

Reference:

Client:

Project:

Consultant:

Location:

Contractor:

Date:

Submitted by: BM



BADR and ASFOUR
Engineering & Metal Industries

Model FD-MB-AF-FA

Manual Quadrant, Multi-Blade Static Fire Damper
Front Access & Out-of-Wall/Floor Application
1-1/2 or 3 Hour, Airfoil Blade, UL-Classified

Application:

The BAS/ CVS model FD-MB-AF-FA is a multi-blade fire damper with Airfoil style blades, for decreased pressure drop, intended for installation outside the plane of a wall or floor with front (or grille) access to the quadrant. The FD-MB-AF-FA is used to prevent the spread of fire through a penetration in a fire rated barrier made by an HVAC duct or transfer. The FD-MB-AF-FA can be installed vertically (with blades running horizontally) or horizontally. The FD-MB-AF-FA can be installed in static systems only.



LISTINGS:

UL 555 Listing: R27700(UAE), R41135(KSA), R40068(Qatar), R41122(Egypt)

STANDARDS MET:

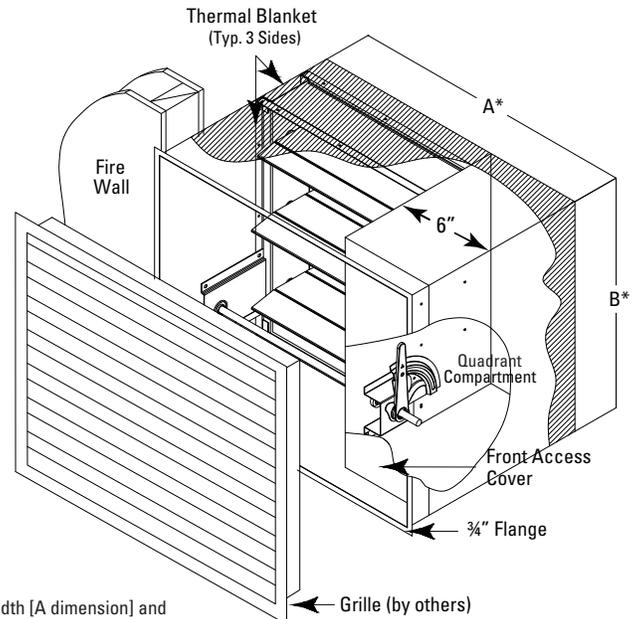
NFPA Standards: 80, 90A, 92A, 92B and 101

Building Code Standard:

ICC International Building Code

Standard Construction:

	Standard	Optional
Frame Material	20 Gauge (1) Galv. Roll-Formed Steel hat section w/ staked corners for integral bracing	-----
Blade Material and Type	Airfoil-shaped, double skin galvanized steel mechanically fastened to form equivalent to 14 Gauge (2) Steel	16 Gauge (1.5) "3V" Galv. Roll-Formed Steel (see FD-MB-3V-FA)
Blade Sizes	Min. width of 5" (127) to max. width of 7" (178)	-----
Frame Depth	5" (127)	-----
Dimensions	Actual - 1/4" (6)	Actual
Axle Bearings	Bronze Oilite (press fit into frame)	-----
Axle Material	Plated Steel	-----
Seals	Pressure Sensitive 450°F (232°C) silicone blade edge & flexible stainless jamb seals	-----
Linkage	.125" (3.2) plated steel, Concealed in Frame	-----
Sleeve	16" x 20" gauge (406x1 galv. steel w/ 1" (25) flange (1 side)	Wide variety of gauges and lengths available
Thermal Blanket	0.25" (6) thick thermal blanket 3 sides for vertical and 4 sides for horizontal applications	-----
Front Access Panel	Max. 6 inch. (152.4 mm), installed inside damper sleeve to conceal quadrant.	-----
Heat Responsive Device	UL Listed Fusible Link 165°F (74°C)	UL Listed Fusible Link 212°F (100°C)
Blade Operator	Manual Quadrant	Motorised [see Model FD-MB-AF-FA (M)]
UL Hour Rating	1-1/2 Hours	3 Hours



*Width [A dimension] and *Height [B Dimension] are approximately 1/4" undercut. Sleeved dampers are furnished approximately same size as given duct dimension plus 0.25" (6) for insulation.

Minimum & Maximum Sizes:

Multi-Blade Model	Minimum Size		Max. Single Section	
	1.5 Hour	3 Hour	1.5 Hour	3 Hour
FD-MB-AF-FA (Vertical)	12x12 (305x305)		36x48 (914x1219)	
FD-MB-AF-FA (Horizontal)				

Contact Factory for smaller sizes.

All dimensions shown in inches, parentheses () indicate millimeters.

Optional Construction:

Factory Installed Sleeve:

Optional Length: _____ (Std. 16" [406])

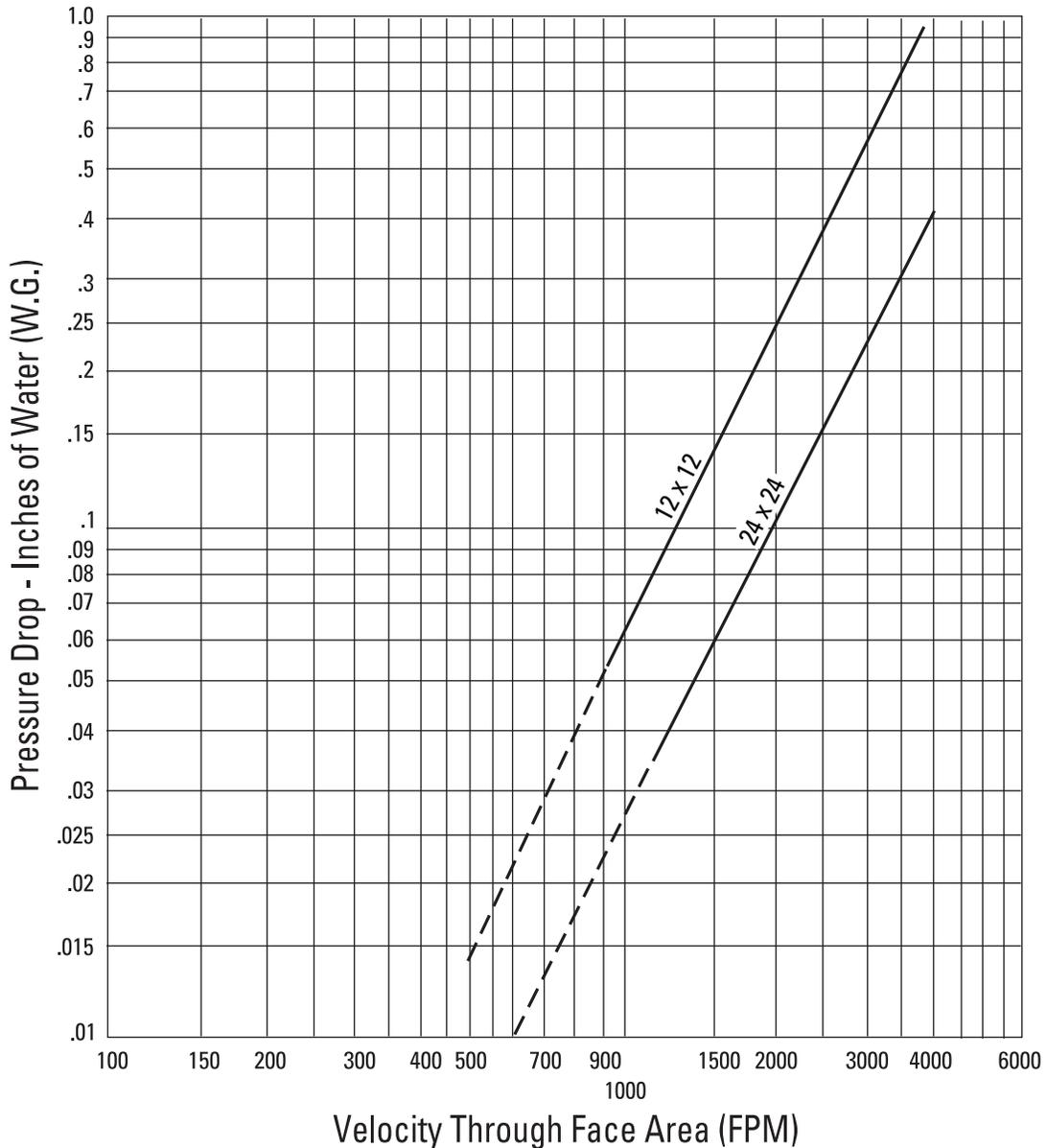
Gauge: 20 (1.0) 18 (1.2) 16 (1.5) 14 (2.0) 10 (3.5)

Framed Retaining Angles 16ga. x 1-1/2" x 1-1/2" (1.5 x 38 x 38)

Remote Control Box

RCB-1 RCB-2 RCB-3

Pressure Drop



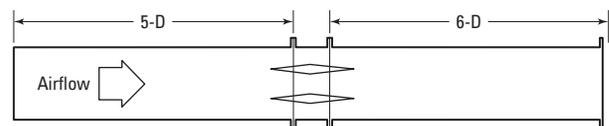
- To determine pressure drop:**
1. Locate the applicable face velocity on the bottom of the chart.
 2. Move up the chart to the most appropriate size damper line.
 3. From the intersection point, move left to determine the pressure drop.

AMCA Figure 5.3 - Ducted Inlet and Outlet

Pressure drop testing was performed by an independent laboratory to the AMCA Standard 500-D, Fig. 5.3 (ductwork upstream and downstream).

Note:

Pressure Drop for both sizes reflect damper face area only, and does not take into account the 6" deep quadrant compartment.



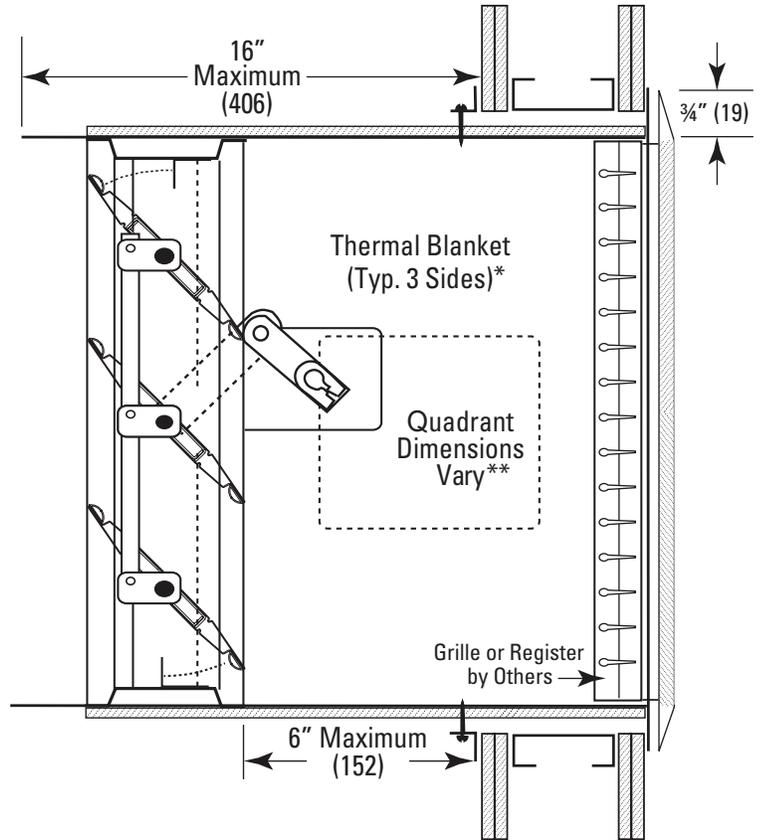
Sleeve Requirements:

Sleeve must be installed at the factory for out of wall/floor products. As with all fire rated damper installations, the sleeve must fully penetrate the wall/floor being protected.

Sleeve length is dependent upon damper height, grille depth (including OBD) and quadrant selection:

- Standard clearance allowance for grille inset is 3" (76).
- Maximum sleeve length is 16" (406) plus the total wall depth.

Sleeve is provided with a 3/4" (19) flange on the quadrant end of the sleeve by default. Flange must be on top of barrier in horizontal installations.



*Thermal Blanket provided 3 sides for Vertical and 4 sides for Horizontal. **3" clearance supplied for grille standard.

Thermal Blanket:

A factory installed thermal blanket is provided on three sides (bottom excluded) for dampers ordered for vertical installation and on all four sides for dampers ordered for horizontal installation.

Due to the nature of the application for Out-of-Wall and Out-of-Floor Fire dampers, a 0.25" (6) thermal blanket is installed around the sleeve at the factory.

This insulation is required as part of the UL Listing of the out of wall/out of floor assembly and must not be removed.

Top View

