



Gulf Grilles Company (GGC)

شركة الخليج لفتحات التكييف المركزي

Acoustic Air Louvers





Product Description

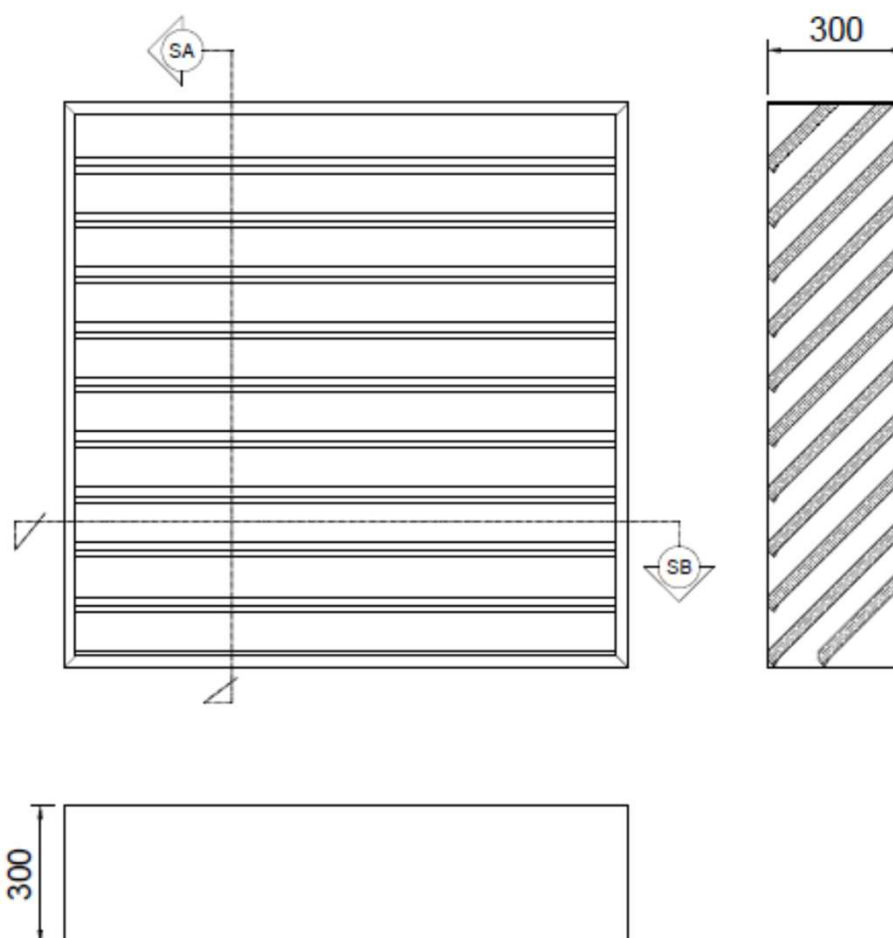
- Acoustic Air Louvers are mainly used for air ventilation to control noise transfer in served areas. Louver performance is related to selected louver size with referring to the required amount of air that will pass through the louver free area. Proper sizes should be selected for better performance.
- The frame and blades are 16-gauge (1/16") aluminum alloy, or frame 18-gauge (3/64") and blades 24-gauge(1/32") galvanized steel sheet.
- The front and back edges of the frame are folded to give additional strength. The overall casing depth is 12".
- The blade elements are set at 45° with a specific pitch and have a raised tip to prevent the ingress of rain.
- The underside of all blades is filled with fiber glass insulation, and retained and faced with 24 gauge(1/32") perforated aluminum sheet.
- The sound absorbing (insulation) packing is inert, non-combustible, non-hygroscopic and vermin proof.
- As an option, bird or insect screen be provided on request. To be attached at the back side of louver.
- Standard finish is white color for frame and blades. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality are used to enhance the appearance of the units.
- **Size Ranges:**
Rectangular / Square Type (WxH):
 - A) Minimum Size: 14"x14".
 - B) Maximum Size (Single Section – without partitions): 48"x 48"
 - C) Maximum Size (Single Unit – with partitions): 100"x 80".
 - D) Larger Sizes: Fabricated in multiple units design, to be assembled at project site as requested.

Notes:-

- 1) **Louvers** are fabricated in galvanized, stainless steel or aluminum sheets construction on request where required.
- 2) **Louvers** are provided with additional accessories on request (Volume Damper, Fire/Smoke Damper, Filters) and to be inserted inside sleeve that is combined with louver. Sleeve is provided with multiple connection options:
 - A) TDC Flange – 1.38" (35mm).
 - B) Plain "S" Slip & C Drive Slip Joint.
 - C) Angle Bar – 1.97" x 1.97" x 0.197" (50x50x5mm).
- 3) **Louvers** are provided with Fire Rated Paint or additional accessories on request.

DESIGN DETAILS AND SIZE RANGES

Listed Models: **WAL5-X**: Acoustic Air Louver



Louvers fabricated with sizes larger than 40"x40" will may be provided in multi section design, with dividers / supports in width, height or both.



Free Area Table (Acoustic Air Louver, Model: WAL5-X)

- Listed sizes in below table are louver face size (Outer Dimension).
- Tested louver sample size is 48"x48" (1219x1219mm)(Face Size).

Acoustic Air Louver - Free Area (Ft²)

Height (inch)	Width (inch)									
	14	18	30	42	48	60	72	84	96	100
14	0.18	0.24	0.41	0.59	0.68	0.85	1.03	1.20	1.38	1.44
18	0.36	0.47	0.82	1.18	1.35	1.70	2.06	2.41	2.76	2.88
30	0.89	1.18	2.06	2.94	3.38	4.26	5.14	6.02	6.90	7.19
42	1.42	1.89	3.30	4.71	5.41	6.82	8.22	9.63	11.04	11.51
48	1.60	2.13	3.71	5.29	6.09	7.67	9.25	10.84	12.42	12.95
60	2.13	2.84	4.95	7.06	8.11	10.23	12.34	14.45	16.56	17.26
72	2.67	3.55	6.18	8.82	10.14	12.78	15.42	18.06	20.70	21.58
80	3.02	4.02	7.01	10.00	11.50	14.49	17.48	20.47	23.46	24.45

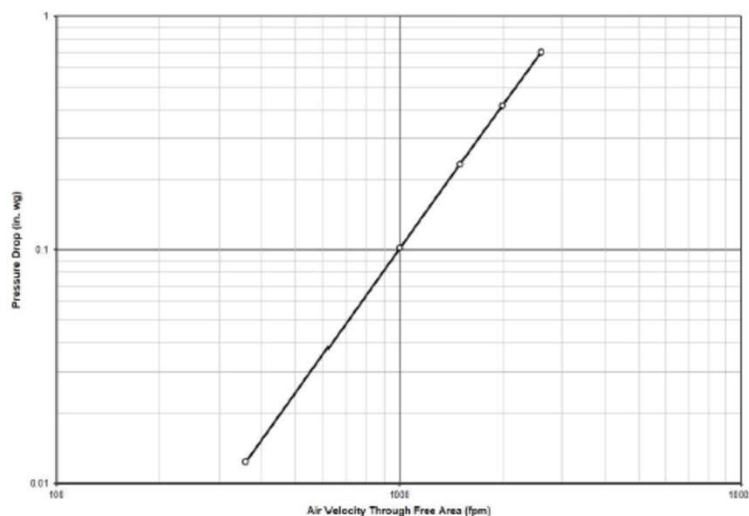


PERFORMANCE

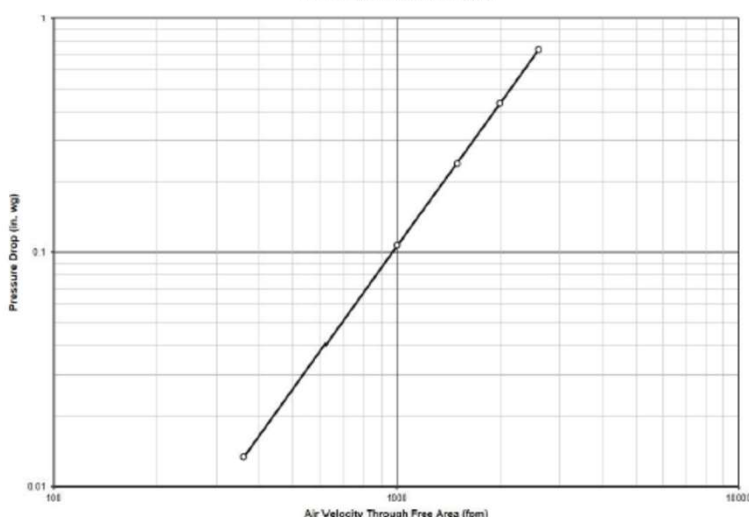
Test Information:

- Tested for air performance in accordance with ANSI / AMCA Standard 500-L-12 (Pressure Drop), Figure 5.5.
- Tested louver sample size is 48"x48" (1219x1219mm)(Face Size).
- The mentioned maximum ΔP s for a specified airflow rate is at standard air density.

Intake Air Performance	
Free Area Velocity (fpm)	ΔP (in.wg)
358	0.01
1002	0.10
1502	0.23
2001	0.42
2603	0.70



Exhaust Air Performance	
Free Area Velocity (fpm)	ΔP (in.wg)
360	0.01
1003	0.11
1501	0.24
2001	0.43
2601	0.73



Gulf Grilles Company (GGC) certifies that the **Acoustic Air Louver** shown herein is licensed to bear the AMCA Seal for Model **WAL5-X**. 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 Program Seal applies to Sound and Air Performance Ratings only.

Test Information
 Tested for air performance in accordance with ANSI / AMCA Standard 500-L-12 (Pressure Drop), Figure 5.5.
 Tested for Sound Performance in accordance with ASTM E90-09 (2016), "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements", Figure ASTM E90.



PERFORMANCE

Test Information:

- Tested for Sound Performance (Acoustical Ratings) in accordance with ASTM E90-09 (2016) "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements".
- Tested louver sample size is 48"x48" (1219x1219mm)(Face Size).

Definitions:-

Sound Transmission Class (STC): Sound Transmission Class is a rating of the effectiveness of an assembly in isolating or reducing airborne sound transmission. It is a single number that summarize airborne sound transmission loss data. Assemblies with higher ratings are more efficient at reducing sound transmission. It is determined in accordance with **ASTM E413-22**.

Transmission Loss (TL): Transmission Loss is a measurement of the reduction of sound power transmission (dB) through an assembly at a given frequency. The more sound power that is reduced, the greater the transmission loss will be. Transmission loss is tested in accordance with **ASTM E90-09 (2016)**.

Free Field Noise Reduction (NR): Free Field Noise Reduction is determined by adding 6 dB to the Transmission Loss.

Louver tested for sound transmission in opposite direction of air flow							
Frequency (Hz)	125	250	500	1000	2000	4000	STC
Transmission Loss (dB)	4	4	5	9	7	7	7
Free Field Noise Reduction (dB)	10	10	11	15	13	13	

Louver tested for sound transmission in the direction of air flow							
Frequency (Hz)	125	250	500	1000	2000	4000	STC
Transmission Loss (dB)	5	3	6	9	7	7	7
Free Field Noise Reduction (dB)	11	9	12	15	13	13	

Gulf Grilles Company (GGC) certifies that the **Acoustic Air Louver** shown herein is licensed to bear the AMCA Seal for Model **WAL5-X**. 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 Program Seal applies to Sound and Air Performance Ratings only.

Test Information
 Tested for air performance in accordance with ANSI / AMCA Standard 500-L-12 (Pressure Drop), Figure 5.5.
 Tested for Sound Performance in accordance with ASTM E90-09 (2016), "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements", Figure ASTM E90.