

Pneumatic Damper Actuators

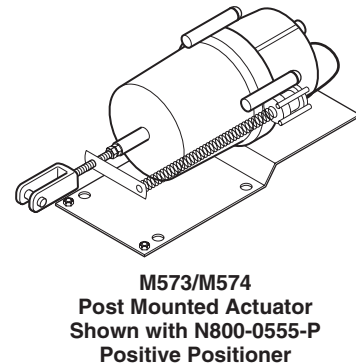
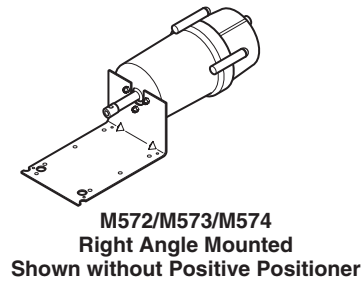
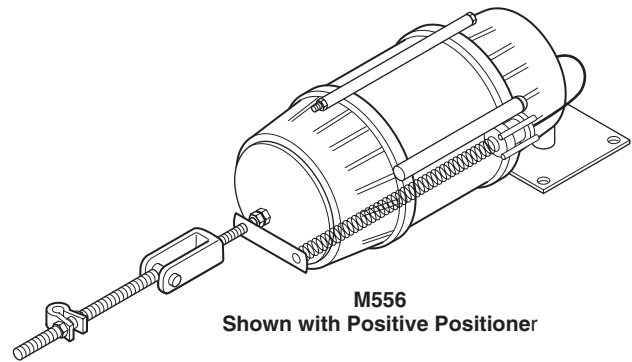
These actuators are designed for use in pneumatic control systems to position air control dampers in response to signals from pneumatic controllers. The M556 is a large swivel-mounted actuator with an adjustable crank arm having a clamp to fit a 1/2 in. O.D. damper shaft.

The M5xx Series damper actuators are used in pneumatic control systems to position automatic air dampers upon receipt of an air pressure signal from a control device. These actuators are equipped with right angle brackets and are adaptable to air conditioning, multi-zone, heating, ventilating, fan coil units, unit ventilators, mixing boxes, and VAV terminal boxes. M573 and M574 are also available as post-mounted actuators.

The M583 is used in classroom type unit ventilators. Special mounting kits are available for adapting the actuator to the various makes and models of classroom type units.

Features:

- Rigid, corrosion-resistant glass-filled nylon bodies.
- M556, M573 and M574 have 303 stainless steel shafts.
- M556, M573 and M574 available with or without N800-0555-P positive positioner.
- The N800-0555-P positive positioner for M556, M573 and M574 can be purchased separately.



Model Chart

2 in. (51 mm) Stroke, 3 sq. in. (19.4 cm²) Effective Area.

Model No.	Spring Range		Mounting	Description
	psig	kPa		
M572-2308	3 to 12	21 to 83	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M572-2311				Actuator with complete linkage for 1/2 in. damper shafts.
M572-8308	4 to 8	28 to 55		Actuator with ball joint to accept 5/16 in. push rod.
M572-8311				Actuator with complete linkage for 1/2 in. damper shafts.
M572-3308	5 to 10	35 to 69		Actuator with ball joint to accept 5/16 in. push rod.
M572-3311				Actuator with complete linkage for 1/2 in. damper shafts.
M572-5308	8 to 13	55 to 90		Actuator with ball joint to accept 5/16 in. push rod.
M572-5311				Actuator with complete linkage for 1/2 in. damper shafts.
M572-6308	10 to 15	69 to 104		Actuator with ball joint to accept 5/16 in. push rod.
M572-6311				Actuator with complete linkage for 1/2 in. damper shafts.

M556 Series, M572 Series, M573 Series, M574 Series, M583 Series

Hesitation Actuator.

Model No. ^a	Stroke	Diaphragm Area	Spring Range		Mounting	Description
			psig	kPa		
M583-0520	2 in. (51 mm)	7 sq. in. (45 cm ²)	1 to 4 and 8 to 12	7 to 28 and 55 to 83	Post-mtd.	Actuator with stamped clevis, clevis pin and bracket; for use on air handlers where factory mounting has not been established.

^a Total stroke of these hesitation actuators takes place in two stages, from 1 to 4 psig (7 to 28 kPa) and 8 to 12 psig (55 to 83 kPa) or 8 to 13 psig (55 to 90 kPa). No shaft movement from 4 to 8 psig (28 to 55 kPa).

3 in. (76 mm) Stroke, 7 sq. in. (45 cm²) Effective Area.

Model No.	Spring Range		Mounting	Description
	psig	kPa		
M573-2108	3 to 12	21 to 83	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M573-2111			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M573-2520			Post-mtd.	Actuator with clevis and pin.
M573-8108	4 to 8	28 to 55	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M573-8111			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M573-8520			Post-mtd.	Actuator with clevis and pin.
M573-3108	5 to 10	35 to 69	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M573-3111			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M573-3520			Post-mtd.	Actuator with clevis and pin.
M573-1108	8 to 13	55 to 90	Right-angle	Actuator with complete linkage and positive positioner for 5/16 in. push rod and 1/2 in. damper shafts.
M573-1111			Post-mtd.	Actuator with positive positioner.
M573-1520			Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M573-5108			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M573-5111			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M573-5520			Post-mtd.	Actuator with clevis and pin.
M573-6108	10 to 15	69 to 104	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M573-6111			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M573-6520			Post-mtd.	Actuator.

M556 Series, M572 Series, M573 Series, M574 Series, M583 Series

4 in. (mm) Stroke, 11 sq. in. (71 cm²) Effective Area.

Model No.	Spring Range		Mounting	Description
	psig	kPa		
M574-2208	3 to 12	21 to 83	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M574-2211			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M574-2520			Post-mtd.	Actuator with clevis and pin.
M574-8208	4 to 8	28 to 55	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M574-8211			Right-angle	Actuator with 1/2 in. shaft linkage and bracket.
M574-8520			Post-mtd.	Actuator with clevis and pin.
M574-3208	5 to 10	35 to 69	Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M574-3211			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M574-3520			Post-mtd.	Actuator with clevis and pin.
M574-1054	8 to 13	55 to 90	Right-angle	Actuator for Keystone butterfly valve, w/positioner.
M574-1208				Actuator with complete linkage and positive positioner for 5/16 in. push rod and 1/2 in. damper shafts.
M574-1211			Post-mtd.	Actuator with positive positioner.
M574-1520			Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M574-5208				Actuator with 1/2 in. shaft linkage and bracket.
M574-5211			Right-angle	Actuator with ball joint to accept 5/16 in. push rod.
M574-6208	10 to 15	69 to 104	Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M574-6211			Right-angle	Actuator with complete linkage for 1/2 in. damper shafts.
M574-6520			Post-mtd.	Actuator.

6 in. (mm) Stroke, 24.8 sq. in. (160 cm²) Effective Area.

Model No.	Spring Range		Mounting	Description
	psig	kPa		
M556-14	8 to 13	55 to 90	Swivel-mtd.	60° to 120° adj. linkage to accept 1/2 in. shafts w/positioner (with 5 psi span feedback spring).
M556-51				60° to 120° adjustable linkage to accept 1/2 in. shafts.

M556 Series, M572 Series, M573 Series, M574 Series, M583 Series

Specifications

Construction	
Housing	Glass-filled nylon.
Diaphragm	Neoprene, rolling type.
Shaft	Stainless Steel on M556, M573, M574. Nickel plated steel on M572, M583.
Stroke	Refer to Model Chart.
Spring	Retract actuator shaft on loss of air pressure.
Ambient temperature limits	-20 to 180°F (-29 to 82°C).
Supply air pressure	Clean, dry, oil free air required (refer to EN-123).
Nominal	20 psig (138 kPa). [M58x Series nominal 0 to 15 psig (0 to 104 kPa).]
Maximum	30 psig (207 kPa).
Air consumption (positioner models)	0.017 scfm (0.481 L/m).
Adjustments	
Hesitation stroke start point	4 psig (28 kPa); stroke adjustable 20% to 70% prior to 4 psig (M583 only).
Finish stroke start point	8 psig (55 kPa); stroke adjustable 80% to 30% after 8 psig (M583 only).
Connections	Barbed fitting for 1/4 in. O.D. plastic tubing.
Dimensions	
M556 Series	5-3/4 dia. x 17 L in. (146 x 432 mm).
M573 Series	3-3/4 dia. x 14 L in. (95 x 356 mm).
M574 Series	4-5/8 dia. x 15-1/8 L in. (117 x 384 mm).

Part Number	Factory Installed Positive Positioner	Nominal Operating Range (psi)	Starting Pressure Adj. (psi)	Effective Area Sq. In.	Nominal Stroke from Linkage for Nominal Operating Range (Inches)	Power Factor (Area x Stroke)	Nominal Torque Proportional Control	
							15 psi Pressure to Actuator (lb. - in.)	20 psi Pressure to Actuator (lb. - in.)
M572-8308	No	4 to 8	4, Non-Adj.	3	2	6	4.50	4.50
M572-3308		5 to 10	5, Non-Adj.					
M572-5308		8 to 13	8, Non-Adj.					
M572-2308		3 to 12	3, Non-Adj.					
M573-1108	Yes	8 to 13	8, Non-Adj.	7	3	21	21.00	68.25
M573-1111								
M573-3108	No	5 to 10	5, Non-Adj.	11	4	44	15.75	15.75
M573-3111								
M573-5108								
M573-5111	Yes	8 to 13	8, Non-Adj.	24.8	6	148.8	148.80	483.60
M574-1208								
M574-1211	No	5 to 10	5, Non-Adj.	11	4	44	33.00	33.00
M574-3208								
M574-3211								
M574-5208								
M574-5211	Yes	8 to 13	8, Non-Adj.	24.8	6	148.8	148.80	483.60
M566-14								

M556 Series, M572 Series, M573 Series, M574 Series, M583 Series

Accessories

Part Number	Description
AM-112	Slotted crank arm for 3/8 in. shaft
AM-113	Slotted crank arm for 1/2 in. shaft.
AM-115	Slotted crank arm for 7/16 in. shaft.
AM-122	Straight connector.
AM-123	Damper clip.
AM-125	5/16 x 20 in. damper rod.
AM-125-048	5/16 x 48 in. damper rod.
AM-132	Ball joint connector.
N5-75	1/2 in. I.D. shaft coupling to extend damper drive shafts (includes four set screws).
N800-1403	Slotted crank arm for 3/8 in. shaft.
N800-1404	Slotted crank arm for 1/2 in. shaft.
N800-1414	3-hole crank arm for 3/8 in. shaft (for 2, 3, 4 in. strokes).
N800-1415	3-hole crank arm for 1/2 in. shaft (for 2, 3, 4 in. strokes).
N800-0555-BOX	Pilot positioner only.
N800-0555-P	Positive positioner kit with feedback arm and springs.
Diaphragms	
N800-9422	For M572 (2472) Series.
N800-9423	For M573 (2473) Series.
N800-9424	For M574 (2474) Series.
N800-9426	For M556 (2466) Series.