

DS-3153

LIT-1921765

High Temperature Pneumatic Piston Damper Actuator

Description

The DS-3153 Pneumatic Actuator is a multipurpose positioning device used primarily for operating smoke ventilating dampers in response to the output signals of a pneumatic controller or electro-pneumatic transducer during life safety applications.

The DS-3153 can be used with dampers up to a maximum area of 16 square feet for proportional volume control and 25 square feet for two position actuation provided that the torque requirements are compatible with the specific application.

The DS-3153 is UL/cUL component recognized for use on UL classified 555/555S smoke and combination fire/smoke dampers which have been tested and approved to a degradation temperature of 350°F.

Features

- high temperature pilot positioner available for additional positioning power and sequential control
- all metal bearings for high temperature exposure
- all-aluminum housing which is lightweight and non-combustible
- telescoping linkage for fast and flexible installation
- 2-way swivel head to ensure full power delivery
- 3-year warranty to provide confidence of company standing behind product

Applications

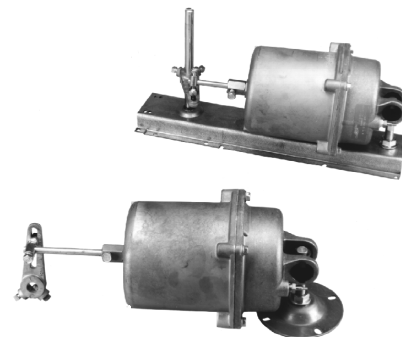
The DS-3153 Pneumatic Actuator is a multipurpose positioning device used primarily for operating UL leakage rated dampers in response to output signals of a pneumatic controller or electro-pneumatic transducer.

The DS-3153 can be used with other dampers up to a maximum area of 16 square feet for proportional volume control and 25 square feet for two position actuation provided that the torque requirements are compatible with the specific application.

The DS-3153 is UL component recognized for use on UL classified 555/555S smoke and combination fire/smoke dampers, which have been tested and approved to a degradation temperature of 350°F (176°C). When used with proportional control, the damper size is limited to 16 square feet maximum. As a 2-position control, damper size is limited to 25 square feet.

The nominal spring range is 8-13 psi. The control air pressure for normal HVAC operation is 0-20 psig. The minimum control pressure for safety damper functions is 20 psig with the maximum pressure of 30 psig. When used for both proportional and safety applications, a separate air signal should be provided to override normal HVAC operation and cause safety damper functions.

Where precision sequential operation is desired, or additional positioning power is necessary, a pilot positioner is available.



DS-3153 High Temperature Pneumatic Piston Damper Actuator

Repair Information

If the DS-3153 Damper Actuator fails to operate within its specifications, replace the unit. For a replacement actuator, contact the nearest Johnson Controls® representative.

Selection Charts

DS-3153

High Temperature Pneumatic Piston Damper Actuator

Code Number	Nominal Spring Range, psig (kPa)
DS-3153-1	8-13 (56 to 91) with pilot positioner and universal mounting bracket
DS-3153-2	8-13 (56 to 91) with universal mounting bracket
DS-3153-4	8-13 (56 to 91) with pilot positioner and auxiliary mounting bracket
DS-3153-5	8-13 (56 to 91) with auxiliary mounting bracket

Accessories for DS-3153 Damper Actuator

Code Number	Description	Shipping Weight, lb (Kg)
D-3073-100	Rubber Boot Kit	0.2 (0.91)
D-3073-604	Ball Joint weather resistant	0.3 (0.11)
DMPR-KC054	Blade Arm Kit	1.0 (0.45)
DMPR-KC051	Crank Arm 3/8 inch adjustable to 2-3/4 inch radius	0.5 (0.23)
DMPR-KC050	Crank Arm 7/16 inch adjustable to 2-3/4 inch radius	0.5 (0.23)
DMPR-KC102	Linkage Rod 4 feet (122 cm)	2.0 (0.91)
D-3153-103	Linkage Rod replacement	1.0 (0.45)

DS-3153 High Temperature Pneumatic Piston Damper Actuator (Continued)

Technical Specifications

DS-3153 Pneumatic Actuator			
Stroke	3 in. (76 mm)		
Control Air Pressure	0-20 psig for HVAC 20 psig (137 kPa) minimum for safety damper functions 30 psig (205 kPa) maximum		
Force at 20 psig (140kPa) Supply	Stroke	Force lb (Newton)	Torque Output at 90° Rotation
	Power	105 (467)	158 in·lb (18 N·m)
	Return	120 (534)	180 in·lb (20 N·m)
Air Connections	Compression fitting for 1/4 in. O.D. copper tubing (furnished)		
Ambient Operating Conditions	-20 to 150°F (-29 to 66°C)		
Effective Diaphragm Area	15 in ² (97 cm ²)		
Materials	Body - Die-cast Aluminum, Diaphragm - Synthetic elastomer		
Dimensions	5-1/14 inch diameter x 10 inches long		
Shipping Weight, lb (Kg)	DS-3153-1	10.5 (4.8)	DS-3153-2 10.5 (4.8)
	DS-3153-4	10.5 (4.8)	DS-3153-5 8.5 (3.9)
Agency Listing	UL Recognized component to 350°F (176°C) with compression fitting for copper tubing File No. R15581		

Maximum Force Values at 20 psig (140 kPa) Supply

Spring Range psig (kPa)	Stroke	Force lb	Force Newton	Torque Output for 90° Rotation (in·lb)	Torque Output for 90° Rotation (N·m)
8 to 13 (56 to 91)	Power	105	467	158	18
	Return	120	534	180	20