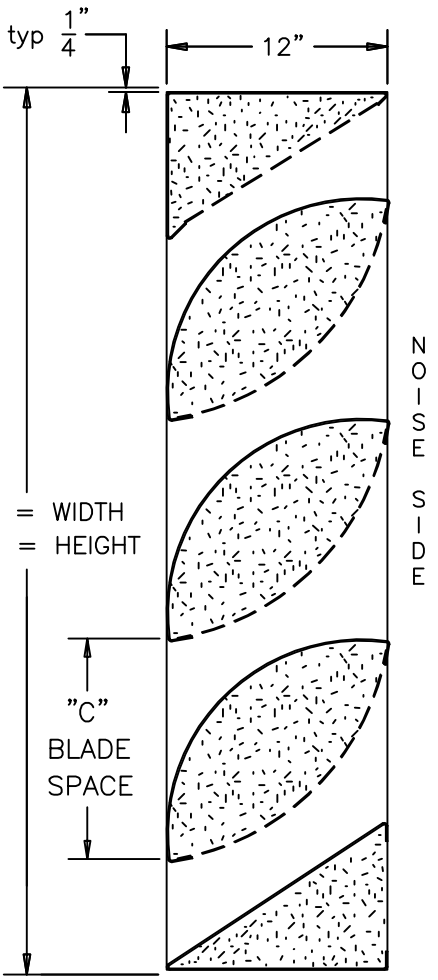
FABRICATED ALUMINUM, 12" DEEP, AIRFOIL BLADE, HEAVY GAUGE, ACOUSTICAL FIXED TYPE BLADE



SECTION VIEW

MODEL LAA–12AF
STANDARD SPECIFICATIONS

FRAME: 12" DEEP, 12 GAUGE ALUMINUM.

BLADES: 16 GAUGE ALUMINUM (NON NOISE SIDE).
20 GAUGE PERFORATED ALUMINUM (NOISE SIDE).

INSULATION: WATER RESISTANT SOUND ABSORBING MATERIAL.

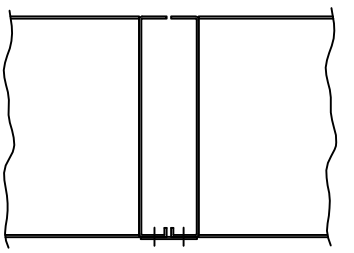
FINISH: MILL.

SCREEN: 1/2" REMOVABLE EXPANDED ALUMINUM BIRD SCREEN, LOCATED ON INTERIOR (NOISE SIDE).

MAXIMUM PANEL SIZE: 72" X 96".

MINIMUM PANEL SIZE: 12" X 24".

DIMENSIONS: "A" (WIDTH) AND "B" (HEIGHT) ARE OPENING SIZES. LOUVERS ARE MADE 1/2" UNDERSIZE.



STANDARD VERTICAL MULLION

MODEL No.	"C" BLADE SPACE
LAA–12AF	12"

LOUVER MODEL No. DESCRIPTION

LAA – 12 AF

- LAA: LOUVER ACOUSTICAL ALUMINUM
- 12: FRAME DEPTH
- AF: AIRFOIL BLADE

American Warming & Ventilating certifies that the model LAA–12AF louver shown herein is 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.

STC CLASS 13

OCTAVE BAND	1	2	3	4	5	6	7	8
FREQUENCY (Hz)	63	125	250	500	1K	2K	4K	8K
TRANSMISSION LOSS (db)	7	6	7	13	15	13	10	9
FREE FIELD NOISE REDUCTION (db)	14	12	14	19	21	19	16	15

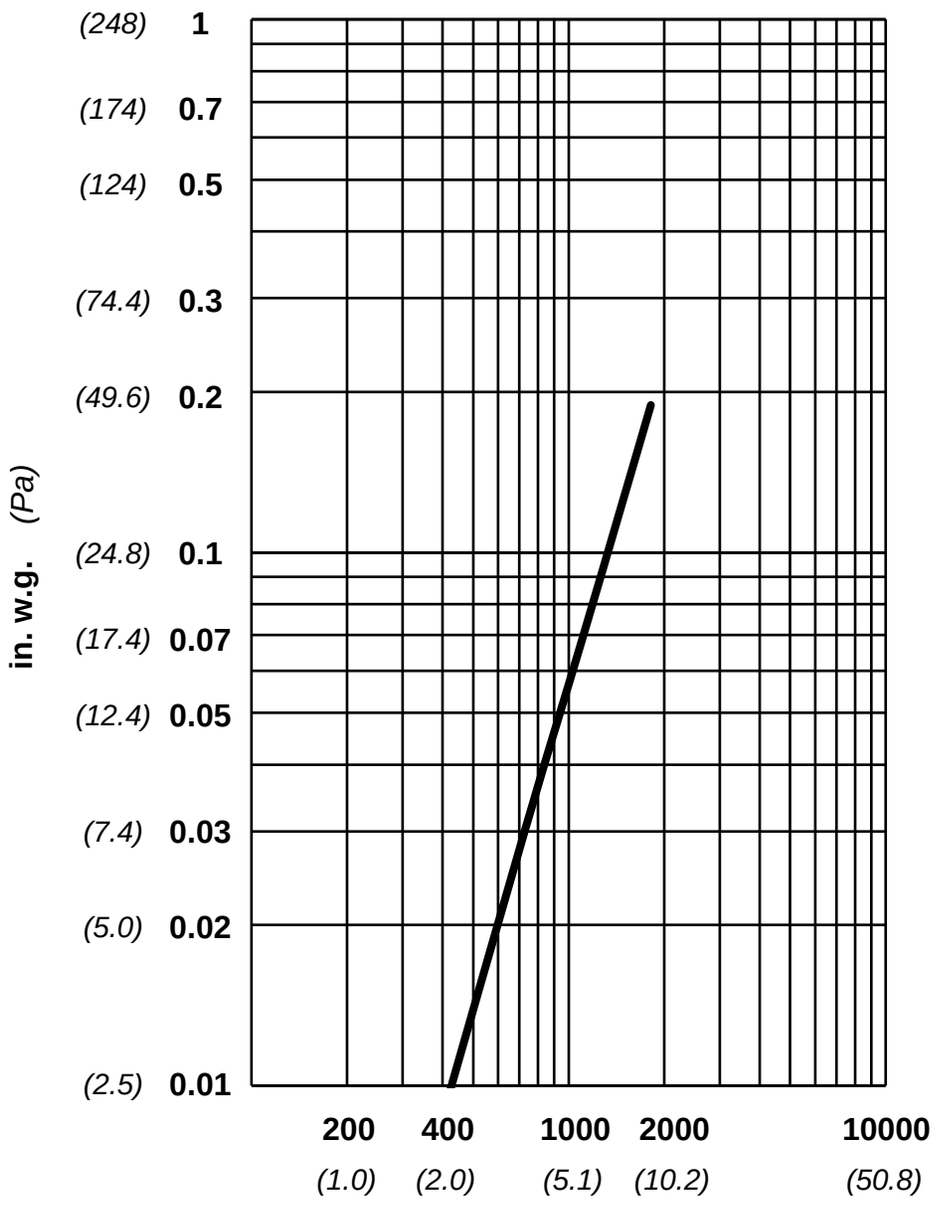
american warming and ventilating
A MESTEK COMPANY
7301 INTERNATIONAL DRIVE HOLLAND, OHIO
Phone (419) 865–5000 Fax (419) 865–1375

LAA–12AF ACOUSTICAL LOUVER

DRN. BY	DWG. NO.	REV.
JMC	LAA–12AF	
DATE 04/13/16		

Water Penetration : 0.01 oz (3.0 g) at 1140 fpm (5.79 m/s) recommended free area velocity
Pressure Drop : 0.07 in wg (17.4 Pa.) at 1140 fpm (5.79 m/s) and 4021 scfm (1.90 scm/s)
Free Area : 3.79 sq ft (0.352 sq m) = 23.7% for 48" x 48" (1.22m x 1.22m) test size

INTAKE PRESSURE DROP



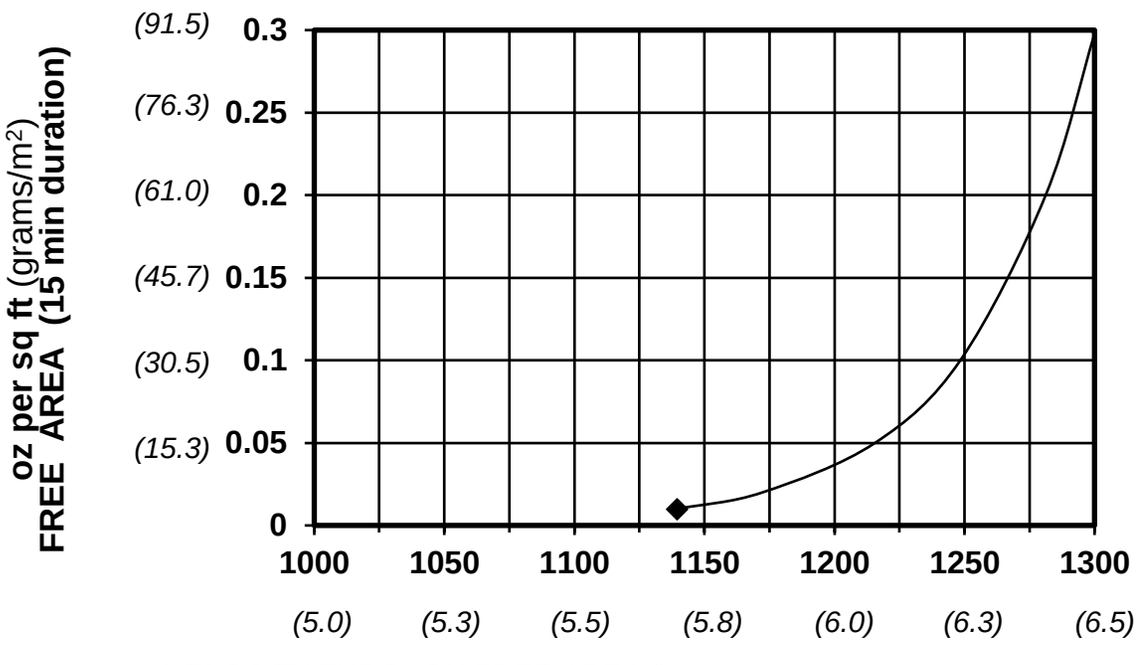
VELOCITY THROUGH FREE AREA fpm (m/s)

Airflow at standard air density - .075 lbs per cu ft
Ratings do not include the effect of a wire bird screen
Test based on a 48" x 48" test size per AMCA Standard 511
AMCA Figure 5.5 Test Setup

FREE AREA IN SQUARE FEET *(sq meters)*

HEIGHT	WIDTH							
in. *mm*	**12** *305*	**18** *457*	**24** *610*	**30** *762*	**36** *914*	**48** *1219*	**60** *1524*	**72** *1829*
24 *610*	**0.38** *0.035*	**0.62** *0.058*	**0.85** *0.079*	**1.08** *0.100*	**1.32** *0.123*	**1.79** *0.166*	**2.26** *0.210*	**2.73** *0.254*
30 *762*	**0.53** *0.049*	**0.86** *0.080*	**1.19** *0.111*	**1.52** *0.141*	**1.84** *0.171*	**2.50** *0.232*	**3.16** *0.294*	**3.81** *0.354*
36 *914*	**0.57** *0.053*	**0.92** *0.085*	**1.27** *0.118*	**1.62** *0.151*	**1.97** *0.183*	**2.67** *0.248*	**3.37** *0.313*	**4.07** *0.378*
48 *1219*	**0.76** *0.071*	**1.22** *0.113*	**1.69** *0.157*	**2.15** *0.200*	**2.62** *0.243*	**3.79** *0.352*	**4.48** *0.416*	**5.41** *0.503*
60 *1524*	**0.94** *0.087*	**1.52** *0.141*	**2.10** *0.195*	**2.69** *0.250*	**3.27** *0.304*	**4.43** *0.412*	**5.59** *0.519*	**6.75** *0.627*
72 *1829*	**1.13** *0.105*	**1.83** *0.170*	**2.52** *0.234*	**3.22** *0.299*	**3.91** *0.363*	**5.31** *0.493*	**6.70** *0.622*	**8.09** *0.752*
84 *2134*	**1.32** *0.123*	**2.13** *0.198*	**2.94** *0.273*	**3.75** *0.348*	**4.56** *0.424*	**6.19** *0.575*	**7.81** *0.726*	**9.43** *0.876*
96 *2438*	**1.51** *0.140*	**2.43** *0.226*	**3.36** *0.312*	**4.29** *0.399*	**5.21** *0.484*	**7.07** *0.657*	**8.92** *0.829*	**10.77** *1.001*

WATER PENETRATION



VELOCITY THROUGH FREE AREA fpm (m/s)

Both maximum recommended free area velocity and beginning of water penetration are 1140 fpm at standard air -.075 lbs per cu ft.
The above water penetration data is based on mill finish, 48" x 48" test size per AMCA Standard 511.

amca CERTIFIED RATINGS — WATER PENETRATION AIR PERFORMANCE — AIR MOVEMENT AND CONTROL ASSOCIATION, INC. — PRINTED IN THE UNITED STATES OF AMERICA

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LAA-12AF

Openings that require multiple louver panels in both width and height will require internal structural supports. It is recommended that large openings be divided with structural members so that the louvers will span either width or height with a single panel. Unusually high wind loading may require structural supports on non-multiple wide and multiple high assemblies. **Structural supports and mounting accessories are not supplied as a standard**.

Below is an explanation of how to use the AMCA Performance data for the recommended free area velocity of 1140 fpm (5.79 m/s).

To determine minimum free area required for louver:

Step #1: Divide the required CFM flow by the maximum recommended free area velocity.

Step #2: Select the most desirable louver size, from the free area table, that meets the minimum free area requirement.

Step #3: Compare specified performance to the certified water penetration and pressure drop ratings.

Example: Given: 5000 CFM design flow

Step #1:

$$\text{min. free area} = \frac{\text{Design CFM}}{\text{Max. Recommended Velocity}} = \frac{5000}{1140} = \textbf{4.39 sq ft}$$

Step #2: From the free area table above the approximate louver size is 48" x 60" = (4.43 sq ft)