

## Application

Model GFSD-211 is a combination fire smoke damper with 3V style blades designed for easy access through the grille to the damper, closure device, and the actuator. A separate compartment on the side of the damper houses the actuator. The GFSD-211 has been qualified to 2000 fpm (10.2 m/s) and 4 in. wg (1 kPa) for operation and dynamic closure in emergency fire smoke situations. Model GFSD-211 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 2000 fpm (10.2 m/s)

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

### UL 555S Leakage Rating

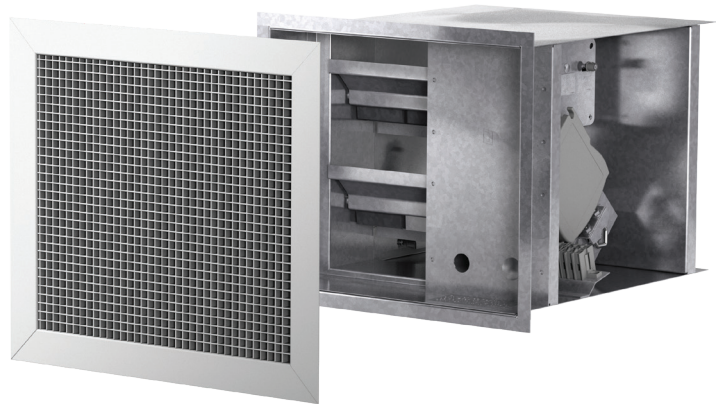
Leakage Class: I

Operational Rating: Actual ratings are actuator dependent

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

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

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



\*Width and Height dimensions furnished approximately ¼ in. (6mm) undersize. Add blanket thickness (⅙ in. [3mm]) and sleeve thickness for overall sleeved damper dimension.

Oversize wall opening as follows:

Nominal damper size plus ⅜ in. (9.5mm).



See complete marking on product.

UL 555 and UL 555S  
Classification R13317

## Size Limitations

W x H	Minimum Size	Maximum Size	
		Single Section	MultipleSection
Inches	14 x 12	42 x 48	48 x 48
mm	356 x 305	1067 x 1219	1219 x 1219

Model GFSD-211 meets the requirements for fire dampers, smoke dampers and combination fire smoke dampers established by:

#### National Fire Protection Association

NFPA Standards 80, 90A, 92, 101, & 105

#### IBC International Building Codes

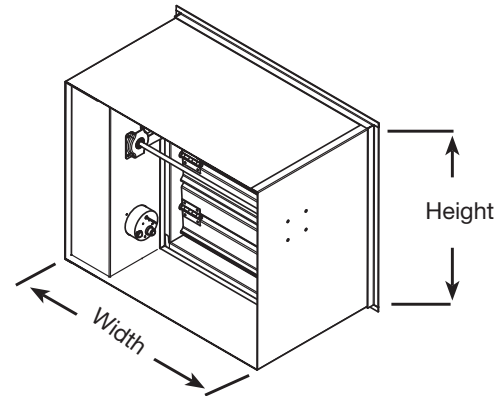
#### CSFM California State Fire Marshal

Fire Damper Listing (#3225-0981:0103)

Leakage (Smoke) Damper Listing (#3230-0981:0104)

## Construction

	Standard	Optional
<b>Frame Material</b>	Galvanized steel	-
<b>Frame Material Thickness</b>	16 ga. (1.5mm)	-
<b>Frame Type</b>	5 in. x 1 in. (127mm x 25mm) hat channel	-
<b>Blade Action</b>	Parallel	-
<b>Blade Material</b>	Galvanized steel	-
<b>Blade Material Thickness</b>	16 ga. (1.5mm) equivalent	-
<b>Blade Type</b>	3V	-
<b>Blade Orientation</b>	Horizontal	-
<b>Linkage</b>	Plated steel out of airstream, concealed in jamb	-
<b>Axle Bearings</b>	316SS	-
<b>Axle Material</b>	Plated steel	-
<b>Blade Seals</b>	Silicone	-
<b>Jamb Seals</b>	Stainless Steel	-
<b>Closure Device</b>	RRL	RRL/OCI, TOR
<b>Closure Temperature</b>	165°F (74°C)	212°F (100°C), 250°F (121°C), 350°F (177°C)
<b>Mounting</b>	Vertical	Horizontal



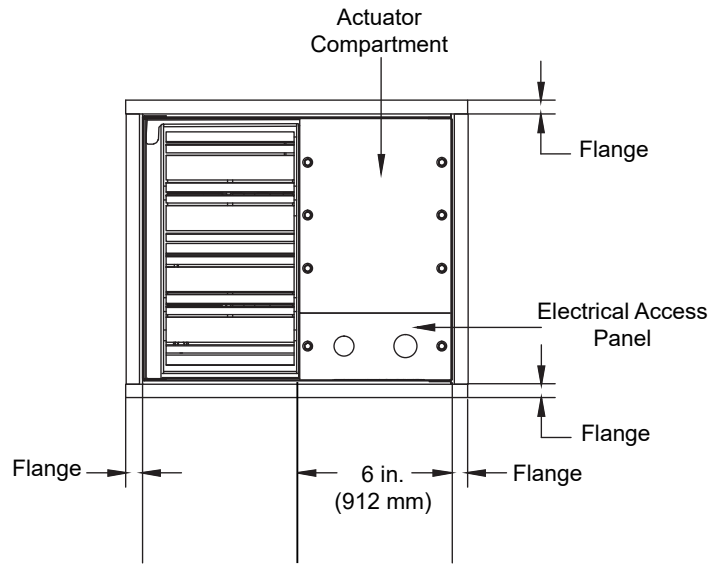
### Note:

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

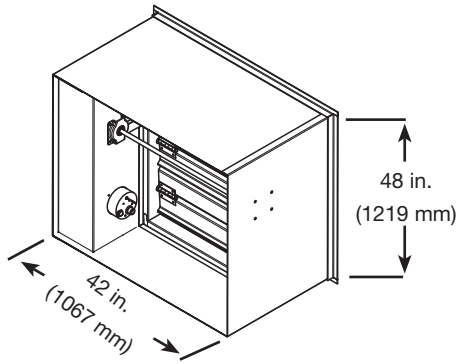
## Options

- [BACnet test module - 120V](#)
- [BACnet test module - 24V](#)
- Clean wrap
- [Greenheck test switches \(GTS\)](#)
- [Retaining angles](#)
- [Smoke detector - no flow](#)
- [Smoke detector - low flow](#)

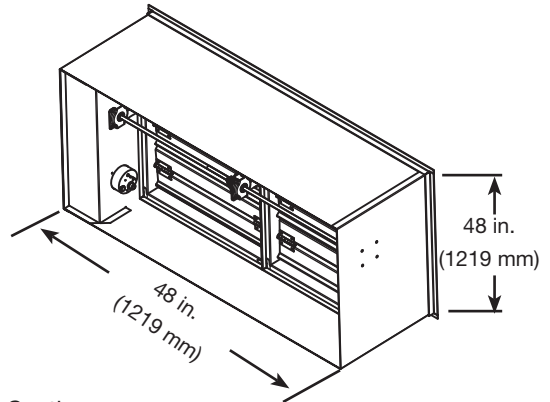
# Damper Sizing Information



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.



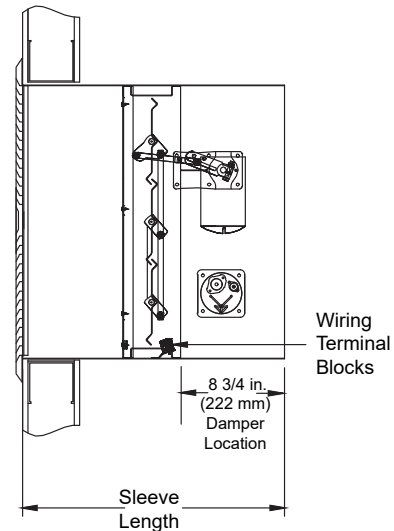
Single Section



Double Section

## Damper Sizing

The drawing to the right shows the position of the GFSD-211 damper when mounted in a factory sleeve. The standard mounting location provide enough space for the mounting of actuators, controls, and allow space for installation of retaining angles and duct connections.





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