

Pneumatic Damper Actuators


Description


The No. 3 Damper Actuators are rolling diaphragm actuators that provide modulating or two-position control. The No. 4 Damper Actuators are rolling diaphragm actuators that are suitable in applications requiring a medium effective diaphragm area and long stroke. The No. 6 Damper Actuators are heavy-duty rolling diaphragm actuators that are suitable in applications requiring a large effective diaphragm area and long stroke.

Features

- All metal body construction
- Variety of spring ranges for sequencing
- Pivot mounting for extended shaft
- Positioning relay (optional)

Product Numbers


	Stroke	Description						Mounting Style				Nominal Spring Range			
		Actuator	Clevis	Bracket	Ball Joint Connector	Pivot	Positioning Relay	Front	Fixed	Pivot	Extended Shaft	3-7 psi (21-48 kPa)	5-10 psi (35-69 kPa)	8-13 psi (55-90 kPa)	
No. 3 Damper Actuator	2-3/8 in. (60 mm)	•						•				331-4310	331-4510	331-4810	
		•		•					•			331-4313	331-4513	331-4813	
		•	•							•		331-4314	331-4514	331-4814	
		•		•						•		331-4331	331-4531	331-4831	
		•		•	•			•		•		332-4331	332-4531	332-4831	
		•					•				•	331-4312	331-4512	331-4812	
		•					•				• ³	331-4311	331-4511	331-4811	
	2-3/4 in. (70 mm)	•							•				331-4320	331-4520	331-4820
		•								•			331-4326 ¹	331-4526 ¹	331-4826 ¹
		•		•									331-4327 ¹	331-4527 ¹	331-4827 ¹
		•								•			331-4323	331-4523	331-4823
		•	•							•			331-4324 ¹	331-4524 ¹	331-4824 ¹
		•	•					•					2	2	332-4824
		•					•				•		331-4322	331-4522	331-4822
		•	•				•				•		331-4351	331-4551 ¹	331-4851 ¹
		•	•				•								331-4829 ¹
									•				331-4841 ¹		
										•			331-4821 ¹		

	Description						Mounting Style				Nominal Spring Range				
	Actuator	Clevis	Bracket	Ball Joint Connector	Pivot	Positioning Relay	Front	Fixed	Pivot	Extended Shaft	3-7 psi (21-48 kPa)	3-13 psi (21-90 kPa)	5-10 psi (35-69 kPa)	8-13 psi (55-90 kPa)	2-3, 8-13 psi (14-21, 55-90 kPa) Hesitation Model
No. 4 Damper Actuator	•						•				331-2910	—	331-2917	331-2963	—
	•	•						•			331-2911 (3-in. stroke)	—	331-2934 (3-in. stroke)	331-2966 (3-in. stroke)	331-2927 (3-in. stroke)
	•			•				•			331-3015	331-3018	331-3016	331-3017	331-3019
	•			•	•				•		—	—	—	332-3017	—
	•				•				•		331-2904 ¹	331-2905 ¹	331-2906 ¹	331-2961 ¹	331-2909
	•	•			•				•		331-2929	331-2930	331-2931	331-2968	—
	•				•					• ³	331-3000	331-3001	331-3002	331-2973 ¹	331-3004
	•				•	•				• ³	—	—	—	332-2973	—
	•								•		—	—	—	—	331-2874 (Extended Temp)
		OEM specials			OEM specials							—	—	331-2976 ¹	331-2995 ¹
													331-2998 ¹		

¹ UL Recognized Components under UL's Damper Actuator category (EMKU2), which covers pneumatic damper actuators intended to be employed on fire dampers and leakage rated dampers.

² Available upon request.

³ Mounted on plate for extended shaft with clevis and crank for 3/8-inch (10-mm), 7/16-inch (11-mm), or 1/2-inch (13-mm) diameter shaft.

	Description						Mounting Style		Nominal Spring Range		
	Actuator	Clevis	Bracket	Ball Joint Connector	Pivot	Positioning Relay	Pivot	Extended Shaft	3-8 psi (21-55 kPa)	5-10 psi (35-69 kPa)	8-13 psi (55-90 kPa)
No. 6 Damper Actuator	•				•		•		331-2793	331-2794	331-2792 ¹
	•				•		•		—	331-2796	331-2795 (with Travel stops)
	•	•					• ²		331-2857	331-2858	331-2856 ¹
	•	•				•	• ²		—	—	332-2856
	•				•			• ³	331-3012	331-3013	331-3011 ¹
	•				•	•		• ³	—	—	332-3011
	•						•		—	—	331-3060 ¹ (Extended Temp)

- ¹ UL Recognized Components under UL's Damper Actuator category (EMKU2), which covers pneumatic damper actuators intended to be employed on fire dampers and leakage rated dampers.
- ² When the actuator is ordered with universal mounting, the mounting plate, pivot post and hardware, clevis, damper crank, and all screws/nuts are included. Order other frame mounting accessories as required if not supplied by damper manufacturer.
- ³ Mounted on plate for extended shaft with clevis and crank for 3/8-inch (10-mm), 7/16-inch (11-mm), or 1/2-inch (13-mm) diameter shaft. Parts for frame mounting (blade drive) included with kit.

No. 6 Pneumatic Damper Actuators with Tandem Mounting, Product Number 333-3070

The No. 6 Pneumatic Damper Actuators with Tandem Mounting consist of two No. 6 actuators piloted by a positioning relay and mounted on a sturdy angle iron frame.

Large Capacity (LC) Pneumatic Damper Actuator, Product Number 331-2882

The LC Damper Actuator is a piston actuator that provides very high thrust with the ability to handle heavy loads such as large dampers, fan inlet vanes, and centrifugal compressor inlet vanes.

Technical Data

Specification	No. 3 Damper Actuator	No. 4 Damper Actuator	No. 6 Damper Actuator	No. 6 Damper Actuator, Tandem Mounting	Large Capacity Damper Actuator
Effective diaphragm area	8 inches ² (51.6 cm ²)	11 inches ² (71 cm ²)	17.9 inches ² (115 cm ²)	35.8 inches ² (230 cm ²)	19.6 inches ² (126 cm ²)
Stroke	2-3/8 inches (60 mm) or 2-3/4 inches (70 mm)	4 inches (102 mm) Hesitation Model: 3 inches (76 mm)	4 inches (102 mm)	4 inches (102 mm)	7 inches (178 mm)
Housing	Aluminum	Steel with cathodic epoxy electrocoat	Aluminum	Aluminum	Aluminum/stainless steel
Stem	Plated steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Diaphragm	Ozone-resistant rubber	Ozone-resistant rubber	Ozone-resistant rubber	Ozone-resistant rubber	—
Maximum air pressure	30 psig (207 kPa)	30 psig (207 kPa)	30 psig (207 kPa)	30 psig (207 kPa)	30 psig (207 kPa)
Ambient temperature	Storage	-20 to 140°F (-29 to 60°C)	-20 to 160°F (-29 to 71°C)	-20 to 160°F (-29 to 71°C)	-20 to 160°F (-29 to 71°C)
	Operating	35 to 140°F (2 to 60°C)	35 to 140°F (2 to 60°C)	-20 to 160°F (-29 to 71°C)	-20 to 160°F (-29 to 71°C)
Air connection	1/8-inch NPT female for straight barb fitting for 1/4-inch O.D. plastic tubing or copper tube	1/8-inch NPT female for straight barb fitting for 1/4-inch O.D. plastic tubing	1/8-inch NPT	1/8-inch NPT	1/8-inch NPT
Shipping weight	1.3 lbs. (0.58 kg)	3.66 lbs. (1.66 kg)	9.0 lbs. (4.08 kg)	30.0 lbs. (13.5 kg)	35 lbs. (16 kg)
Dimensions in inches (millimeters)	3-15/16 (100) dia., 6 (152) L	4-5/8 (118) dia., 9-15/16 (250) L	7-1/8 (181) dia., 14 (356) L	17 (230) W, 18 (230) L	8-1/8 (206) W, 12-7/8 (327) L

Typical Specifications

Automatic pneumatic control damper actuator shall have an ozone resistant, EP rubber rolling diaphragm. Air shall enter the piston chamber through a 1/8-27 NPT threaded port with a barb fitting for connecting 1/4-inch O.D. poly tubing or 1/4-inch O.D. copper tube. Output shaft shall have a 3/8 inch-24 thread

to allow for linkage assembly. Damper actuator shall be available in various spring ranges to accommodate sequencing dampers. Damper actuators shall pivot mount to prevent damage to linkage. A relay shall be able to be mounted to the actuator for accurate stem positioning as an option. Limit stops shall be available as an option.

Information in this publication is based on current specifications. The company reserves the right to make changes in specifications and models as design improvements are introduced. Product or company names mentioned herein may be the trademarks of their respective owners.
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