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## SD60V-M SMOKE DAMPER

### UL555S Leakage Class 2

#### APPLICATION

The SD60V-M is a UL555S listed vertical blade modulating smoke damper used in ducts or transfer openings that penetrate smoke rated barriers. The high strength one-piece airfoil blades insure lowest resistance to airflow with velocities up to 2000 fpm (10.2 m/s) and 4 in w.g. (1 kPa). The SD60V-M is rated for airflow and leakage in either direction.

SD60V-M is equipped with either a 24vac or vdc electric modulating actuator.



STANDARD CONSTRUCTION	
Description	SD60V-M
Frame	5" x 16 gauge (127 x 1.6) galvanized, single piece, hat-shaped channel frame.
Blades	One-piece airfoil, nominal 6" (152) wide-and 14 (2.0) gauge galvanized steel equivalent strength. Blades are approximately 6" (152) on center.
Bearings	Stainless steel sleeve type, pressed into frame.
Jamb Seals	Stainless steel, flexible metal compression type.
Blade Seals	Silicone edge type for smoke seal to 450°F (232°C) mechanically fastened to the blade edge.
Linkage	Concealed in frame.

#### OPERATION OPTIONS

Fail Position: Closed

#### DAMPER SIZES

Sizes listed below are for ratings of 2000 fpm (10.2 m/s) and 4 in. wg (1 kPa). See page 3 for extended operational ratings.

##### MINIMUM SIZE

8"w x 8"h (203 x 203).

##### MAXIMUM SIZE

Single Section  
48"w x 36"h (1219 x 914).

Multiple Section  
192"w x 36"h (4877 x 914), 96"w x 72"h (2438 x 1829) or  
48"w x 144"h (1219 x 3658)

\*Multiple section assemblies consist of 48" x 36" (1219 x 914) max single section sizes.

#### NOTES

1. Dampers furnished approximately 1/4" (6) smaller than given opening dimensions.
2. Dimensions shown in ( ) indicate millimeters.

MAXIMUM OPERATIONAL RATINGS	
Description	SD60V-M
UL555S Leakage Rating	Class 2
Maximum Velocity	2000 FPM (10.2 m/s)
Maximum Pressure	4 in. wg (1kPa)
Temperature	250°F (121°C)

Model SD60V-M meets the requirements for smoke dampers established by:

- National Fire Protection Association NFPA Standards 80, 90A, 92A, 92B, 101 and 105.
- ICC International Building Codes

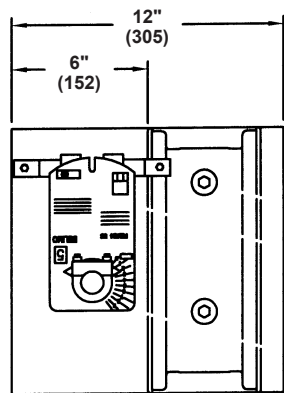
CSFM California State Fire Marshal Fire Damper  
Listing (#3230-0245:XXXX)



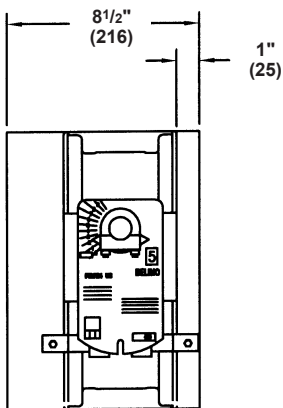
# ACTUATOR REQUIREMENTS

- UL555S requires that all smoke dampers have factory mounted actuators in order to bear the UL label.
- Smoke dampers larger than single section may require multiple actuators. See "Smoke Damper Multiple Section Detail" spec sheet for details.
- Ruskin's smoke dampers are UL555S labeled with actuators either mounted internal (in air stream) or external (out of air stream).
- Smoke dampers utilizing multiple actuators must have all actuators **field** wired to a common point for simultaneous closure. All field wiring shall be in accordance with applicable codes, ordinances and regulations.

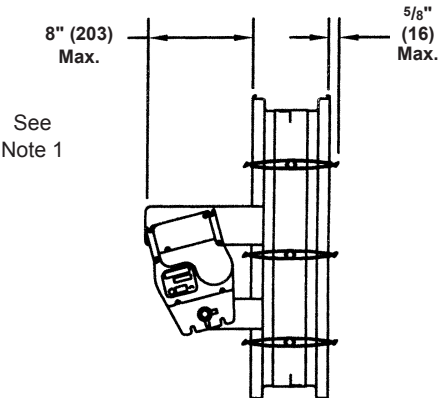
# TYPICAL ACTUATOR MOUNTING



Multiple Section with Side Plate



Single Section with Side Plate



Typical Internal Mount

- NOTES:**
1. 8" (203) actuator depth shown varies upon the damper height and actuator selection.
  2. External mount actuators may extend above or below the damper height.

# SLEEVE TRANSITION DIMENSIONAL INFORMATION

## DUCT TRANSITION CONNECTIONS

SD60V-M dampers may be supplied with Round, Oval and Rectangular duct connections.

Style	Description
CR	Round Sealed (Medium Pressure)
WR	Round Welded (High Pressure)
C	Rectangular Sealed (Low and Medium Pressure)
WC	Rectangular Welded (High Pressure)
CO	Oval Sealed (Medium Pressure)
WO	Oval Welded (High Pressure)

The square damper size will be 2" (51) larger in width and height than the round, oval or rectangular duct size ordered.

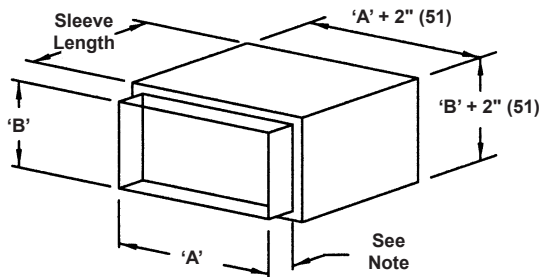
## MINIMUM and MAXIMUM SIZES

<b>Round Transitions</b> Minimum 6" (102) diameter Maximum – 94" (2388) diameter
<b>Rectangular and Oval Transitions</b> Minimum 6"w x 6"h (152 x 152)

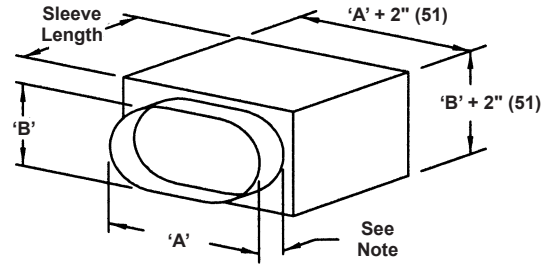
Consult Ruskin for other available styles and sizes.

**Note:** For medium pressure units (Styles CR, C and CO) the collar extends 1 1/2" (38) beyond the sleeve length and for low pressure and high pressure units (Styles R, WR, WC and LO) the collar extends 2 1/2" (64) beyond the sleeve length.

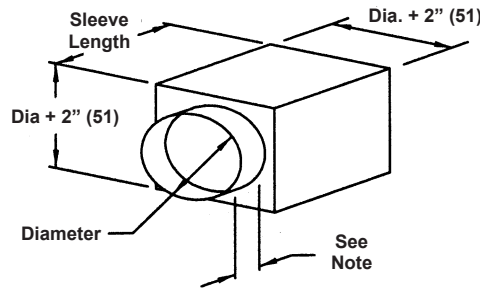
## SLEEVE TRANSITION DIMENSIONAL INFORMATION CONTINUED



Style C and WC



Style LO, CO and WO



Style R, CR and WR

## SUGGESTED SPECIFICATION

Smoke dampers meeting or exceeding the following specifications shall be furnished and installed at locations shown on plans or as described in schedules. AMCA Certified smoke dampers shall meet the requirements of NFPA80, 90A, 92A, 92B, 101 and 105 and shall be classified as Smoke Dampers in accordance with the latest version of UL555S. The leakage rating under UL555S shall be Leakage Class 2. Smoke dampers shall be produced in an ISO 9001 certified factory and warranted to be free from defects in material and workmanship for a period of 5 years after date of shipment.

Damper frame, where size permits, shall be constructed using the UniFrame Design Concept (UDC) and shall be minimum 16 (1.6) gauge galvanized steel formed into a structural hat channel. Top and bottom frame members on dampers less than 13" (330) high shall be low profile design to maximize the free area of these smaller dampers. Damper blades shall be single piece airfoil shaped with 14 (2.0) gauge equivalent strength. Airfoil type blades generate low pressure drop and low noise levels. Blade edge seals shall be silicone mechanically locked into blade edge. Jamb seals shall be stainless steel compression type. Bearings shall be stainless steel, permanently lubricated sleeve type turning in an extruded hole in the frame for maximum life.

Smoke dampers and their actuators shall be qualified in accordance with UL555S to an elevated temperature of 250°F (121°C). Appropriate electric actuators shall be installed by the damper manufacturer at time of damper fabrication. Actuators, factory installed on dampers, shall have been tested for prolonged periods of holding (minimum 1 year with no evidence of reduced spring return performance). Each damper shall be rated for leakage and airflow in either direction through the damper. In addition to the leakage ratings already specified, the dampers shall be AMCA licensed for Air Performance.

Smoke dampers shall be Ruskin model SD60V-M.

(Consult [www.Ruskin.com](http://www.Ruskin.com) for electronic version of this "Quick" spec as well as for complete 3-part CSI *MasterFormat* Specification).



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