

Reference:

Client:

Project:

Consultant:

Location:

Contractor:

Date:

Submitted by: BM



BADR and ASFOUR
Engineering & Metal Industries

Model SSD-AF-FA-201

Smoke Damper
Front Access Application
Airfoil Blade, Class 1, UL-Classified
(Class I is < 8 cfm per sq. ft. @ 4" w.g.)

Application:

The BAS/CVS model SSD-AF-FA-201 is a smoke 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 actuator. The SSD-AF-FA-201 is used to prevent the spread of smoke through a penetration in a smoke rated barrier made by an HVAC duct or transfer. The SSD-AF-FA-201 can be installed vertically (with blades running horizontally) or horizontally. The SSD-AF-FA-201 can be installed in static or dynamic systems up to the allowable tested pressures and velocities below.

MAXIMUM VELOCITY*: 2000 fpm (10.2 m/s).

MAXIMUM PRESSURE*: 4" wg (1kPa).

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	"3V" Galv. Roll-Formed Steel (see Model SSD-3V-FA-201)
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	Brass 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 actuator.	-----
Operating Temp.	350° (177°C)	-----
Leakage Class Rating	Class 1	Class 2 (see Model SSD-AF-FA-202)

Minimum & Maximum Sizes:

Front Access Damper Model	Minimum Size	Maximum Size
SSD-AF-FA-201 Vertical	12 x 12 (305 x 305) ¹	36 x 48 (914 x 1219)

¹Contact Factory for smaller sizes.

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



LISTINGS:

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

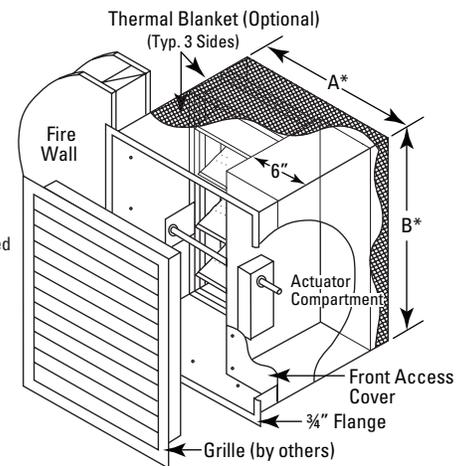
STANDARDS MET:

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

Building Code Standard:

ICC International Building Code

*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.



Optional Construction:

Auxiliary Switch

Add to Actuator Blade Mounted Switch (BIS)

Momentary Test Switch

Factory Sleeve:

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

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

Remote Control Box

RCB-1 RCB-2 RCB-3

Smoke Detector (Shipped Loose)

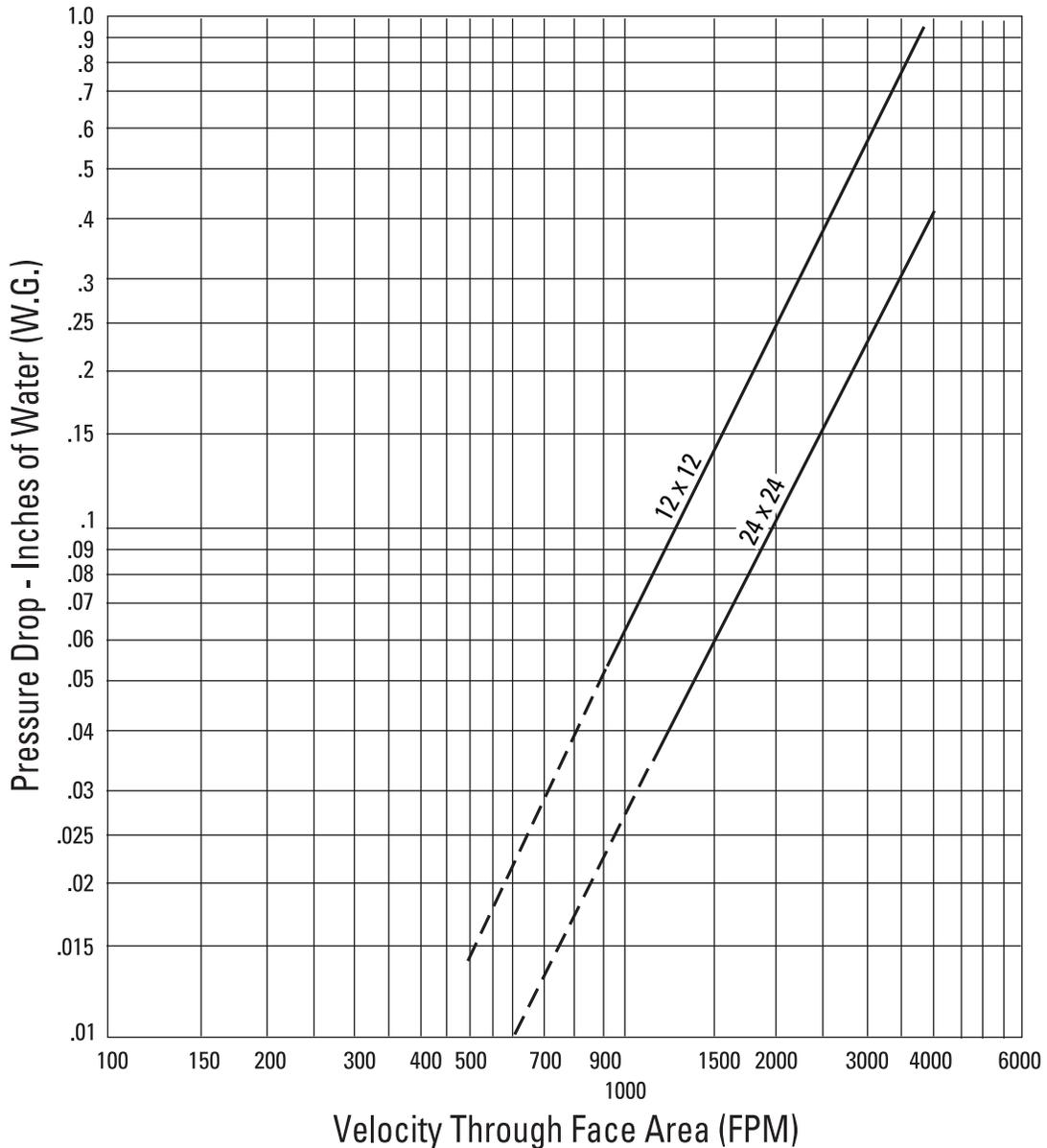
Actuators (Refer to UL Damper Actuator Reference Chart)

Type: Electric: Model # _____ Pneumatic: Model # _____

Location: Internal (Std.)

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

Pressure Drop



To determine pressure drop:

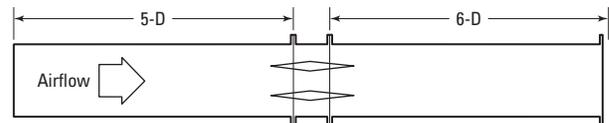
1. Locate the applicable face velocity on the bottom of the chart.
2. Move up the chart to the most appropriate size damper line.
3. From the intersection point, move left to determine the pressure drop.

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 actuator compartment.



Actuator Requirements:

UL555S requires that all leakage rated dampers be provided with factory mounted actuators. Available actuators vary by damper size and velocity, pressure and temperature ratings. Consult Motor/Actuator sheet for UL Products for current offering.

Sleeve Requirements:

Sleeve must be installed at the factory for front access products.

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

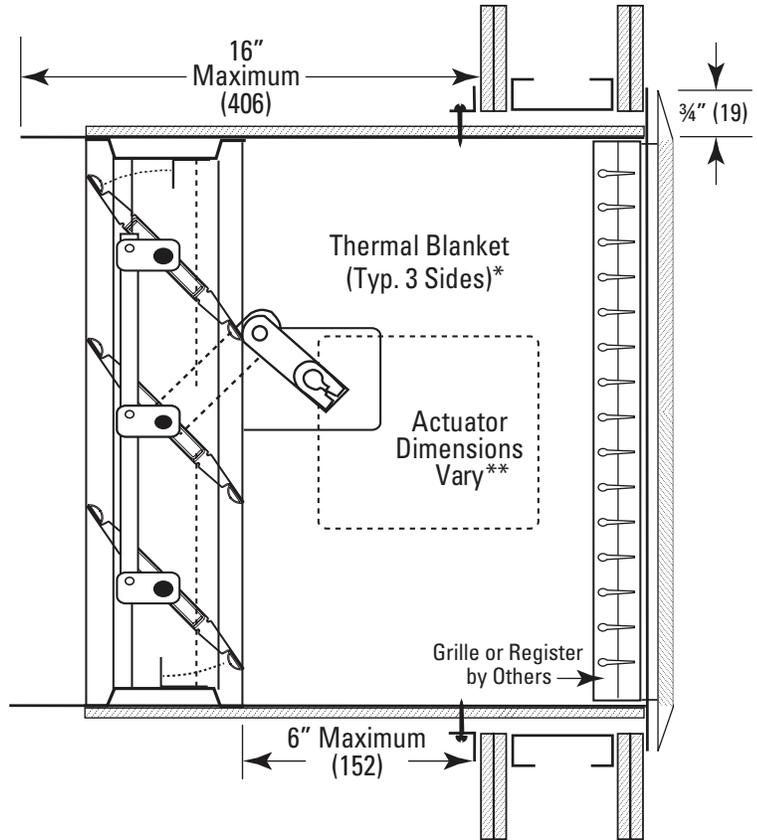
- Standard clearance allowance for grille inset is 3" (76).
- Maximum sleeve length is 16" (406) plus the total wall depth.

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

Thermal Blanket (Optional):

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 Front Access Smoke dampers, a 0.25" (6) thermal blanket is installed around the sleeve at the factory.



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

Top View

