

ACOUSTICAL LOUVER - Model UFA-12

Design Features – Sound attenuating insulated blades provide a dual function of weather protection and airborne sound reduction. The airfoil shape blade reduces very high static pressure through the louver. The sound ratings are based on sound transmission standards ASTM E90-90 and ASTM E413-87.

STANDARD CONSTRUCTION

FRAME

12" deep, 16 gauge galvanized steel in style #2

BLADES

Exterior surface – 18 ga. galv. approx. spacing 10" oc.
Interior surface – 22 ga. galv. perforated fastened to blade underside

SOUND INSULATION

6# density pcf mineral wool

ASSEMBLY

3/16" plated steel rivets exposed to view

MAXIMUM SINGLE SECTION

72"W x 120"H

MINIMUM SIZE

12"W x 16"H

MAXIMUM SIZE

Unlimited, with mullions, structural bracing supplied by others

MULLION

Visible

SCREEN

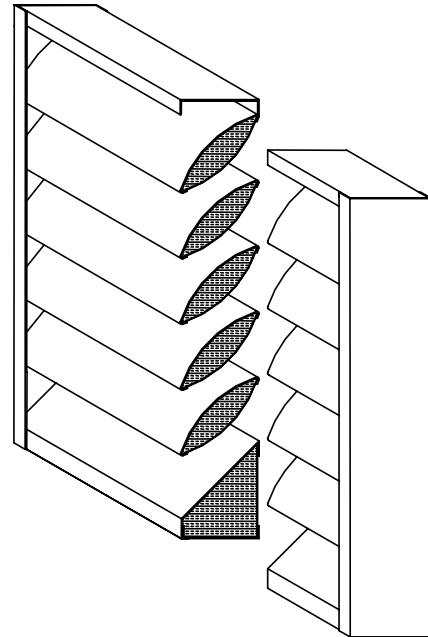
1/2" x 19 ga. galvanized screen in frame

UNDERSIZED

1/4" under ordered size unless specified Exact or Actual

FINISH

Mill



OPTIONAL CONSTRUCTION

SPECIFIED MATERIAL – Heavier gauge or in Aluminum or stainless steel

SCREEN - Many styles available please consult screen listing

FINISH – Air-dry primer, polyurethane, epoxy, or enamel, baked epoxy or enamel, Kynar, or Powder coat.

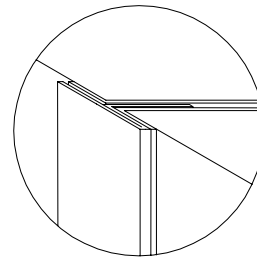
SLEEVE AND DUCTWORK – 10 ga. to 20 ga. galvanized steel or aluminum to 30" in length.

SPECIAL PURPOSE CONSTRUCTION

Fully welded construction

Security bar

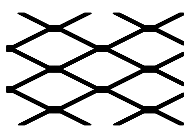
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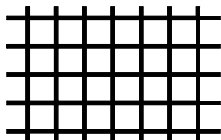
MULLION STYLE

PERFORMANCE
Point of Water Penetration 1077 fpm
Free Area (48 x 48) 30%
Pressure Drop (intake) .07" wg. @ 1000 fpm

TYPICAL SCREEN STYLES

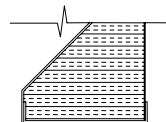


Expanded Aluminum

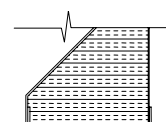


Wire Mesh
Standard

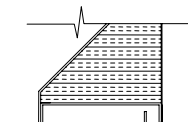
FRAME STYLE



#2 Box Frame
Standard



#1 Flange Frame

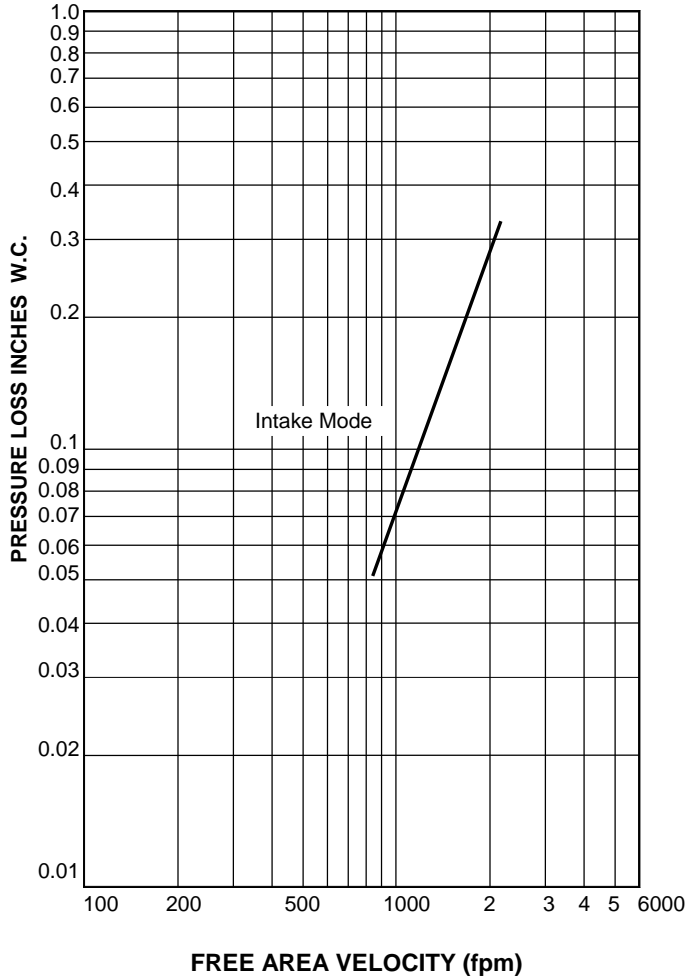


#8 Box frame and
Sill Extension

DATE	ARCHITECT			CUSTOMER		
PROJECT						
ITEM	QTY	W	H		<p>SAFE-AIR/DOWCO certifies that the UFA-12 louver 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 ratings and water penetration ratings.</p>	

The sound ratings shown are based on sound transmission standards – ASTM E90-90 and ASTM E413-87. All tests were performed at an independent laboratory. The Air Performance and Free Area Calculations are made in accordance with AMCA 500 standards.

AIR PERFORMANCE



CALCULATING PRESSURE LOSS

Based upon a given flow rate (in CFM), the flowing pressure loss may be determined from the “air performance” graph, knowing the sq. ft. of free area of the louver. Alternately, the free area may be determined based upon a volumetric flow rate and a maximum pressure loss. Utilizing the “air performance” graph.

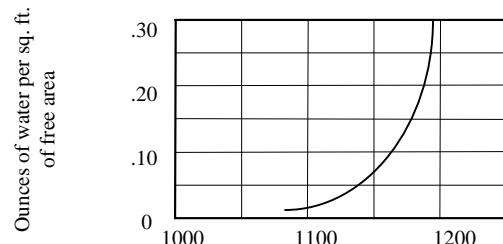
_____ in. W.C. Max. Pressure Loss Intake or Exhaust
 _____ FPM (Free Area Velocity From “Air Performance” Graph)
 _____ CFM / _____ FPM Free Area Velocity = _____ Sq. Ft. Free Area

CALCULATING MAXIMUM AIRFLOW BEFORE WATER PENETRATION

The “free area flow rate” at which water penetration commences (.01 oz. of water) is established at, 1077 fpm for UFA-12, and will vary depending upon actual weather conditions. The “water penetration” graph illustrates the results of actual laboratory test on a 48” x 48” (1219 x 1219) test sample subjected to hypothetical rainfall conditions. To determine the free area (in sq. ft.) based on upon a known volumetric flow rate in CFM;

_____ CFM / _____ FPM = _____ SQ. FT. FREE AREA
 (System Requirements)

Water Penetration Graph
 in oz. of water per sq. ft. of free area over a 15 min. test period



1077 fpm beginning of water penetration

Octave Bands								
Frequency (hz)	1	2	3	4	5	6	7	8
	63	125	250	500	1000	2000	4000	8000
Free Field Noise Reduction (DB)	12	11	12	13	20	18	16	20
Transmission Loss (DB)	6	5	6	7	14	12	10	14

WIDTH

FREE AREA CALCULATIONS IN SQ. FT.

HEIGHT	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108
12	0.26	0.42	0.58	0.74	0.90	1.06	1.22	1.38	1.54	1.69	1.85	2.01	2.17	2.33	2.49	2.65	2.81
18	0.29	0.46	0.63	0.80	0.97	1.15	1.32	1.49	1.66	1.83	2.01	2.18	2.35	2.52	2.69	2.86	3.04
30	0.54	0.86	1.18	1.50	1.82	2.14	2.46	2.78	3.11	3.43	3.75	4.07	4.39	4.71	5.03	5.35	5.68
36	0.68	1.08	1.49	1.90	2.30	2.71	3.11	3.52	3.93	4.33	4.74	5.15	5.55	5.96	6.36	6.77	7.18
42	0.80	1.28	1.76	2.24	2.72	3.19	3.67	4.15	4.63	5.11	5.59	6.07	6.55	7.03	7.51	7.99	8.47
48	1.05	1.67	2.30	2.93	3.56	4.18	4.81	5.44	6.07	6.69	7.32	7.95	8.58	9.20	9.83	10.46	11.09
54	1.07	1.71	2.35	2.99	3.63	4.27	4.91	5.55	6.19	6.83	7.47	8.11	8.76	9.40	10.04	10.68	11.32
60	1.32	2.11	2.90	3.69	4.48	5.27	6.06	6.85	7.64	8.43	9.22	10.01	10.80	11.59	12.38	13.17	13.96
66	1.46	2.33	3.21	4.08	4.96	5.83	6.71	7.58	8.46	9.33	10.21	11.08	11.96	12.83	13.71	14.58	15.46
72	1.58	2.53	3.48	4.42	5.37	6.32	7.27	8.22	9.16	10.11	11.06	12.01	12.95	13.90	14.85	15.80	16.75
78	1.83	2.92	4.02	5.12	6.21	7.31	8.41	9.50	10.60	11.69	12.79	13.89	14.98	16.08	17.18	18.27	19.37
84	1.85	2.96	4.07	5.18	6.29	7.40	8.51	9.61	10.72	11.83	12.94	14.05	15.16	16.27	17.38	18.49	19.60
90	2.10	3.36	4.62	5.87	7.13	8.39	9.65	10.91	12.17	13.43	14.69	15.94	17.20	18.46	19.72	20.98	22.24
96	2.24	3.58	4.93	6.27	7.61	8.96	10.30	11.65	12.99	14.33	15.68	17.02	18.36	19.71	21.05	22.40	23.74