

Application

The SMD-301V is a leakage rated smoke damper with vertical airfoil blades for operational closure in emergency smoke control situations.

Ratings

UL 555S Leakage Rating

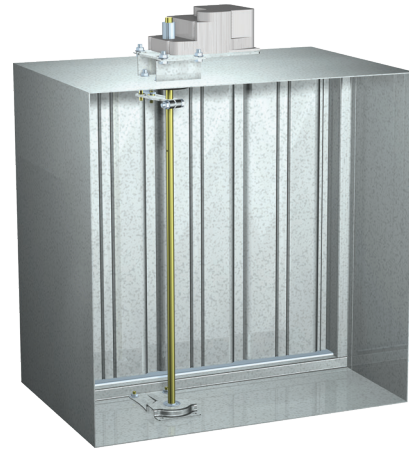
Leakage Class: I

Operational Rating: Actual ratings are size dependent

Velocity: Up to 4000 fpm (20.3 m/s)

Pressure: Up to 8 in. wg (2 kPa)

Temperature: Up to 350°F (177°C) - depending upon the actuator



*W and H dimensions furnished approximately ¼ in. (6mm) undersize. Add sleeve thickness for overall sleeved damper dimension.

Construction

	Standard
Frame Material	Galvanized steel
Frame Material Thickness	16 ga. (1.5 mm)
Frame Type	5 in. x 1 in. (127 mm x 25 mm) hat channel
Blade Material	Galvanized steel
Blade Material Thickness	14 ga. (2 mm) equivalent
Blade Type	Double skin airfoil
Blade Action	Opposed
Linkage	Plated steel out of airstream, concealed in jamb
Axle Bearings	316SS
Axle Material	Plated steel
Blade Seals	Silicone
Jamb Seals	Stainless Steel

Note:

The frames are constructed with reinforced corners. Low profile head and sill are used on sizes less than 17 in. wide (432mm) for lower pressure drop and improved damper performance.



See complete marking on product.

UL 555S Classification
R13317

Model SMD-301V meets the requirements for smoke dampers established by:

National Fire Protection Association

NFPA Standards 90A, 92, 101 & 105

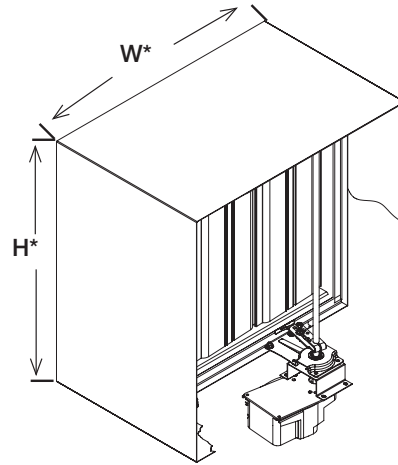
IBC International Building Codes

W x H	Minimum Size	Maximum Size	
		Single Section	Multiple Section
4 in. wg (1 kPa) pressure			
Inches	6 x 8	50 x 32	100 x 32
mm	152 x 203	1270 x 813	2540 x 813
6 in. wg (1.5 kPa) pressure			
Inches	6 x 8	50 x 32	-
mm	152 x 203	1270 x 813	-

*Note: Maximum sizes are dependent on velocities and pressures.

Options

- Breakaway connections
- Greenheck Test Switches
- Momentary test switch
- Retaining angles
- OCI (Open Closed Indication Switches)
- Sealed transitions and sleeves
- Security bars
- Smoke detectors
- Transitions: C, O, R



Document Links



[INSTALLATION](#)



[CATALOG](#)



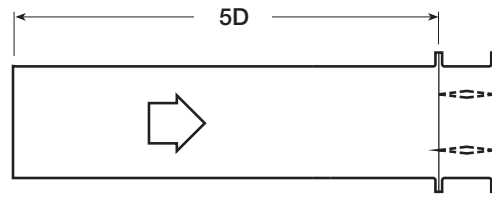
[SELECTION GUIDE](#)



[WARRANTY](#)

Pressure Drop Data

AMCA Figure 5.2



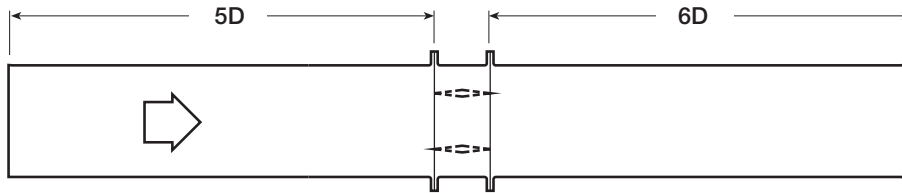
12 in. x 12 in. (305mm x 305mm)

Velocity (fpm)	Pressure Drop (in. wg)
500	0.03
1000	0.11
1500	0.24
2000	0.42
2500	0.66
3000	0.95
3500	1.30
4000	1.70

24 in. x 24 in. (610mm x 610mm)

Velocity (fpm)	Pressure Drop (in. wg)
500	0.01
1000	0.06
1500	0.12
2000	0.22
2500	0.34
3000	0.49
3500	0.67
4000	0.87

AMCA Figure 5.3



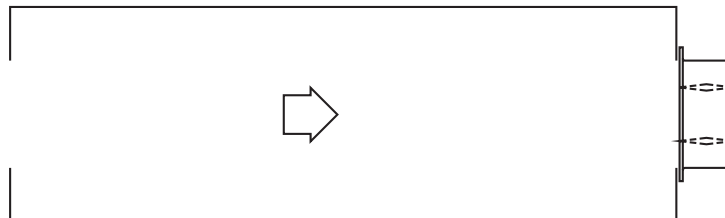
12 in. x 12 in. (305mm x 305mm)

Velocity (fpm)	Pressure Drop (in. wg)
500	0.01
1000	0.06
1500	0.13
2000	0.23
2500	0.37
3000	0.53
3500	0.73
4000	0.95

24 in. x 24 in. (610mm x 610mm)

Velocity (fpm)	Pressure Drop (in. wg)
500	0.01
1000	0.02
1500	0.06
2000	0.10
2500	0.16
3000	0.23
3500	0.32
4000	0.42

AMCA Figure 5.5



12 in. x 12 in. (305mm x 305mm)

Velocity (fpm)	Pressure Drop (in. wg)
500	0.04
1000	0.18
1500	0.42
2000	0.75
2500	1.17
3000	1.68
3500	2.29
4000	2.09

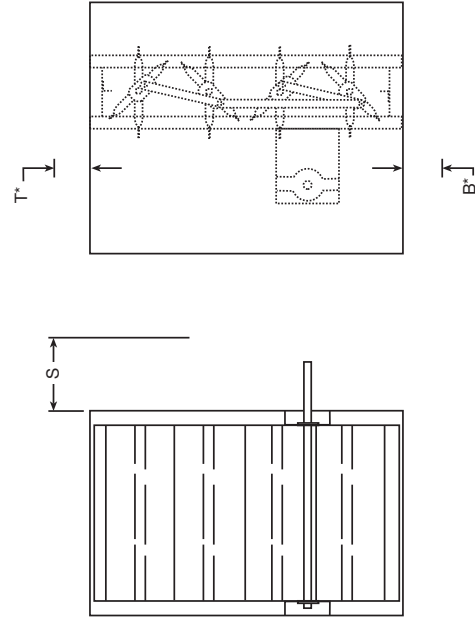
24 in. x 24 in. (610mm x 610mm)

Velocity (fpm)	Pressure Drop (in. wg)
500	0.03
1000	0.13
1500	0.29
2000	0.52
2500	0.81
3000	1.17
3500	1.60
4000	2.14

Space Envelopes

Externally mounted actuators always require space outside of the damper sleeve. The “S” dimension illustrates the clearance required for various available actuators.

Worst case space envelopes shown below. Exact dimensions may vary based on specific damper configuration. Consult factory for specific space envelope if necessary.

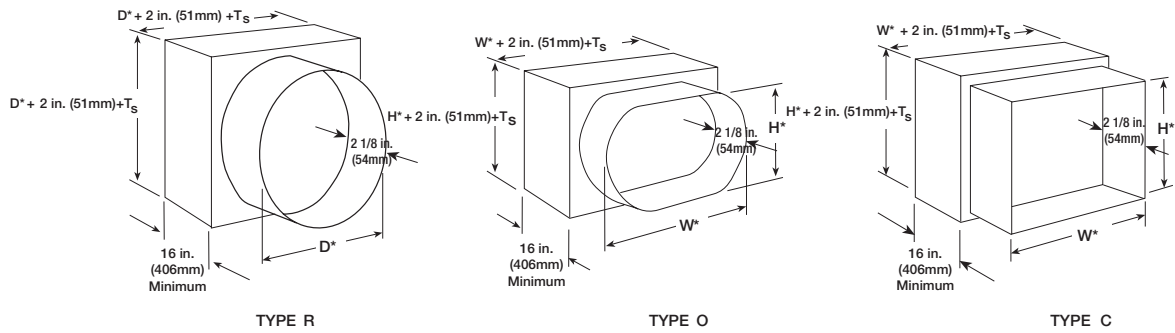


Actuator Type/Model	B*		S	
	With RRL, RRL/OCI, or TOR	With RRL, RRL/OCI, or TOR	Piggyback	
			No	Yes
Belimo				
FSAFB24-SR (-S)	1 ½ in (38mm)	9 ¼ in. (235mm)	6 in. (152mm)	9 in. (229mm)
FSLF series	8 in. (203mm)	1 ½ in (38mm)	6 ½ in. (165mm)	NA
FSNF series	1 ½ in (38mm)	9 ¼ in. (235mm)	6 in. (152mm)	9 in. (229mm)
FSTF Series	8 in. (203mm)	1 ½ in (38mm)	6 ½ in. (165mm)	NA
Siemens				
GJD Series	7 in. (178mm)	1 ½ in (38mm)	6 ½ in. (165mm)	NA
GRD Series	1 ½ in (38mm)	7 ½ in (191mm)	6 ½ in. (165mm)	NA
GXVD Series	1 ½ in (38mm)	9 ¼ in. (235mm)	6 in. (152mm)	9 in. (229mm)
Honeywell				
MS4103, MS8103 Series	8 ¾ in. (222mm)	1 ½ in (38mm)	6 ½ in. (165mm)	NA
MS4104, MS4604, MS8104 Series	1 ½ in (38mm)	8 ½ in (216mm)	6 ½ in. (165mm)	NA
MS4109, MS4609, MS8109 Series	1 ½ in (38mm)	8 ½ in (216mm)	6 ½ in. (165mm)	NA
MS4120, MS4620, MS8120 Series	1 ½ in (38mm)	9 ½ in. (241mm)	6 in. (152mm)	9 in. (229mm)

* For dampers 18 in. (457mm) or more in width these dimensions are 0 in.

Transitioned Damper Dimensions

When a smoke damper is being used in conjunction with round or oval ductwork, the SMD-301V can be supplied in a factory sleeve with round or oval transitions on both ends of the sleeve. Dampers should be ordered to the duct dimensions. Drawings below show overall damper size.



* These dimensions are furnished approximately $\frac{1}{4}$ in. (6mm) undersize, except round and oval dimensions which are approximately $\frac{1}{8}$ in. (3mm) undersize.

$T_s = (2)(\text{Sleeve Thickness})$

Multiple Section Dampers

Dampers larger than maximum single section size are supplied as a factory assembly of two or more sections of equal size. The following figures show maximum damper section size and assembly configurations for multi-section dampers.

