

## Combination Fire Smoke Damper

*Round Steel Blade*

**UL 555S Leakage Class I**

**UL 555 1 1/2 Hour Fire Resistance Rating**

### Application

Model FSDR-511 is a combination fire smoke damper with round style blades. The FSDR-511 has been qualified to 3000 fpm (15.2 m/s) and 4 in. wg (1 kPa) 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: 1 1/2 Hour  
 Dynamic Closure Rating: Actual ratings are size dependant  
 Maximum Velocity: 3000 fpm (15.2 m/s)  
 Maximum Pressure: 4 in. wg (1 kPa)

#### UL 555S Leakage Rating

Leakage Class: I  
 Operational Rating: Actual ratings are actuator dependant  
 Maximum Velocity: 3000 fpm (15.2 m/s)  
 Maximum Pressure: 4 in. wg (1 kPa)  
 Maximum Temperature: 350° F (177°C) — Depending on actuator

### Standard Construction

**Frame/Sleeve:** 20 ga. (1mm) galvanized steel round  
**Blade:** Double skin galvanized steel (14 ga. [2mm] equivalent) round style blades  
**Seal:** Extruded silicone rubber blade seals  
**Axle:** 1/2 in. (13mm) dia. plated steel  
**Bearings:** Stainless steel sleeve type  
**Fusible Link:** UL listed 165°F (74°C) -not 304SS

### Size Limitations

**Minimum Size:** 6 in. (152mm) diameter  
**Maximum Size:** 24 in. (610mm) diameter

### Optional Features

- OCI (Open closed indication switches)
- 165° F (74°C), 212° F (100°C), and 350° F (177°C) RRL available
- TOR (remote override of 165° F (74°C) closure allows damper to perform smoke management functions during a fire emergency)
- Electric or pneumatic actuators to accomplish smoke management and system functions.
- One retainer plate required, additional retainer plate available.
- 14 ga. (2mm) or 16 ga. (1.5mm) frame/sleeve

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, 92A, 92B, 101, & 105

#### IBC International Building Codes

New York City (MEA listing #260-91-M)

#### California State Fire Marshall

Listing #: 3225-0981:112 (fire)

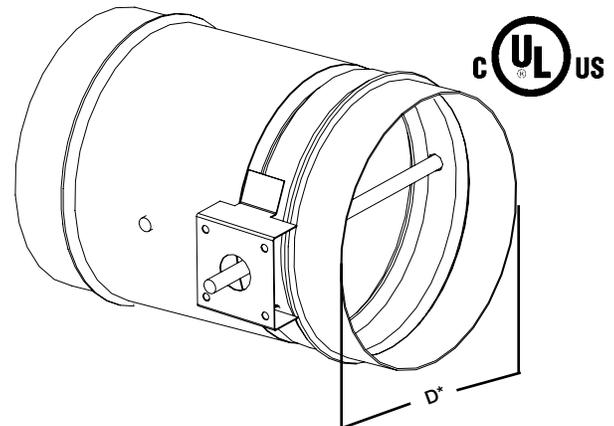
Listing #: 3230-0981:113 (smoke)

**“UL CLASSIFIED (see complete marking on product)”**

**“UL CLASSIFIED to Canadian safety standards (see complete marking on product)”**

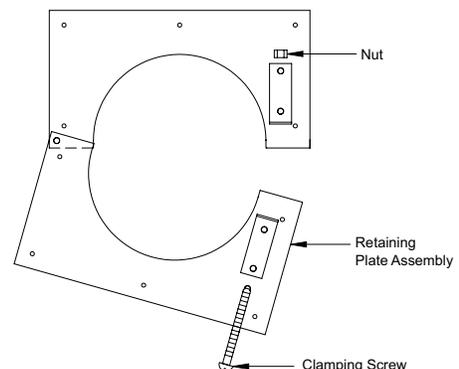
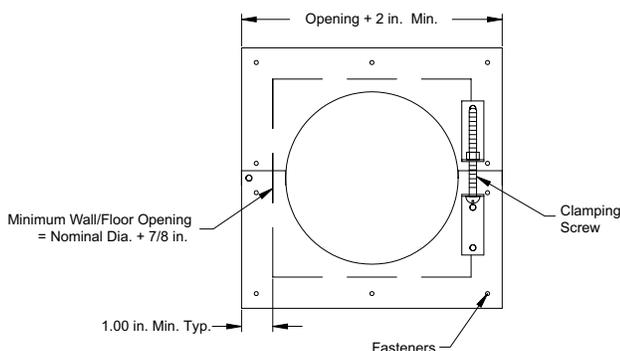
Standard 555 (Listing #R13317)

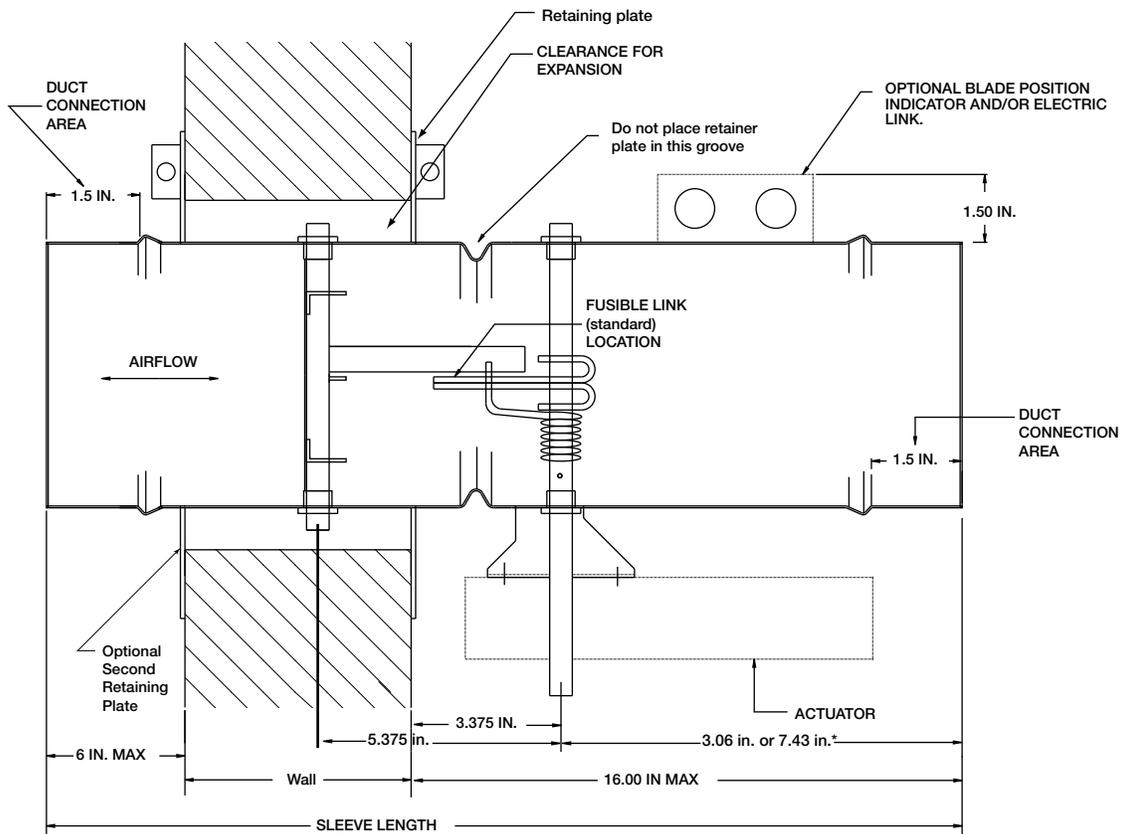
Standard 555S (Listing #R13447)



\* Dimensions furnished approximately 1/8 in. (3mm) undersize.

Installation instructions available at [www.greenheck.com](http://www.greenheck.com).





TOP VIEW OF DAMPER

\* 7.43 in. when OCI, RRL, RRL/OCI, TOR, or PRV is selected

## Specifications

True Round Combination Fire Smoke Dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules. Dampers shall meet the requirements of the latest edition of NFPA 80, 90A, 92A, 92B, 101, & 105.

Damper shall be constructed of 20 ga. (1mm) galvanized steel frame/sleeve; blade constructed of double skin galvanized steel round style blade; silicone rubber blade seal; ½ in. plated steel axles; stainless steel bearing. Damper is provided with one retainer plate.

Dampers shall be tested, rated and labeled in accordance with the latest edition of UL standards 555 and 555S. Dampers shall have a UL555 fire rating of 1½ hours. Each damper shall be equipped with a heat responsive device, which has been tested and approved for use with the damper assembly in accordance with UL555. The heat responsive device shall have a temperature rating of (specifier select one of the following) 165°F (74°C), 212°F (100°C), 286°F (141°C), or 350°F (177°C).

Dampers shall be UL labeled for use in dynamic systems. The damper shall have a dynamic closure airflow rating equal to or greater than the airflow at the dampers installed location and a dynamic closure pressure rating of 4 in. wg (1kPa). All UL555 and UL555S dynamic closure and leakage

ratings shall be qualified for airflow and pressure in either direction through the damper. UL ratings shall allow for mounting damper vertically or horizontally.

Dampers shall have a UL555S leakage rating of Class I and a temperature rating of 250°F (121°C) minimum. Dampers shall have a UL555S operational airflow rating equal to or greater than the airflow at its installed location and an operational pressure rating of 4 in. wg (1kPa). Damper actuators shall be factory mounted and qualified for use with the damper in accordance with UL555S.

Damper actuators shall be (specifier select one of the following) electric type for 120 or 24 volt operation and pneumatic type for 25 psi minimum (30 psi maximum) operation. Manufacturer's submittal data shall indicate actuator space requirements around the damper.

The Damper manufacturer's submittal data shall certify all air performance pressure drop data is tested in accordance with the AMCA certified ratings program for test figures 5.2, 5.3, and 5.5. Damper air performance data shall be developed in accordance with the latest edition of AMCA Standard 500-D.

Basis of design is Greenheck's model FSDR-511.

