

FSD60M, FSD60-3M AND SD60M COMBINATION FIRE SMOKE AND SMOKE AND VOLUME CONTROL DAMPERS 1½ or 3 HOUR UL555 RATED, UL555S LEAKAGE CLASS 1

APPLICATION

The FSD60M and FSD60-3M are combination fire and smoke dampers. The SD60M is a smoke (only) damper. They are designed with airfoil blades (for lowest pressure drop) and are equipped with either a modulating electric or pneumatic actuator so they can also be used as volume control dampers. They can be installed vertically in walls or horizontally in concrete floors in HVAC systems with velocities to 2,000 fpm and pressures to 4" w.g.

STANDARD CONSTRUCTION

FRAME

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

BLADES

Airfoil-shaped, double-skin, single piece construction with 14 gage equivalent thickness, maximum 6" (152) wide.

BEARINGS

Stainless steel sleeve, pressed into frame.

JAMB SEALS

Stainless steel, flexible metal compression type.

BLADE SEALS

Silicone edge type for smoke seal to 450°F (232°C) and galvanized steel for flame seal to 1900°F (1038°C).

LINKAGE

Concealed in frame.

HEAT-ACTUATED CONTROLLED CLOSURE DEVICE (FSD ONLY)

165°F (74°C) standard. 212°F (100°C) or 250°F (132°C) are available at no additional cost.

ACTUATOR

Electric

120VAC - M9182A120.

24VAC - M9182A24.

Both actuators come factory equipped with an interface module (Q7230A) that provides current or voltage control (4 - 20 mA and 2 - 10 Vdc) with adjustable zero and span.

Pneumatic

331-2961P (includes pilot positioner)

DAMPER SIZES

MINIMUM SIZE

8"w x 6"h (203 x 152).

MAXIMUM SIZE

Vertical or Horizontal Installation – 120"w x 48"h (3048 x 1219)

OPTIONS

- **TS150 FireStat** for reopenable operation in dynamic smoke management systems.
- **DSD/DSDN Duct Smoke Detector** (Flow rated or No-Flow).
- **SP100 Switch Package** to remotely indicate damper blade position.
- **FAST Angle** factory supplied for labor saving angle one-side installations.
- **PFMA Picture Frame Mounting Angle** factory supplied for angle two sides installations.
- **G Style** for grille applications.
- **GA, Grille Access Type** for "through the grille access" to actuator and control devices (see FSD60GA model).
- **OW, Out of Wall/Floor Type** for outside the wall/floor "through penetrations" (see FSD60OW model).
- **RA, Integral Retaining Angle Type** for "fool proof" all from one side installation (see FSD60RA model).
- **Factory Sleeves** of various lengths and gages to insure field compliance with UL installation requirements.

Models FSD60M, FSD60-3M and SD60M meet the requirements for fire, smoke and combination fire and smoke dampers established by:

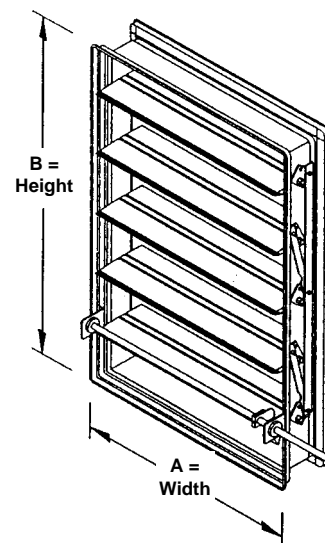
- **National Fire Protection Association NFPA Standards** 90A, 92A, 92B and 101
- **BOCA National Building Codes**
- **ICBO Uniform Building Codes**
- **SBCCI Standard Building Codes**
- **ICC International Building Codes**
- **CSFM California State Fire Marshal Fire Damper Listing** (#3225-245:102) and Smoke Damper Listing (#3230-245:110)
- **New York City** (BSA Listing #176-82-SM)

UL CLASSIFIED

UL555 Listing R5531, UL555S Listing R10525

FEATURES

- 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 reopen 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.
- Actuators factory mounted either out or in airstream.



NOTES

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

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 1 1/2 hours (FSD60M) or 3 hours (FSD60-3M) in accordance with the latest edition of UL555 and shall be classified as Leakage Class I Smoke Dampers in accordance with the latest version of UL555S. Pressure drop shall not exceed .03" w.g. at a face velocity of 1,000 fpm on a 24" x 24" damper that is fully open.

In addition the dampers and their actuators shall have a UL555S elevated temperature rating of 250°F (121°C). Appropriate modulating electric or pneumatic actuators shall be installed by the damper manufacturer at time of damper fabrication.

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. 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. Dampers shall be Ruskin model FSD60M or FSD60-3M.

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

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