

SD102 SMOKE DAMPER UL555S Classified

APPLICATION

The SD102 is a UL555S Leakage Class 2 smoke damper that is manufactured with one piece extruded aluminum airfoil blades and formed galvanized steel frame. It is elevated temperature rated for 250°F (121°C) and is designed for air-handling equipment isolation when the capacity is greater than 15,000 cfm per NFPA-90A. The SD102 is UL listed for 2,000 fpm, and 6" w.g. (1.5 kPa), but is constructed and tested for velocities as high as 5,000 fpm and pressures as high as 24" w.g. (6 kPa).

STANDARD CONSTRUCTION

FRAME

8" x 2" x 12 gage (203 x 51 x 2.8) steel channel.

BLADES

7³/₄" (197) wide, .080 (2.1) thick, 6063T5 extruded aluminum airfoil blade. Parallel action is standard; opposed is optional.

LINKAGE

Side linkage out of airstream; 3/16" x 3/4" (4.8 x 19) plated steel tie bars. 3/8" (9.5) diameter stainless steel pivot pins with lock-type retainers. 10 gage (3.5) galvanized steel clevis-type arms.

AXLES

3/4" (19) diameter plated steel, D shape.

BEARINGS

Stainless steel sleeve pressed into frame.

SEALS

Blade edge is silicone rubber. Jamb is stainless steel, flexible metal compression type.

FINISH

Mill.

MOUNTING

Vertical or horizontal.

MINIMUM DAMPER SIZE

Single blade damper – 12"w x 6"h (305 x 152).

Multiple blade damper – 12"w x 14"h (305 x 356).

MAXIMUM UL CLASSIFIED SIZE

Single section – 36"w x 48"h (914 x 1219).

Maximum width of multiple assembled sections – 72" x 48" (1829 x 1219).

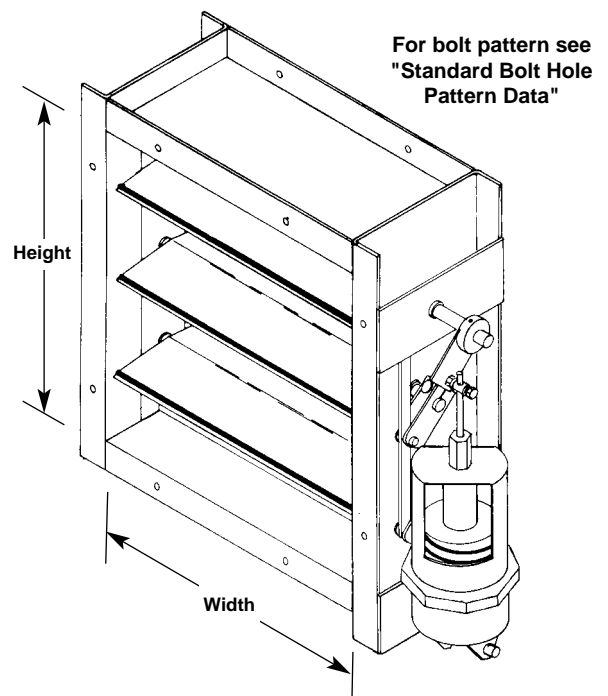
OPTIONS

Options available at additional cost, include:

- Bolt holes in flanges
- Nonstandard flanges (1¹/₂" to 3" [38 to 76])

NOTES

1. Dimensions shown in () indicate millimeters.
2. Dampers furnished actual size.



**ACTUATOR MOUNTED
OUT OF AIRSTREAM**

DAMPER ACTUATORS

Typical actuator installation is shown at right. Actual installation may vary according to damper size.

Damper actuators available from Ruskin are listed in the table on this page.

Actuator damper size limitations shown are based on testing to UL Standard 555S. Dampers shipped with factory installed actuators qualify at elevated temperatures of 250°F (121°C).

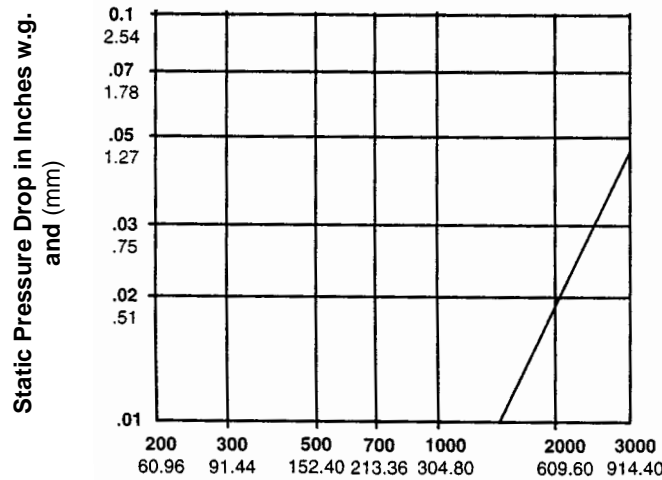
SD102 DAMPER ACTUATORS

MODEL	TEMPERATURE	MAXIMUM DAMPER SIZE (MAX. 6" SP)
331-3060 20 psig	250°F (121°C)	12 sq. ft. and 36"w x 48"h (914 x 1219) max.
(2)GGD221 120 VAC	250°F (121°C)	12 sq. ft. and 36"w x 48"h (914 x 1219) max.

*Width or height cannot exceed dimensions shown.

PERFORMANCE DATA

PRESSURE DROP-
Damper Open (24" x 24" size)



Air Velocity in **FEET** and **METERS** per minute through **FACE AREA**. Tested per AMCA Std. 500. Fig. 5.3, ductwork upstream and downstream

SUGGESTED SPECIFICATION

Smoke dampers meeting or exceeding the following specifications shall be furnished and installed at locations shown on plans, or as described in schedules. Frame shall be a minimum of 12 gage (2.8) galvanized steel formed into a structural channel reinforced at corners for added strength. The blades shall be aluminum airfoil shaped .080 min. thickness double-skin type with internal structural support. Blade action shall be parallel or opposed (**specifier select one**). Bearings shall be stainless steel sleeve turning in an extruded hole in the frame for long life. Blade edge seals shall be silicone rubber mechanically locked into blade edge (adhesive or clip fastened seals shall not be acceptable) and shall withstand a minimum of 450°F (232°C). Jamb seals shall be non-corrosive stainless steel flexible metal compression type to further ensure smoke management.

Damper shall be designed for fan isolation application to prevent smoke migration into supply system.

Each damper shall be classified by Underwriters Laboratories as a Leakage Class 2 Smoke Damper in accordance with the latest version of UL555S.

As part of the UL qualification, smoke dampers shall have demonstrated a capacity to operate (to open and close) under HVAC system operating conditions, with pressures up to 6" w.g. in the closed position, and 2,000 fpm air velocity in the open position.

In addition to the leakage ratings already specified herein, the smoke dampers and their actuators shall be qualified under UL555S to an elevated temperature of 250°F (121°C). Appropriate electric/pneumatic actuators shall be installed by the damper manufacturer at time of damper fabrication. Damper and actuator shall be supplied as a single entity which meets all applicable UL555S qualifications for both dampers and actuators.

The damper shall be equivalent (airflow, pressure drop and leakage performance) to Ruskin Model SD102.