

## 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
		•					•				• <sup>3</sup>	331-4311	331-4511	331-4811
	•					•	•			• <sup>3</sup>	—	—	332-4811	
	2-3/4 in. (70 mm)	•						•				331-4320	331-4520	331-4820
												331-4326 <sup>1</sup>	331-4526 <sup>1</sup>	331-4826 <sup>1</sup>
				•						•		331-4327 <sup>1</sup>	331-4527 <sup>1</sup>	331-4827 <sup>1</sup>
		•								•		331-4323	331-4523	331-4823
		•	•						•			331-4324 <sup>1</sup>	331-4524 <sup>1</sup>	331-4824 <sup>1</sup>
		•	•					•				2	2	332-4824
		•					•				•	331-4322	331-4522	331-4822
		•	•				•				•	331-4351	331-4551 <sup>1</sup>	331-4851 <sup>1</sup>
	•												331-4829 <sup>1</sup>	
	•												331-4841 <sup>1</sup>	
•	•				•				•	—	—	331-4821 <sup>1</sup>		

	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 <sup>1</sup>	331-2905 <sup>1</sup>	331-2906 <sup>1</sup>	331-2961 <sup>1</sup>	331-2909
	•	•			•				•		331-2929	331-2930	331-2931	331-2968	—
	•				•					• <sup>3</sup>	331-3000	331-3001	331-3002	331-2973 <sup>1</sup>	331-3004
	•				•	•				• <sup>3</sup>	—	—	—	332-2973	—
	•								•		—	—	—	—	331-2874 (Extended Temp)
	OEM specials					OEM specials					—	—	331-2976 <sup>1</sup>	331-2995 <sup>1</sup>	331-2998 <sup>1</sup>

<sup>1</sup> 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.

<sup>2</sup> Available upon request.

<sup>3</sup> 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)
<b>No. 6 Damper Actuator</b>	•				•		•		331-2793	331-2794	331-2792 <sup>1</sup>
	•				•		•		—	331-2796	331-2795 (with Travel stops)
	•	•					• <sup>2</sup>		331-2857	331-2858	331-2856 <sup>1</sup>
	•	•				•	• <sup>2</sup>		—	—	332-2856
	•				•			• <sup>3</sup>	331-3012	331-3013	331-3011 <sup>1</sup>
	•				•	•		• <sup>3</sup>	—	—	332-3011
	•						•		—	—	331-3060 <sup>1</sup> (Extended Temp)

- <sup>1</sup> 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.
- <sup>2</sup> 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.
- <sup>3</sup> 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
<b>Effective diaphragm area</b>	8 inches <sup>2</sup> (51.6 cm <sup>2</sup> )	11 inches <sup>2</sup> (71 cm <sup>2</sup> )	17.9 inches <sup>2</sup> (115 cm <sup>2</sup> )	35.8 inches <sup>2</sup> (230 cm <sup>2</sup> )	19.6 inches <sup>2</sup> (126 cm <sup>2</sup> )
<b>Stroke</b>	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)
<b>Housing</b>	Aluminum	Steel with cathodic epoxy electrocoat	Aluminum	Aluminum	Aluminum/stainless steel
<b>Stem</b>	Plated steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
<b>Diaphragm</b>	Ozone-resistant rubber	Ozone-resistant rubber	Ozone-resistant rubber	Ozone-resistant rubber	—
<b>Maximum air pressure</b>	30 psig (207 kPa)	30 psig (207 kPa)	30 psig (207 kPa)	30 psig (207 kPa)	30 psig (207 kPa)
<b>Ambient temperature</b>	<b>Storage</b>	-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)
	<b>Operating</b>	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)
<b>Air connection</b>	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
<b>Shipping weight</b>	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)
<b>Dimensions in inches (millimeters)</b>	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.

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