

## Application

Model FSDR-511 is a combination fire smoke damper with round style blades. The FSDR-511 is qualified to 4,000 fpm (20.3 m/s) and 4 in. wg (1kPa) for operation and dynamic closure in emergency fire smoke situations. Model FSDR-511 may be installed vertically (with blades running horizontal) or horizontally and is rated for airflow and leakage in either direction.

## Ratings

### UL 555 Fire Resistance Rating

Fire Rating: 1½ hours

Dynamic Closure Rating: Actual ratings are size dependent

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

Pressure: Up to 4 in. wg (1 kPa)

### 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 4 in. wg (1 kPa)

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



\*Dimensions (dia.) furnished approximately ⅛ in. (3mm) undersize.



See complete marking on product.

UL 555 and UL 555S  
Classification R13317

## Construction

	Standard	Optional
<b>Frame Material</b>	Galvanized steel	-
<b>Frame Material Thickness</b>	20 ga. (1 mm)	16 ga. (1.5 mm)
<b>Blade Material</b>	Double skin galvanized steel	-
<b>Blade Material Thickness</b>	14 ga. (2mm) equivalent	-
<b>Blade Seal</b>	Silicone	-
<b>Axle Bearings</b>	Bronze	316SS
<b>Axle Material</b>	½ in. (13 mm) plated steel	316SS
<b>Closure Device</b>	Fusible Link	RRL, RRL/OCI, TOR, Fusible link
<b>Closure Temperature</b>	165°F (74°C)	212°F (100°C), 250°F (121°C), 286°F (141°C)*, 350°F (177°C)

\* available with fusible link only.

Model FSDR-511 meets the requirements for fire dampers, smoke dampers, and combination fire smoke dampers established by:

### National Fire Protection Association

NFPA Standards 80, 90A, & 101

### International Building Code (IBC)

### California State Fire Marshall (CFSM)

Fire Damper Listing #3225-0981:0112

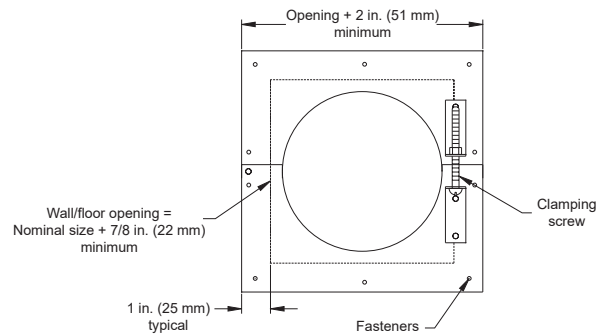
Leakage (Smoke) Damper Listing  
#3230-0981:0113

## Size Limitations

Diameter	Minimum Size	Maximum Size
Inches	6	24
mm	152	610

## Options

- [BACnet test module - 120V or 24V](#)
- [Greenheck Test Switches \(GTS\)](#)
- [OCI \(Open Closed Indication switches\)](#)
- [Momentary test switch](#)
- One retainer plate required, additional retainer plate available



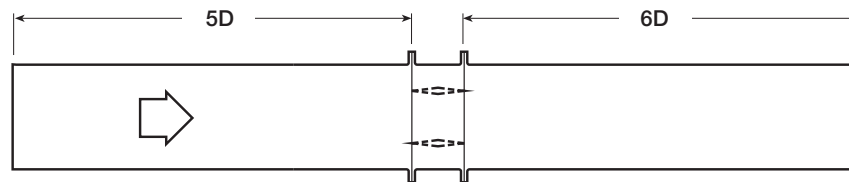
## Pressure Drop Data

This pressure drop testing was conducted in accordance with AMCA Standard 500-D using the configuration shown. All data has been corrected to represent standard air at a density of .075 lb/ft<sup>3</sup> (1.201 kg/m<sup>3</sup>).

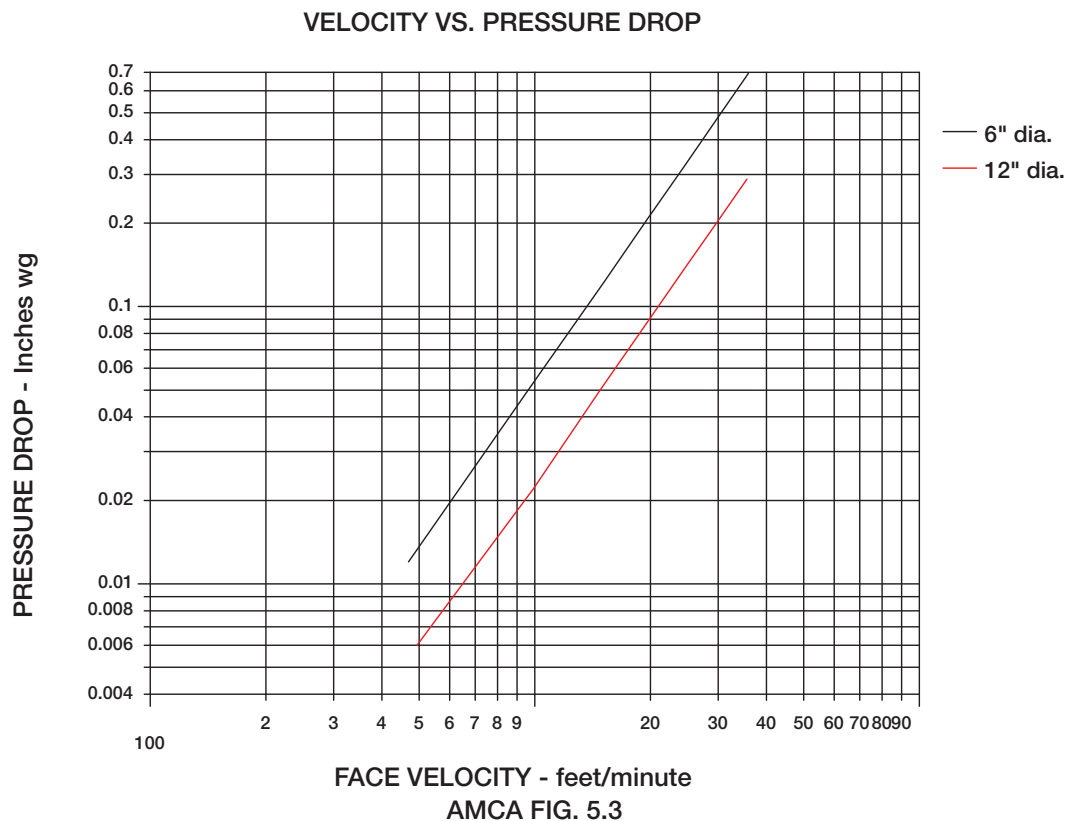
Actual pressure drop found in any HVAC system is a combination of many factors. This pressure drop information along with an analysis of other system influences should be used to estimate actual pressure losses for a damper installed in a given HVAC system.

## AMCA Test Figures

**Figure 5.3** Illustrates a fully ducted damper. This configuration has the lowest pressure drop of the three test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.



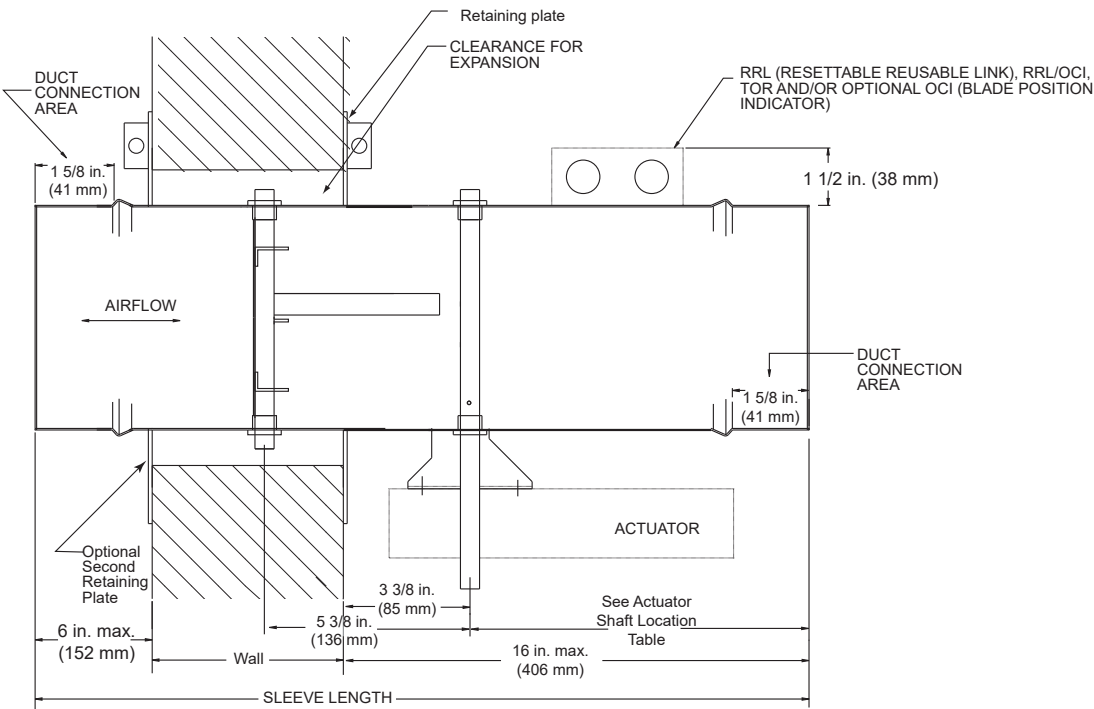
**Figure 5.3**



Sleeve Length and Actuator Shaft Location

Wall Thickness	Sleeve Length		
	Fusible Link	RRL	RRL/OCI, TOR, OCI
Up to 6½ in. (165)	16 in. (406)	18 in. (457)	20 in. (508)
Up to 8½ in. (216)	18 in. (457)	20 in. (508)	22 in. (559)
Up to 10½ in. (267)	17 ⅞ in. (448)	22 in. (559)	24 in. (610)
Over 10½ in. (267)	Consult Greenheck		

Dimensions in inches (mm).



TOP VIEW OF DAMPER

Actuator Shaft Location				
Control Device	Diameter -in inches (mm)			
	≥ 6 to ≤10⅞ (≥152 to ≤257)	>10⅞ to ≤11⅞ (≥257 to ≤283)	>11⅞ to ≤14⅞ (≥283 to ≤359)	>14⅞ (>359)
Fusible Link	3⅛ (78)	3⅛ (78)	3⅛ (78)	3⅛ (78)
RRL	5⅛ (144)	4⅛ (119)	4⅛ (119)	4⅛ (119)
RRL/OCI	7⅞ (189)	7⅞ (189)	7⅞ (189)	7⅞ (189)
TOR	7⅞ (189)	7⅞ (189)	7⅞ (189)	7⅞ (189)



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