

Application

Model SMD-202 is a leakage rated smoke damper with 3V style blades. Model SMD-202 may be installed vertically (with blades running horizontally) or horizontally and is rated for airflow and leakage in either direction.

Ratings

UL 555S Leakage Rating

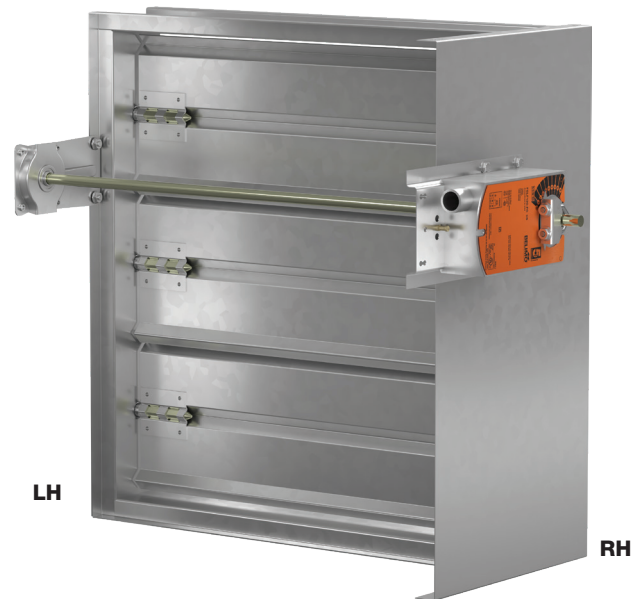
Leakage Class: II

Operational Rating: Actual ratings are size dependent

Velocity: Up to 2000 fpm (10.2 m/s)

Pressure: Up to 6 in. wg (1.5 kPa)

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



W&H dimensions furnished approximately ¼ in. (6mm) undersize.
(Add sleeve thickness for overall sleeved damper dimension)
Actuator is shown mounted internal left.



See complete marking on product.

UL 555S Classification R13317

CAN/ULC S112.1 Classified Smoke Damper

Size Limitations

W x H	Minimum Size	Maximum Size	
		Single Section	Multiple Section
4 in. wg (1 kPa) pressure			
Inches	6 x 6*	32 x 50 or 36 x 48	144 x 100 or 288 x 50
mm	152 x 152	813 x 1270 or 914 x 1219	3658 x 2438 or 7315 x 1270
6 in. wg (1.5 kPa) pressure			
Inches	6 x 6*	36 x 48	144 x 48
mm	152 x 152	914 x 1219	3658 x 1219

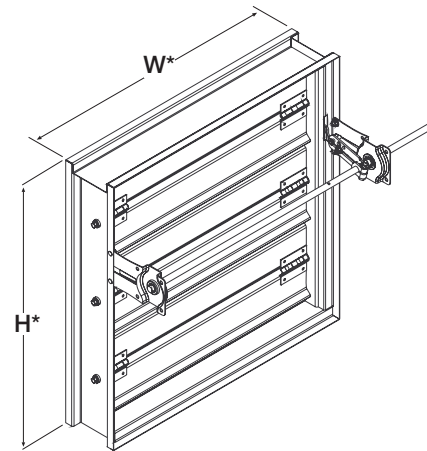
* Down to 4 in. x 4 in. (102 mm x 102 mm) using transitions.

Model SMD-201 meets the requirements for smoke dampers established by:

National Fire Protection Association
NFPA Standards 90A, 92, 101 & 105
IBC International Building Codes

Construction

	Standard	Optional
Frame Material	Galvanized steel	-
Frame Material Thickness	16 ga. (1.5mm)	-
Frame Type	5 in. x 1 in. (127mm x 25mm) hat channel	-
Blade Material	Galvanized steel	-
Blade Material Thickness	16 ga. (1.5mm)	-
Blade Type	3V	-
Blade Action	Parallel	-
Linkage	Plated steel out of airstream, concealed in jamb	-
Axle Bearings	316SS	-
Axle Material	Plated steel	-
Blade Seals	Silicone	-
Jamb Seals	Stainless Steel	-
Mounting	Vertical	Horizontal



Note:

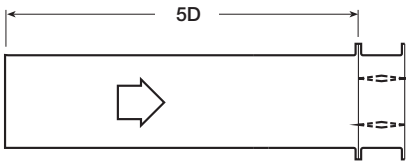
The frames are constructed with reinforced corners. Low profile head and sill are used on sizes less than 17 in. (432mm) high for lower pressure drop and improved damper performance.

Options

- Breakaway connections
- Clean wrap
- Greenheck test switches (GTS)
- Grille tabs
- Momentary test switch
- Retaining angles
- OCI (Open closed indication switches)
- Sealed transitions and sleeves
- Security bars
- Smoke detectors
- Transitions: C, O, R

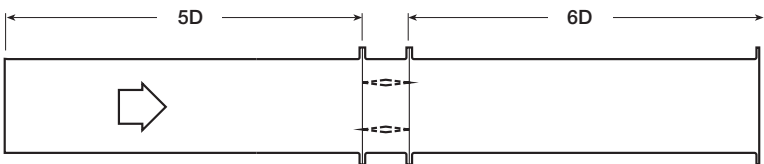
Pressure Drop

AMCA Figure 5.2



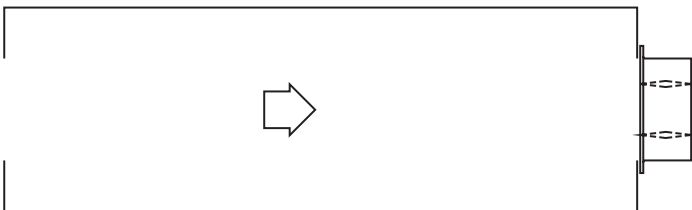
12 in. x 12 in. (305mm x 305mm)		24 in. x 24 in. (610mm x 610mm)		36 in. x 36 in. (914mm x 914mm)		12 in. x 48 in. (305mm x 1219mm)		48 in. x 12 in. (1219mm x 305mm)	
Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)
500	0.04	500	0.02	500	0.01	500	0.01	500	0.03
1000	0.14	1000	0.07	1000	0.04	1000	0.06	1000	0.10
1500	0.31	1500	0.16	1500	0.09	1500	0.13	1500	0.23
2000	0.55	2000	0.29	2000	0.16	2000	0.23	2000	0.41
2500	0.86	2500	0.45	2500	0.25	2500	0.36	2500	0.63
3000	1.24	3000	0.65	3000	0.36	3000	0.52	3000	0.91
3500	1.69	3500	0.89	3500	0.49	3500	0.70	3500	1.24
4000	2.20	4000	1.16	4000	0.64	4000	0.92	4000	1.62

AMCA Figure 5.3



12 in. x 12 in. (305mm x 305mm)		24 in. x 24 in. (610mm x 610mm)		36 in. x 36 in. (914mm x 914mm)		12 in. x 48 in. (305mm x 1219mm)		48 in. x 12 in. (1219mm x 305mm)	
Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)
500	0.02	500	0.01	500	0.01	500	0.01	500	0.02
1000	0.09	1000	0.04	1000	0.03	1000	0.04	1000	0.07
1500	0.20	1500	0.09	1500	0.06	1500	0.10	1500	0.16
2000	0.36	2000	0.16	2000	0.11	2000	0.17	2000	0.29
2500	0.56	2500	0.25	2500	0.17	2500	0.27	2500	0.45
3000	0.81	3000	0.35	3000	0.24	3000	0.39	3000	0.64
3500	1.10	3500	0.48	3500	0.33	3500	0.53	3500	0.88
4000	1.44	4000	0.63	4000	0.42	4000	0.70	4000	1.14

AMCA Figure 5.5

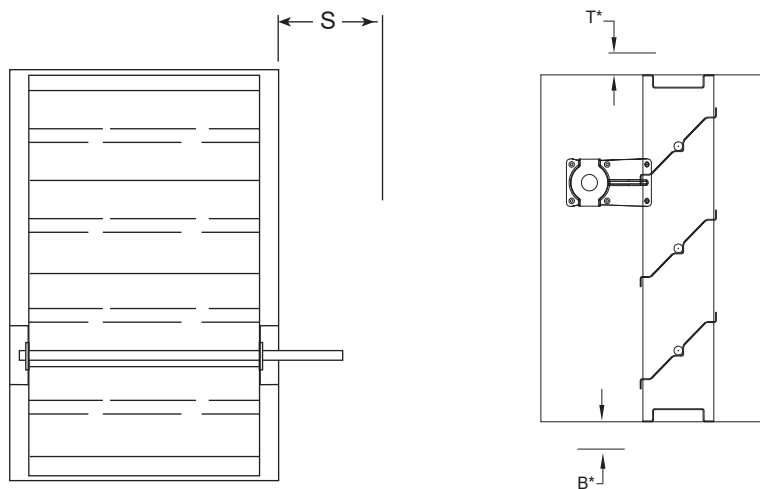


12 in. x 12 in. (305mm x 305mm)		24 in. x 24 in. (610mm x 610mm)		36 in. x 36 in. (914mm x 914mm)		12 in. x 48 in. (305mm x 1219mm)		48 in. x 12 in. (1219mm x 305mm)	
Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)	Velocity (fpm)	Pressure Drop (in. wg)
500	0.06	500	0.03	500	0.03	500	0.03	500	0.04
1000	0.22	1000	0.14	1000	0.12	1000	0.13	1000	0.17
1500	0.50	1500	0.31	1500	0.26	1500	0.30	1500	0.38
2000	0.89	2000	0.54	2000	0.46	2000	0.53	2000	0.67
2500	1.39	2500	0.85	2500	0.73	2500	0.83	2500	1.04
3000	2.00	3000	1.22	3000	1.05	3000	1.19	3000	1.50
3500	2.72	3500	1.66	3500	1.42	3500	1.62	3500	2.05
4000	3.55	4000	2.17	4000	1.86	4000	2.11	4000	2.67

Space Envelopes

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

On dampers less than 18 in. (457mm) high, actuators may also require clearances above and/or below the sleeve. “B” and “T” dimensions are worst case clearance requirements for some dampers less than 18 in. (457mm) high. All dampers 18 in. (457mm) or more in height, do not require these worst case clearances. If space availability above or below the damper sleeve is limited, each damper size should be individually evaluated.

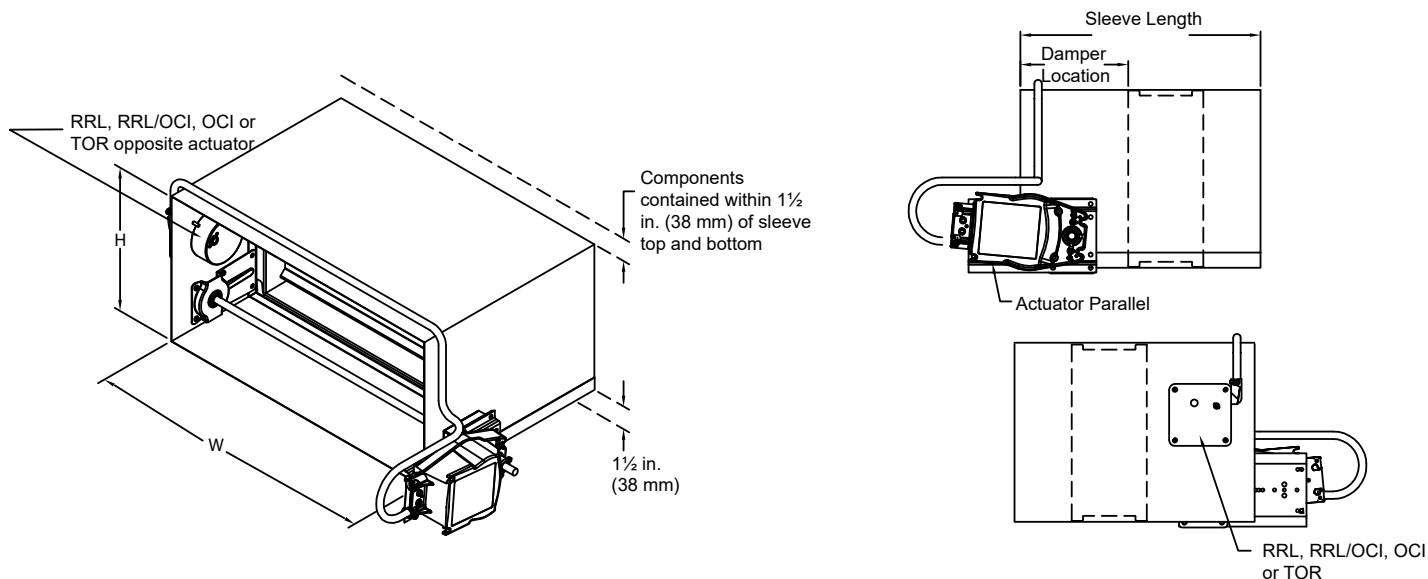


Actuator Type/Model	B*	T*	S	
	With	With	Piggyback	
	RRL, RRL/OCI, or TOR	RRL, RRL/OCI, or TOR	No	Yes
120 Volt AC				
FSLF120 (-S) Belimo	7 ¹¹ / ₁₆ in. (195mm)	0	6 in. (152mm)	NA
FSNF120 (-S) Belimo	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	9 in. (229mm)
FSTF120 (-S) Belimo	7 ¹¹ / ₁₆ in. (195mm)	0	6 in. (152mm)	NA
MS4X09 Series Honeywell	½ in. (13mm)	8½ in. (216mm)	6 in. (152mm)	NA
MS4120 Series Honeywell	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	9 in. (229mm)
24 Volt AC				
FSAF24 (-S) Belimo	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	NA
FSTF24 (-S) Belimo	7 ¹¹ / ₁₆ in. (195mm)	½ in. (13mm)	6 in. (152mm)	NA
FSLF24-S Belimo	7 ¹¹ / ₁₆ in. (195mm)	0	6 in. (152mm)	NA
FSNF24 (-S) Belimo	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	9 in. (229mm)
MS8120 Series Honeywell	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	9 in. (229mm)
230 Volt AC				
FSLF230-S Belimo	7 ¹¹ / ₁₆ in. (195mm)	0	6 in. (152mm)	NA
FSNF230-S Belimo	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	9 in. (229mm)
MS4X09 Series Honeywell	½ in. (13mm)	8½ in. (216mm)	6 in. (152mm)	NA
MS4620 Series Honeywell	½ in. (13mm)	9 ¹³ / ₁₆ in. (249mm)	6 in. (152mm)	9 in. (229mm)

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

Contained Actuator Option

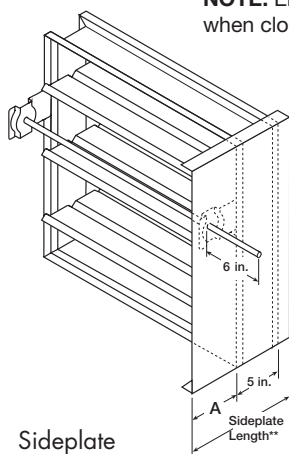
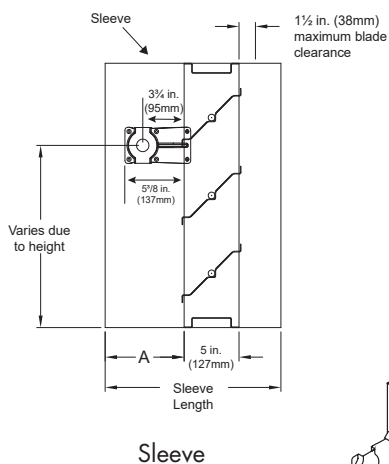
Dampers can be ordered with a “contained actuator option”. This option will result in the actuator being oriented such that it extends no more than 1½ inches above or below the sleeve. Note that some damper configurations that are 11 inches high or less will have the OCI mounted on the side opposite the actuator when the contained actuator option is selected.



Sleeve and Sideplate Dimensions

The drawings below and corresponding table show the position of the SMD-202 damper when mounted in a factory sleeve ("A" dimension). The standard mounting locations provide enough space for the mounting of actuators, controls and allow space for installation of retaining angles and duct connections. The following options may affect the range of available mounting locations: smoke detector, NEMA 7 enclosure, transitions, security bars, grille tabs.

The standard location of a damper mounted in a factory sleeve ("A" dimension) is shown below. The damper can be positioned at other locations within a range of 6 in. (152mm) to 16 in. (406mm) for the "A" dimension.

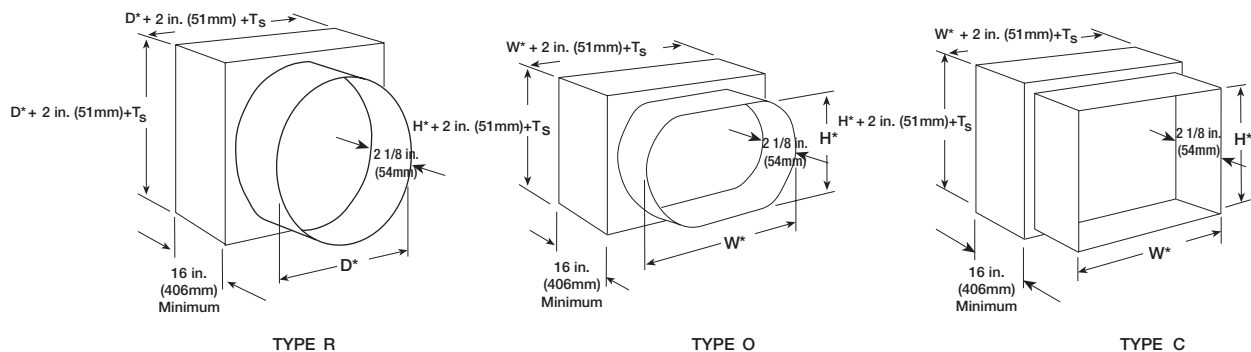


in. (mm)	With Sleeve		Sideplate Damper Location "A"
	Minimum Damper Location "A"	Maximum Damper Location "A"	
Dampers with no OCI	7 3/16 in. (183)	16 (406)	6 3/16 (157)
Height < 12 in. (305) OCI	12 (305)	16 (406)	12 (305)
Height ≥ 12 in. (305) OCI	7 3/16 in. (183)	16 (406)	12 (305)

NOTE: Entire damper frame is not required to be installed within the wall. The damper blades, when closed should be contained within the wall.

Transitioned Damper Dimensions

When a smoke damper is being used in conjunction with round or oval ductwork, the SMD-202 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.

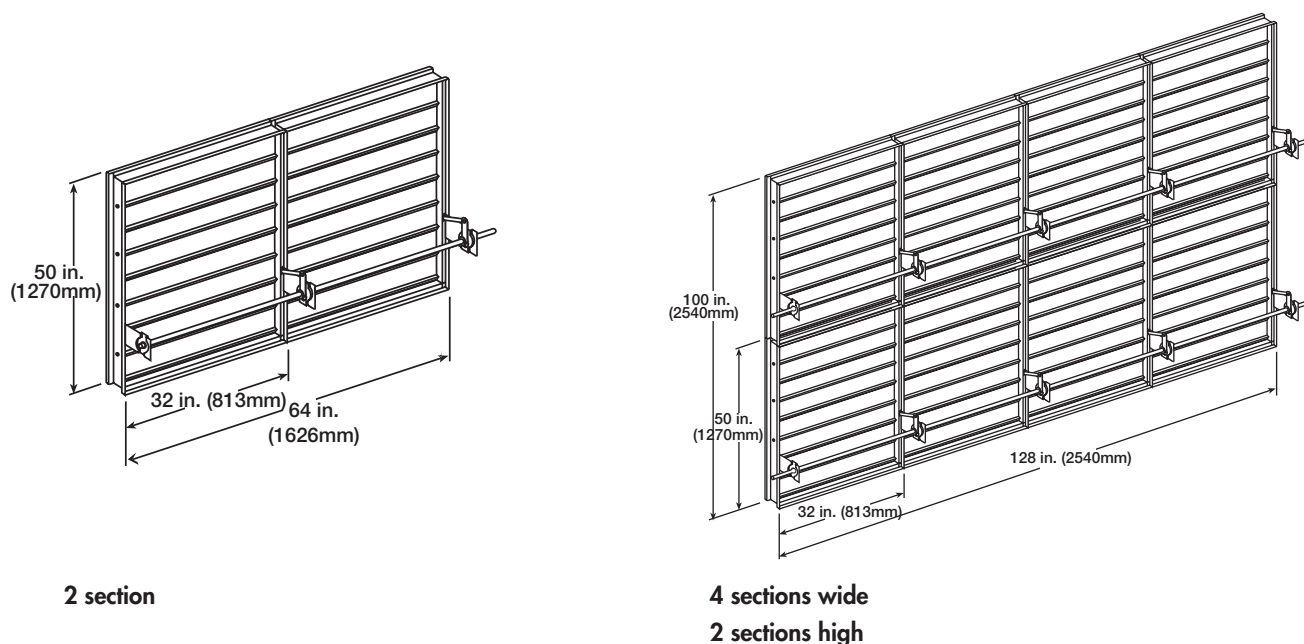


*These dimensions are furnished approximately $\frac{1}{4}$ in. (6mm) undersize, except round and oval dimensions which are approximately $\frac{1}{8}$ in. (3mm) undersize.

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

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.



Document Links



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