

## FSD60RA, FSD60-2RA, FSD60VRA, FSD36RA AND FSD35RA COMBINATION FIRE AND SMOKE RATED MULTIPLE BLADE DAMPERS 1½ HOUR UL CLASSIFIED RATING

### APPLICATION

"RA" combination fire and smoke dampers are designed to install completely from one side of the wall and are available 3 ways. RA1 is equipped with a partial sleeve, RA2 is manufactured without a sleeve and the RA is equipped with a standard sleeve. All RA fire smoke dampers include an integral flange that can be fastened directly to the wall or top side of the floor. The RA1 and RA2 dampers also include unique mounting straps that can be used for installation in masonry or metal stud walls without the use of anchors or fasteners of any type.

### STANDARD CONSTRUCTION

#### FRAME

5" x 16 gage (127 x 1.6) galvanized, hat-shaped channel, structurally superior to 13 gage (2.3) channel frame.

#### SLEEVE

17" (432) or 20" (508) standard 20 gage (1.0) galvanized steel.

#### BLADES

See specific basic model spec sheets for details.

#### BLADE AND JAMB SEALS

See specific basic model spec sheets for details.

#### BEARINGS

Stainless steel sleeve, pressed into frame.

#### LINKAGE

Concealed in frame.

#### AXLES

½" (13) plated steel hex.

#### CONTROLLED CLOSURE DEVICE (HEAT-ACTUATED)

165°F (74°C) standard. 212°F (100°C), 250°F (121°C), 285°F (141°C) or 350°F (177°C) are available at no additional cost.

### DAMPER SIZES

#### MINIMUM SIZES

FSD60RA, FSD60-2RA and FSD36RA – 8"w x 6"h (203 x 152)

FSD60-VRA – 6"w x 8"h (152 x 203)

FSD35RA – 5"w x 6"h (127 x 152)

#### MAXIMUM SIZES

FSD60RA and FSD60-2RA – 32"w x 36"h (813 x 914)

FSD60-VRA – 36"w x 32"h (914 x 813)

FSD36RA and FSD35RA – 36"w x 36"h (914 x 914)

### OPTIONS

- **FM Approvals** Specification Tested Product.
- **TS150 FireStat** for reopenable operation in dynamic smoke management systems.
- **DSD Duct Smoke Detector** (Low-flow rated)
- **SP100 Switch Package** to remotely indicate damper blade position.
- **Factory Sleeves** in lengths other than standard and gages to insure field compliance with UL installation requirements.
- **Access Door** factory mounted in common sleeve to insure compliance with UL installation requirements.
- **MCP** control panels for test purposes or smoke management systems.

### NOTES

1. Dimensions shown in parentheses ( ) indicate millimeters.
2. Units are furnished approximately ¼" (6) smaller than given opening dimensions.

The FSDRA series dampers meet the requirements for fire, smoke and combination fire/smoke dampers established by:

- **National Fire Protection Association NFPA Standards** 90A, 92A, 92B and 101
- **BOCA National Building Codes**
- **ICBO Uniform Building Codes**
- **SBCCI Standard Building Codes**
- **ICC International Building Codes**
- **CSFM California State Fire Marshal (See note 4)**
- **New York City, MEA or BSA (See note 4)**

### UL CLASSIFIED

UL555 Listing R5531, UL555S Listing R5531



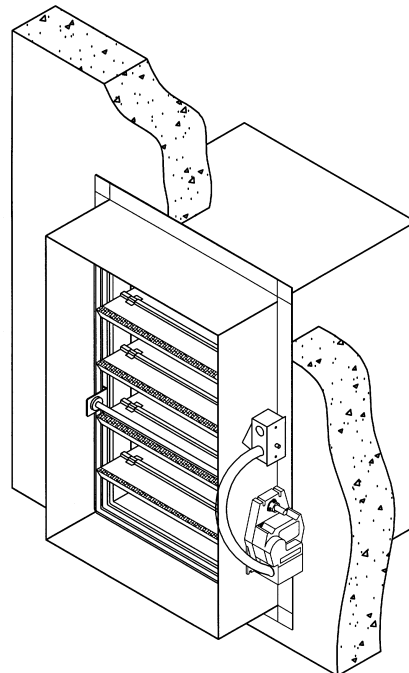
SEE COMPLETE  
MARKING  
ON PRODUCT

**FM Approvals**  
Specification Tested Product  
(Option)

### FEATURES

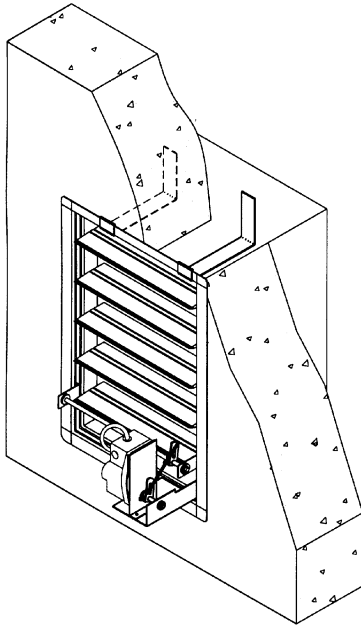
The FSDRA series offers:

- **EFL (Electric Fuse Link) or PFL (Pneumatic Fuse Link)** heat-actuated release devices permit controlled (rather than instantaneous) closure through the damper actuator. The EFL and PFL allow the damper to automatically open after a test, smoke detection or power failure condition.
- EFL is standard on dampers with electric actuators.
- PFL is standard on dampers with pneumatic actuators.
- EFL's may be ordered on dampers with pneumatic actuators but require an additional EP switch.

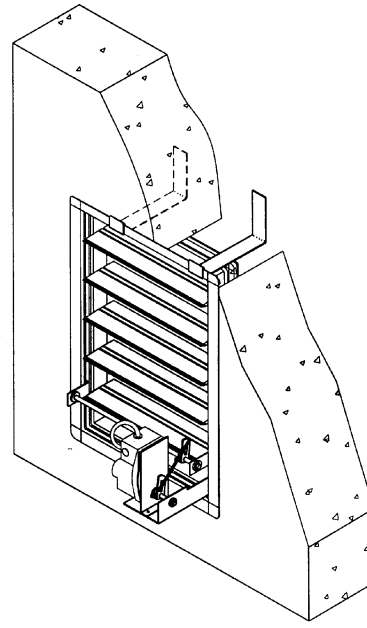


## RA1 AND RA2 OPTIONS

---



The RA1 option is an integral retaining angle fire/smoke damper with a 12" (305) long partial sleeve. The partial sleeve permits a duct connection on one side. The RA1 is ideal for ducted return air applications.



The RA2 option is an integral retaining angle fire/smoke damper that can be installed without a sleeve. The RA2 is ideal for non-ducted return air applications.

## SPECIFICATION

---

Combination fire smoke dampers meeting or exceeding the following specifications shall be furnished and installed at locations shown on plans or as described in schedules. Dampers shall meet the requirements of NFPA90A, 92A and 92B. Dampers shall have a fire rating of 1½ hours in accordance with the latest edition of UL555 and shall be classified as Leakage Class I, 2 or 3 Smoke Dampers in accordance with the latest version of UL555S (FSD60RA is Class 1, FSD60-2RA and FSD60VRA and FSD36RA are Class 2 and FSD35RA is Class 3). Dampers shall be warranted to be free from defects in material and workmanship for a period of 5 years after date of shipment.

In addition the dampers and their actuators shall have a UL555S elevated temperature rating of 250°F (121°C) or 350°F (177°C) depending upon the actuator. Appropriate electric or pneumatic actuators shall be installed by the damper manufacturer at time of damper fabrication. Electric actuators shall have been energized hold open tested for a period of at least 1 year with no spring return failures.

Each fire smoke damper shall be equipped with a "controlled clo-

sure" quick detect heat-actuated release device to prevent duct and HVAC component damage. Instantaneous damper closure through the use of fusible links is unacceptable.

Damper frame shall be a roll-formed structural hat channel, reinforced at the corners, formed from a single piece of minimum 16 gage (1.6) galvanized steel. Damper blades shall be airfoil shaped with 13 gage (2.3) equivalent thickness formed from a single piece of galvanized steel or shall be single skin 16 gage (1.6) galvanized steel reinforced with a minimum three longitudinal grooves. Bearings shall be stainless steel turning in an extruded hole in the frame. Blade edge seals shall be silicone rubber and galvanized steel mechanically locked in to the blade edge (adhesive type seals are not acceptable). Each damper shall be supplied with a factory mounted sleeve of 17" (432) minimum length. Sleeve shall include a 1½" (38) integral retaining flange with mounting straps to allow installation from one side of the wall. Dampers shall be Ruskin model FSD60RA, FSD60-2RA, FSD60-VRA, FSD36RA or FSD35RA.

(Consult Ruskin for detailed CSI *MasterFormat* Specification).

**RUSKIN®**

3900 Dr. Greaves Rd.  
Kansas City, MO 64030  
(816) 761-7476  
FAX (816) 765-8955  
www.ruskin.com