

SD-1630

Class I Smoke Dampers



Description

The SD-1630 Class I Smoke Dampers are designed to prevent the spread of smoke within a dynamic HVAC system during life safety situations.

The SD-1630 series is UL listed and tested to the latest UL-555S standard.

The SD-1630 series includes a factory-installed actuator which should be cycled at least once every six months or sooner as local codes require.

The SD-1630 is available with factory-installed blade position switch to connect to smoke control systems and indicate when blades are fully open or fully closed.

Features

- 250 or 350°F rated actuators
- three-year warranty on materials and workmanship
- shipping in as little as five working days from order entry

To Order

Specify the code number from the selection chart. For information about available combinations, please contact your Johnson Controls representative. (Not all combinations are available.)

SD-1630 standard dampers are available in one inch increments. Actual damper size is 1/4 in. less than nominal. All Johnson Controls damper dimensions are from the outside edges of the damper frame.

All Johnson Controls Dampers are built to order, just in time, and cannot be returned due to customer ordering errors. All dampers are backed by a 3-year warranty, which covers defects in materials or workmanship when used in our defined applications. Refer to terms and conditions of sale for specifics.

SD-1630 Class I Smoke Damper Selection Chart

	Code Number	S	G	S	-	w	w	x	h	h	
Application	S = Smoke										
Blade Operation	O = Opposed P = Parallel										
Blade Type	G = Airfoil										
Bearing/Seal	S = Standard (Stainless Steel/Silicone)										
Actuator Type	A = 120 VAC 250°F, Two-Position B = 24 VAC 250°F, Two-Position C = 120 VAC 350°F, Two-Position D = 24 VAC 350°F, Two-Position F = 120 V 250°F, Modulating G = 24 V 250°F, Modulating O = Pneumatic 250°F, Two-Position P = Pneumatic 350°F, Two-Position ^(a) Q = Pneumatic, Modulating ^(a)										
Width Dimensions	008 to 144, 1 inch increments ^(b)										
Height Dimensions	006 to 096, 1 inch increments ^{(a) (b) (c)}										
Options (Limit two)	See Factory Options list										

(a) The 350° pneumatic or modulating actuators are limited to a maximum width of 120 inches and a maximum height of 48 inches.

(b) Maximum single panel size is 36 in. wide x 72 in. high. On multiple panel assemblies, each panel will be a maximum of 36 x 48 inches.

(c) Sizes less than 12 inches high are to be parallel operation only.

Note: Standard actuator installation is outside the air stream mounted on a side plate.

SD-1620 Smoke Dampers include 16-gauge galvanized steel blades, stainless steel bearings, and stainless steel side seals.

Example: SOGSB-020x020 is a Class I smoke damper that has 14 gauge equivalent sirfoil blades, opposed blade operation, stainless steel bearings, high-temperature blade seals, and side seals. Its dimensions are 20 inches wide x 20 inches high, with a 250° F 24 VAC electric actuator.

Factory Options

E = exact whole inch (no undercut)

I = factory-installed Blade Position Switch Kit

L = 20 gauge galvanized steel sleeve that is 20 inches in length

Q = internal mount actuator
(electric minimum size is 10 x 21 in.,
pneumatic minimum size is 18 x 24 in.)

V = transition to round or oval duct
(maximum size is 70 x 92 in.)

Note: Limit of two factory-installed options.

SD-1630 Class I Smoke Dampers (Continued)**Performance Data Specifications**

SD-1630 Class I Smoke Dampers			
Maximum Dynamic Rating	4 in. w.c. static pressure at 2000 fpm		
Ambient Operating Temperature	-40° F to 200° F; (-40° C to 93° C)		
Timing	Drive Open: 15 to 25 seconds typical Spring close: 15 seconds typical		
Maximum Short Duration Operating Temperature	250° F or 350° F; (121° C or 177° C) based on actuator selected		
Pressure Drop inches w.c. - Fully Open	1000 fpm	2000 fpm	
	24 in. x 24 in.	0.03	0.11
	36 in. x 36 in.	0.02	0.10
Field Installed Accessories	None		
Field Replaceable Parts	SP100 blade position switch kit Actuators are field replaceable, refer to model number of actuator mounted on damper to order direct replacement		
Approximate Weight	7 lbs. per square foot		
Electrically Actuated Two-Position Models:			
Electrical – Power Input	120 VAC ±10%, 60 Hz 24 VAC +20%, -10%, 50/60 Hz		
Electrical – Power Consumption	120 V - Running: 0.18 A, 23 W, Holding: 0.13 A, 9 W maximum 24 V - Running: 23 VA, Holding: 8 VA maximum		

Note: Dampers are tested at an AMCA Certified Laboratory using instrumentation and procedures in accordance with AMCA Standard No. 500-89, Test Methods for Louvers, Dampers, and Shutters.

Submittal Specifications

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, and shall be Class I Leakage Rated Dampers for use in smoke control systems in accordance with the latest version of Underwriters Laboratories®, Inc. UL555S.

As part of the UL qualification, smoke dampers shall have demonstrated a capacity to open and close under Heating, Ventilating, and Air Conditioning (HVAC) system operating conditions, with pressures up to 4 inches w.c. in the closed position and 2000 fpm air velocity in the open position.

In addition to the leakage ratings already specified herein, the dampers and their actuators shall be qualified under UL555S to an elevated temperature of 250°F (121°C) or 350°F (177°C) depending upon the actuator. Appropriate pneumatic or electric actuators shall be installed by the damper manufacturer at the time of damper fabrication. Damper and actuator shall be supplied as a single entity that meets all applicable UL555S qualifications for both dampers and actuators. Each damper shall be rated for leakage and airflow in either direction through the damper. Damper and actuator assembly shall be factory cycled at least ten times to assure operation.

Only certain damper and actuator combinations have been evaluated and found suitable for volume control use. As such, only dampers marked "Also Suitable For Use As Volume Control Damper" should be considered suitable for volume control applications.

Construction

Part	Construction
Frame	5 in. deep x 16-gauge galvanized steel
Blades	14-gauge equivalent galvanized steel, airfoil; All blades are 6 in. nominal width and 8 in. maximum width.
Linkage	Concealed in the frame
Blade Pin	1/2 in. hex steel, zinc plated
Bearings	Stainless steel
Side Seal	Flexible metal compression, stainless steel
Blade Seal	Stainless steel with extruded silicone
Sleeve	20-gauge galvanized steel, 20 in. long (optional) ^(a)
Side Plate	16-gauge galvanized steel

(a) The optional sleeve is designed for use with standard breakaway connectors.

Note: All leakage-rated smoke damper systems are factory-assembled, connected to a power source, and cycled a minimum of ten times prior to shipment.

Specifications - Modulating Actuator

Modulating Electric Smoke Damper Actuator	
Electrical – Power Input	120 VAC $\pm 10\%$, 60 Hz 24 VAC $+20\%$, -10% , 50/60 Hz (Class II)
Electrical – Power Consumption	120V – 0.28A current draw, 28W power consumption 24V – 1.0A current draw, 23W power consumption
Input Signal	2 to 10 VDC (4 to 20 mA) with adjustable zero and span
Humidity Ratings	5% to 95% RH noncondensing
Timing	Nominal 30 seconds
Electrical Connections	Quick connect terminals
Cycling Requirements	Every three months or as defined by local codes
Torque Ratings	60 lb-in. (20 N-m)
Noise Rating	Driving open or spring return: 70 dBA at 1 m (maximum) Holding: 20 dBA at 1 m (no audible noise) minimum at 350° F
Ambient Operating Conditions	-40° F to 150° F (-40° C to 66° C)
Shipping and Storage Conditions	-40° F to 140° F (-40° C to 60° C)
Agency Listings	UL555S ratings up to 350°F tested with damper UL873 Plenum Rating, File No. E4436; Guide No. XAPX ^(a)
Dimensions	2-1/2 x 6-15/32 x 8-3/4 inches (64 x 164 x 223 mm)
Weight	7 lbs. (3.2 kg)

(a) Plenum applications require that conductors be enclosed in conduit.