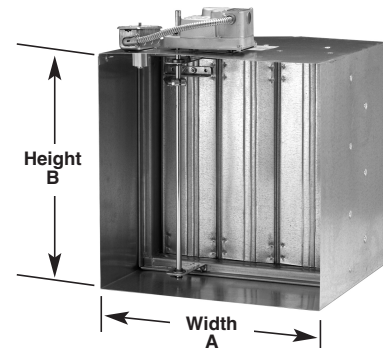


FSD60-V COMBINATION FIRE AND SMOKE DAMPER

1½ HOUR UL555 RATED, UL555S LEAKAGE CLASS 2

APPLICATION

The FSD60-V is the most versatile fire and smoke damper in the industry. It is approved for installation with blades running either horizontally or vertically and is the best performing damper in the industry on sizes over 32" (813) wide. The FSD60-V is the perfect choice for applications where ducts run side by side and there is no room for actuators on the side of the damper. The FSD60-V may be installed vertically (in walls) or horizontally (in floors) in air systems with airflow in either direction with velocities to 2,000 fpm and pressures to 4" w.g.



STANDARD CONSTRUCTION	
Description	FSD60-V
Frame	5" x 16 gauge (127 x 1.6) galvanized, single piece, hat-shaped channel, structurally superior to 13 (2.4) gauge channel frame.
Blades	One-piece airfoil, nominal 6" (152) wide and 14 (2.0) gauge galvanized steel equivalent strength. Blades are approximately 6" (152) on center.
Bearings	Stainless steel sleeve type, 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) mechanically fastened to the blade edge.
Linkage	Concealed in frame.

DAMPER SIZES

Sizes indicated below are for ratings of 2000 FPM (10.2 m/s) and 4 in. w.g. (1 kPa).

MINIMUM SIZE

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

MAXIMUM SIZE

Single Section – 48"w x 32"h (1219 x 813).

CONTROLLED CLOSURE DEVICE (HEAT-ACTUATED)

EFL (Electric Fuse Link) - 165°F (74°C) standard. 212°F (100°C), 250°F (121°C), 350°F (177°C) available.

PFL (Pneumatic Fuse Link) - 165°F (74°C) standard. 212°F (100°C), 285°F (141°C) available.

NOTES

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

MAXIMUM OPERATIONAL RATINGS	
Description	FSD60-V
UL555S Leakage Rating	Class II
UL555 Hourly Rating	1½ Hour
Maximum Velocity	2000 FPM (20.3 m/s)
Maximum Pressure	4 in. wg (2kPa)
Temperature	350°F (177°C)

OPTIONS

- **FM Approvals** as Specification Tested Product.
- **DTS** (Damper Test Switch) test switch for cycle testing.
- **TS150** for reopenable operation in dynamic smoke management systems.
- **DSDF/DSDN Duct Smoke Detector** (Flow rated or No-Flow).
- **SP100** Switch Package to allow remote indication of damper blade position.
- **MCP** control panels for testing or monitoring purposes or smoke management systems.
- **Factory Sleeves** of various lengths and gauges to ensure field compliance with UL installation requirements.
- **FAST Angle** factory supplied for labor saving angle one-side installation. Other angles of various sizes and gauges also available for one-side or two-side installation.
- **Stainless Steel Linkage** – 304 stainless steel.

UL CLASSIFIED

UL555 Listing R5531, UL555S Listing 5531

Model FSD60-V meets the requirements for fire, smoke and combination fire and smoke dampers established by:

- **National Fire Protection Association NFPA Standards** 90A, 92A, 92B, 101 and 105
- **ICC International Building Codes**
- **CSFM California State Fire Marshal** Listing (#3225-245:1026)
- **New York City** (MEA 252-05-E)

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. Combination fire smoke dampers shall be produced in an ISO 9001 certified factory and shall be warranted to be free from defects in material and workmanship for a period of 5 years after date of shipment. Dampers shall meet the requirements of NFPA80, 90A, 92A, 92B, 101 and 105 and shall have a fire rating of 1.5 hours in accordance with the latest edition of UL555 and shall be classified as Leakage Class II Smoke Dampers in accordance with the latest version of UL555S.

Damper frame (when size permits) shall be constructed using the UniFrame Design Concept (UDC) and shall be minimum 16 gauge (1.6) galvanized steel formed into a structural hat channel superior to 13 gauge (2.4) channel frame. Damper blades shall be single piece airfoil shaped with 14 (2.0) gauge equivalent strength and shall run vertically within the frame. Blade edge seals shall be inflatable silicone mechanically locked into blade edge. Jamb seals shall be stainless steel compression type. Bearings shall be stainless steel, permanently lubricated sleeve type turning in an extruded hole in the frame for maximum life.

Combination fire smoke dampers and their actuators shall be qualified in accordance with UL555S to an elevated temperature of 250°F (121°C) or 350°F (177°C) depending upon the actuator. Appropriate electric or pneumatic actuators (specifier select one) shall be installed by the damper manufacturer at time of damper fabrication. Electric actuators, factory installed on dampers, shall have been tested for prolonged periods of holding (minimum 1 year) with no evidence of reduced spring return performance. Each damper shall be rated for leakage and airflow in either direction through the damper.

Optional FM Approvals Specification

Each combination fire smoke damper shall be listed in Factory Mutual (FM) approvals Specification Tested Product and labeled accordingly.

Combination fire smoke dampers shall be Ruskin FSD60-V.

(Consult www.ruskin.com for electronic version of this "Quick" spec as well as for complete 3-part CSI MasterFormat Specifications)



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