

# Air Flow Company, Inc.

850 W. Fullerton Ave. • Addison, IL. 60101  
 Tel (630) 628-1138 Fax (630) 628-1149

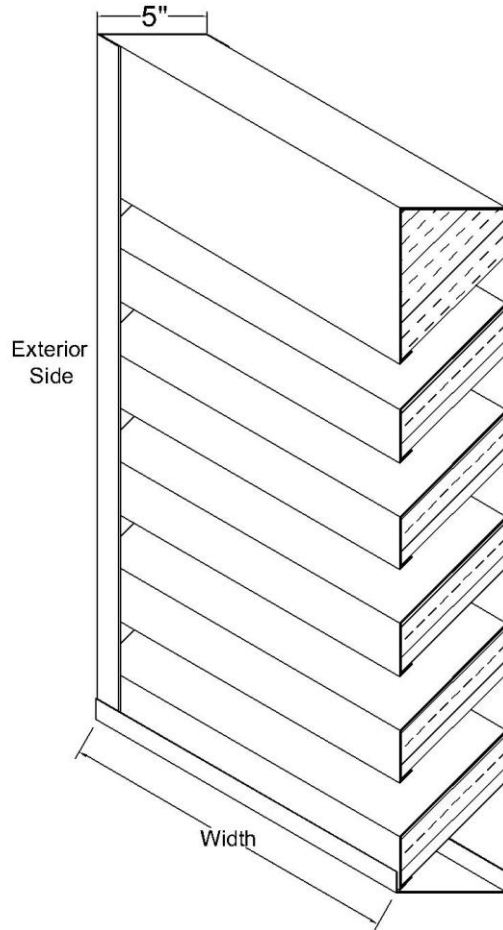
## AL-505 5" Deep Formed Steel Acoustical Louver

### Standard Louver Construction

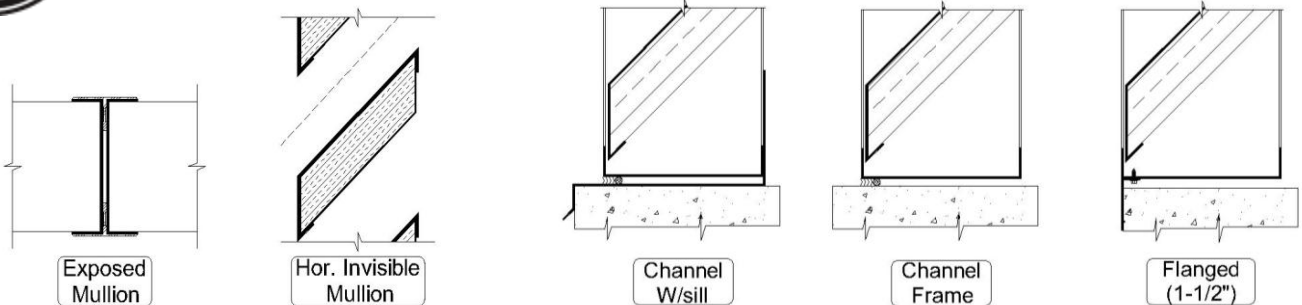
✓ Frame	Channel
✓ Frame Thickness	16 Gauge galvanized steel
✓ Blades Thickness	18 Ga. galvanized steel-exterior surface 22 Ga. galvanized perforated -interior surface
✓ Blade Positioning	45° angle
✓ Sound Insulation	6# density pcf mineral wool
✓ Fasteners	3/16" plated steel rivets exposed to view
✓ Screen	12" x 19 Ga. Galvanized screen in frame
✓ Finish	Mill
✓ Undersized	1/4" under opening sizes
✓ Mullions	Visible
✓ Minimum Size	12" W x 12" H
✓ Maximum Single Section	60" W x 120" H

### Optional Construction

Frames	Heavier gauge		
	Stainless steel		
	Formed aluminum		
Blades	Heavier gauge		
	Stainless steel		
	Formed aluminum		
Fasteners	Stainless Steel Fasteners		
Screen	.063" x 3/4" expanded aluminum		
	18 x 16 Insect screen		
Finish	Prime coat		
	Baked enamel		
	Powder coat		
	Kynar 500	2 Coat	3 Coat
	Anodized	Clear	Color
Frame Accessories	Flange		
	Pan		
	Extended sill		



**Air Flow Model AL-505.** The ratings shown are based on tests & Procedures Made in accordance with AMCA standard 500-L. The actual test results of water penetration & air performance may vary (+/-10%) depending on the actual application. Free area calculations are (+/-5%)



### Louver Schedule

Item	Qty	Opening Size (W x H)	Notes	Project:	
				<b>Location:</b>	
				<b>Arch/Eng:</b>	
				<b>Customer:</b>	

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### Free Area Calculations (Sq. Ft.)

		W I D T H (Inches)								
		12	18	24	30	36	42	48	54	60
H E I G H T (Inches)	12	0.19	0.30	0.41	0.52	0.64	0.75	0.86	0.97	1.08
	18	0.39	0.61	0.83	1.05	1.27	1.49	1.71	1.93	2.15
	24	0.58	0.91	1.24	1.57	1.91	2.24	2.57	2.90	3.23
	30	0.77	1.22	1.66	2.10	2.54	2.98	3.43	3.87	4.31
	36	0.97	1.52	2.07	2.62	3.18	3.73	4.28	4.83	5.39
	42	1.35	2.13	2.90	3.67	4.45	5.22	5.99	6.77	7.54
	48	1.55	2.43	3.31	4.20	5.08	5.97	6.78	7.73	8.62
	54	1.74	2.73	3.73	4.72	5.72	6.71	7.71	8.70	9.70
	60	1.93	3.04	4.14	5.25	6.35	7.46	8.56	9.67	10.77
	66	2.13	3.34	4.56	5.77	6.99	8.20	9.42	10.63	11.85
	72	2.51	3.95	5.39	6.82	8.26	9.70	11.13	12.57	14.00
	78	2.71	4.25	5.80	7.35	8.89	10.44	11.99	13.53	15.08
84	2.90	4.56	6.21	7.87	9.53	11.19	12.84	14.50	16.16	
90	3.09	4.86	6.63	8.40	10.16	11.93	13.70	15.47	17.24	
96	3.29	5.17	7.04	8.92	10.80	12.68	14.56	16.44	18.31	

◆ To determine the pressure drop of a louver:  
Calculate the Velocity thru free area; divide the required CFM (volume of air) by the required free area above chart. The pressure drop is expressed in (inches w.g.)

◆ To determine the minimum free area required for louver:  
Divide the required CFM (volume of air) by the free area velocity before water penetration, then select the most desirable louver size from the free area chart above.

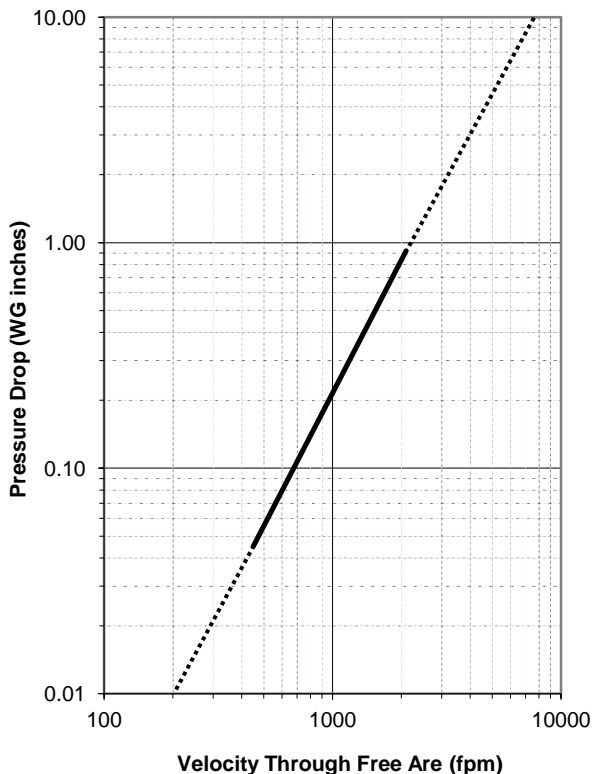
◆ To determine the maximum CFM (volume), knowing the louver size:  
Multiply the required free area (see above free area chart) by maximum velocity thru free area.



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### Air Performance

Unit test size (48" x 48")  
Airflow rate at standard air density  
and the AMCA figure 5.5



### CALCULATING TRANSMISSION LOSS

In order to calculate transmission loss (dB), take the Free Field Noise Reduction (dB) and subtract by 6 (dB)

$$\text{Free-Field Noise Reduction} - 6 \text{ (dB)} = \text{Transmission Loss (dB)}$$

### OCTAVE BANDS

Frequency (Hz)	63	125	250	500	1000	2000	4000	5000
Free Field Noise Reduction (dB)	9	11	9	12	17	19	18	18
Transmission Loss (dB)	3	5	3	6	11	13	12	12

