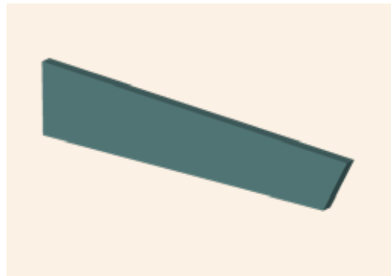
Bullnose in varying dimensions



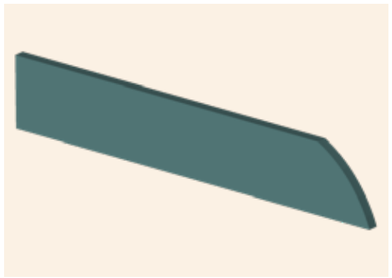
Sloped in varying dimensions



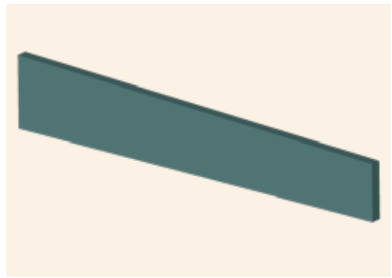
Wedge in varying dimensions



Profiled in varying dimensions



Tapered in varying dimensions

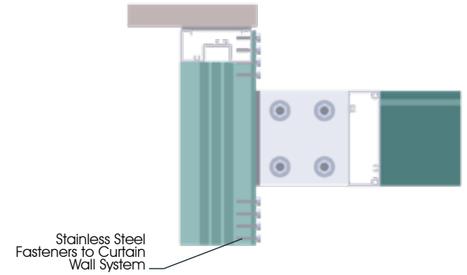


DOWNRIGGERS

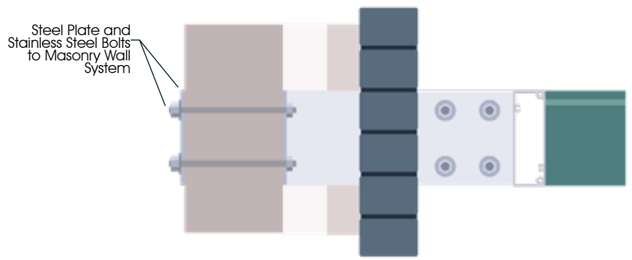
Downriggers are normally threaded rods attached to the building facade through a mounting bracket located above the sunshade and attached to the end of the sunshade.

MOUNTING METHODS

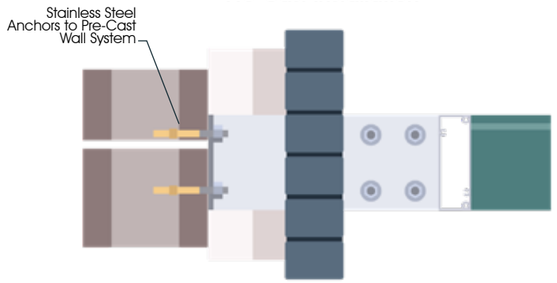
Typical Sunshade to Curtain Wall Installation



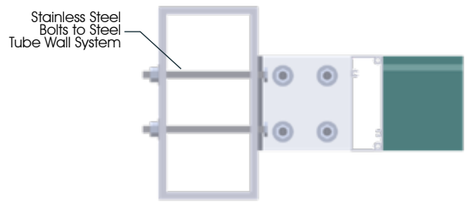
Typical Sunshade to Masonry Installation



Typical Sunshade to Pre-Cast Installation



Typical Sunshade to Steel Support Installation



Penthouses

The purpose of penthouses is to provide ventilation or exhaust air, while offering defense against vision, water and noise intrusion. In addition, the penthouse designs must give the architect aesthetic flexibility to enhance the building's appearance. AWV's broad line of penthouses address these design objectives.

STANDARD FEATURES, OPTIONS AND ACCESSORIES

AWV offers a wide selection of options and accessories to simplify installation and provide the functionality required.

- Shipped completely factory assembled (up to maximum cataloged penthouse thoat size.)
- Varying blade spacing and angles.
- Aluminum insect/bird screen with mounting either in the interior or on the exterior, with options for galvanized steel and stainless steel.
- Flat or pitched hinged roofs with internal insulation.
- Option for blank-off panels.
- Non-welded or welded constructed.

AWV'S OFFERING

Aesthetically Pleasing

AWV penthouses are designed with aesthetics in mind.

Wide Range

AWV penthouses are available in a wide variety of shapes, sizes, materials, finishes and coatings to meet the requirements of any project.

Reduced Energy Costs

AWV penthouses are highly aerodynamically efficient. The low air resistance reduces the fan energy required to introduce the ventilation air into or exhaust air out of the building.

Durability

AWV can provide certified structural calculations when requested to ensure penthouse structural integrity. All architectural louvers are constructed of aluminum.

Penthouses

FIXED DRAINABLE PENTHOUSES

Fixed drainable extruded aluminum penthouses in a variety of frame depths, blade angles and spacing. They are appropriate for both intake and exhaust applications.

Model	Description	Blade			Frame	Material Thickness			Penthouse Throat Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Frame Inches	Blade Inches	Roof Inches	Min W x L x H Inches	Max W x L x H Inches
PE-21	Boxed Corners Fixed Drainable	H	45.0	5.00	4.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60
PE-23	Boxed Corners Fixed Drainable	H	37.5	3.50	4.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60
PE-31	Boxed Corners Fixed Drainable	H	37.5	4.00	6.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60
PE-33	Boxed Corners Fixed Drainable	H	45.0	7.00	6.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60

Notes:
Penthouses with larger throat sizes are available shipped knocked-down.

FIXED NON-DRAINABLE PENTHOUSES

Fixed non-drainable extruded aluminum penthouses are offered in a variety of frame depths, blade angles and spacing. Either boxed or mitered corners are available. They are usually most appropriate for exhaust applications.

Model	Description	Blade			Frame	Material Thickness			Penthouse Throat Size	
		Orientation H - Horiz. V - Vert.	Angle Deg.	Spacing Inches	Depth Inches	Frame Inches	Blade Inches	Roof Inches	Min W x L x H Inches	Max W x L x H Inches
PE-47B	Boxed Corners Fixed Non-drainable	H	45.0	5.00	4.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60
PE-47M	Mitered Corners Fixed Non-drainable	H	45.0	5.00	4.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60
PE-63B	Boxed Corners Fixed Non-drainable	H	45.0	7.00	6.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60
PE-63M	Mitered Corners Fixed Non-drainable	H	45.0	7.00	6.00	0.081	0.081	0.050	12 x 12 x 12	84 x 84 x 60

Notes:
Penthouses with larger throat sizes are available shipped knocked-down.

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