

ACL645

Stationary Acoustical Louver



APPLICATION

The ACL645 is a 6" deep acoustical louver designed to reduce the noise transmission between areas. This louver is specifically designed for weather protection of intake and exhaust exterior wall applications. It provides high free area and low airflow resistance with sound absorbing insulated blades for areas that require noise separation.

STANDARD CONSTRUCTION

Frame	6" (152) deep 16 gauge (1.6) galvanized formed channel or 0.125" thk. (3.1) Aluminum 5005-H34 formed channel.
Blades	18 gauge (1.3) galvanized steel exterior surface with 22 gauge (0.9) perforated steel interior surface. 0.08" thick (2) aluminum 5005-H34 exterior surface with 0.05" thick (1.2) perforated interior surface. Blades positioned at 45° angle and spaced approximately 6" (152) center to center
Acoustical Insulation	Mineral Wool.
Screen	1/2" mesh x 19 gage (13 x 1.1) galvanized steel bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.
Finish	Mill
Minimum Size	12"w x 18"h (305 x 457)
Approximate Shipping Weight	6 lbs. per sq. ft.
Maximum Factory Assembly Size	Maximum single section size shall be 60" x 120" (1524 x 3048). Louvers larger than the maximum single section size will require field assembly of smaller sections.

FEATURES

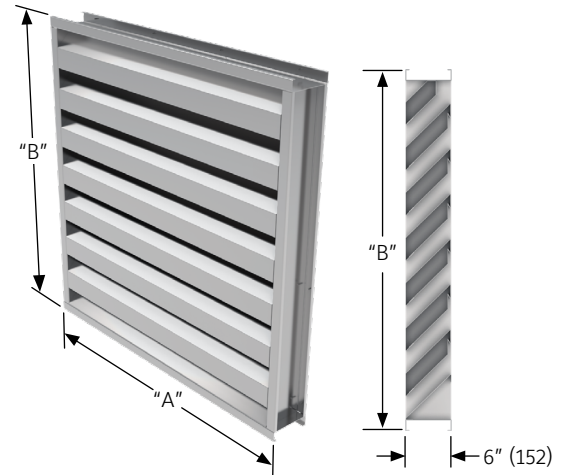
- ▶ Excellent Sound Attenuation (see table)
- ▶ 27% Free Area
- ▶ Beginning point of water penetration at .01 oz. /sq. ft. is 769 fpm (234 m/min)

VARIATIONS

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

- ▶ Extended sill
- ▶ Drip Caps
- ▶ Installation Angles, both clip and continuous angles available
- ▶ Intragural Flanges
- ▶ Security bar
- ▶ Glazing frame
- ▶ Sleeves
- ▶ Filter racks
- ▶ A variety of bird and insect screens
- ▶ Optional finishes available at additional cost: 50% & 70% PVDF (modified fluoreopolymer) Pearledize 50% & 70%, prime coat, epoxy, clear top coats and anodized finishes, both clear and color. (Anodize finish available only on aluminum construction. Some variation in anodize color consistency is possible.)

Consult Ruskin for other special requirements.



Octave Band Frequency (Hz)	Free Field Noise Reduction (db) Ruskatherm Blanket
1/63	10
2/125	11
3/250	9
4/500	13
5/1000	19
6/2000	20
7/4000	19
8/8000	18

To calculate Transmission Loss (db), subtract 6 db from Free Field Noise Reduction (db).

NOTES:

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

FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of ACL645.

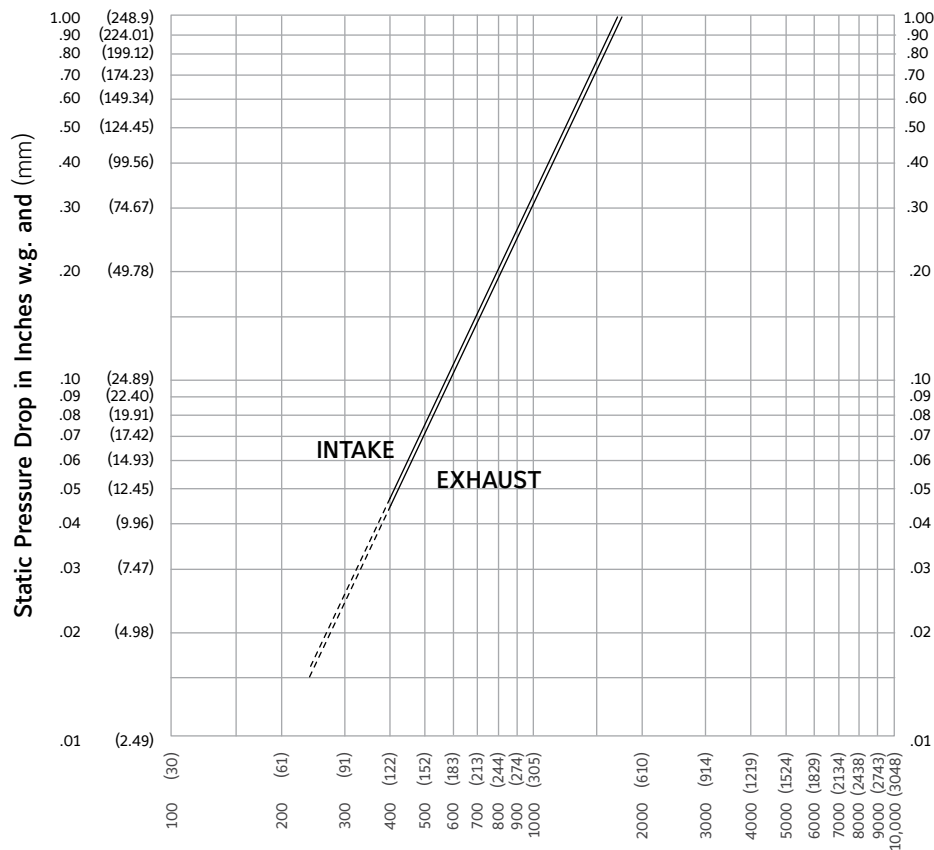
Width – Inches and Meters

	12		18		24		30		36		42		48		54		60	
	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50									
Height – Inches (Meters)	18	0.24	0.39	0.55	0.70	0.86	1.01	1.17	1.32	1.48								
	0.45	0.02	0.04	0.05	0.07	0.08	0.09	0.11	0.12	0.14								
	24	0.36	0.60	0.84	1.07	1.31	1.55	1.79	2.03	2.26								
	0.60	0.03	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.21								
	30	0.49	0.81	1.13	1.45	1.77	2.09	2.41	2.73	3.05								
	0.75	0.07	0.11	0.15	0.20	0.24	0.29	0.33	0.37	0.41								
	36	0.61	1.02	1.42	1.82	2.23	2.63	3.03	3.43	3.84								
	0.90	0.06	0.09	0.13	0.17	0.21	0.24	0.28	0.32	0.36								
	42	0.74	1.22	1.71	2.20	2.68	3.17	3.65	4.14	4.63								
	1.05	0.07	0.11	0.16	0.20	0.25	0.29	0.34	0.39	0.43								
	48	0.86	1.43	2.00	2.57	3.14	3.71	4.28	4.84	5.41								
	1.20	0.08	0.13	0.19	0.24	0.29	0.34	0.40	0.45	0.50								
	54	0.99	1.64	2.29	2.94	3.60	4.25	4.90	5.55	6.20								
	1.35	0.09	0.15	0.21	0.27	0.33	0.39	0.46	0.52	0.58								
	60	1.12	1.85	2.58	3.32	4.05	4.79	5.52	6.25	6.99								
	1.50	0.10	0.17	0.24	0.31	0.38	0.45	0.51	0.58	0.65								
	66	1.24	2.06	2.88	3.69	4.51	5.33	6.14	6.96	7.78								
	1.65	0.12	0.19	0.27	0.34	0.42	0.50	0.57	0.65	0.72								
	72	1.37	2.27	3.17	4.07	4.97	5.86	6.76	7.66	8.56								
	1.80	0.13	0.21	0.29	0.38	0.46	0.55	0.63	0.71	0.80								
	78	1.49	2.48	3.46	4.44	5.42	6.40	7.39	8.37	9.35								
	1.95	0.14	0.23	0.32	0.41	0.50	0.60	0.69	0.78	0.87								
	84	1.62	2.68	3.75	4.81	5.88	6.94	8.01	9.07	10.14								
	2.10	0.15	0.25	0.35	0.45	0.55	0.65	0.74	0.84	0.94								
	90	1.75	2.89	4.04	5.19	6.34	7.48	8.63	9.78	10.93								
	2.25	0.16	0.27	0.38	0.48	0.59	0.70	0.80	0.91	1.02								
	96	1.87	3.10	4.33	5.56	6.79	8.02	9.25	10.48	11.71								
	2.40	0.17	0.29	0.40	0.52	0.63	0.75	0.86	0.97	1.09								
	102	2.00	3.31	4.62	5.94	7.25	8.56	9.88	11.19	12.50								
	2.55	0.19	0.31	0.43	0.55	0.67	0.80	0.92	1.04	1.16								
	108	2.12	3.52	4.91	6.31	7.71	9.10	10.50	11.89	13.29								
	2.70	0.20	0.33	0.46	0.59	0.72	0.85	0.98	1.11	1.24								
	114	2.25	3.73	5.21	6.68	8.16	9.64	11.12	12.60	14.08								
	2.85	0.21	0.35	0.48	0.62	0.76	0.90	1.03	1.17	1.31								
	120	2.37	3.94	5.50	7.06	8.62	10.18	11.74	13.30	14.86								
	3.00	0.22	0.37	0.51	0.66	0.80	0.95	1.09	1.24	1.38								



Ruskin Manufacturing 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 Standard 511 and comply with the requirements of the AMCA Certified Ratings Program. AMCA Certified Ratings Seal applies to air performance ratings and water penetration ratings only.

PRESSURE DROP



Ratings do not include the effect of a bird screen.

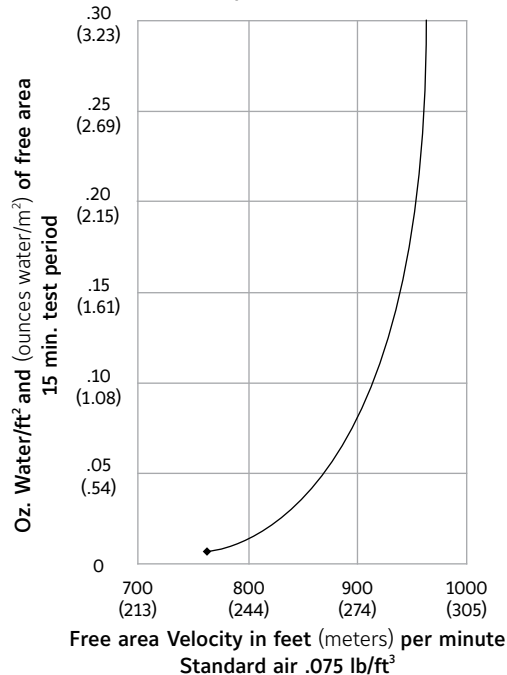
Air Velocity in feet and (meters) per minute through Free Area
(Data corrected to standard air density and AMCA figure or figures testes to 5.5)

PERFORMANCE DATA

AMCA Standard 500 provides a reasonable basis for testing and rating louvers. Testing to AMCA 500 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.

Water penetration
Test size 48" wide X 48" high (1219 X 1219)
Beginning point of water penetration at .01 oz. /sq. ft. is
769 fpm (234 m/min).



SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary acoustical type contained within a 6" (152) frame. Louver components (heads, jambs, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a windload of 30 lbs. per sq. ft. (1.44kPa) (equivalent of a 110 mph wind [177 KPH] – specifier may substitute any loading required).

Louvers shall be Ruskin Model ACL645 construction as follows:

Frame: 16 gauge (1.6) galvanized steel channel.

Blades: 18 gauge (1.0) galvanized steel exterior surface, 22 gage (.9) perforated steel interior surface that covers insulation. Blade angle 45° on 6" (152) centers.

Screen: 1/2" mesh x 19 gauge (13 x 1.1) galvanized steel in removable frame.

Finish: Select finish specification from Ruskin Finishes Brochure.

Published louver performance data bearing the AMCA Certified Ratings Seal for Air Performance must be submitted for approval prior to fabrication and must demonstrate pressure drop equal to or less than the Ruskin model specified.

LINKS TO IMPORTANT DOCUMENTS

Document Title

Paint Finishes and Color Guide

Limited Warranty Document



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