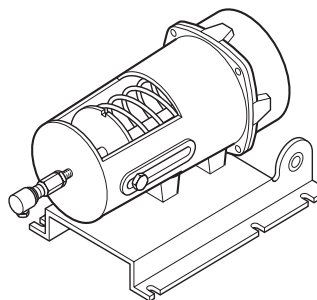


## Pneumatic Damper Actuators

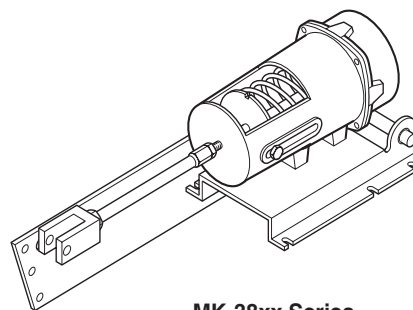
Proportional pneumatic actuator with 8 in.<sup>2</sup> (52 cm<sup>2</sup>) effective area used to control dampers, mixing boxes, air valves, etc., in heating, ventilating, and air conditioning systems.

Features:

- Rugged cast aluminum bodies.
- Long lasting rolling diaphragm.
- Provisions for adjustable stroke-stop.



MK-31xx Series



MK-38xx Series

Model Chart															
Model No.	Nominal Operating Range		Starting Pressure		Nominal Stroke <sup>a</sup>	Maximum Force <sup>b</sup>				Nominal Torque <sup>c</sup> Proportional Control <sup>b</sup>					
						Return Stroke	Power Stroke			15 psi (103 kPa) Supply Dual Press. System	15 psi (103 kPa) Supply Single Press. System <sup>d</sup>	20 psi (138 kPa) Supply Single or Dual Press. System <sup>d</sup>	15 psi (103 kPa) Supply Dual Press. System	15 psi (103 kPa) Supply Single Press. System <sup>d</sup>	20 psi (138 kPa) Supply Single or Dual Press. System <sup>d</sup>
							Based on 1.5 psi (10 kPa) Pressure to Actuator	15 psi (103 kPa) Supply Dual Press. System	15 psi (103 kPa) Supply Single Press. System <sup>d</sup>						
MK-3101	3 to 8	21 to 55	3 ±1	21 ±7	3-1/2 (89), adjustable 2 to 4 (51 to 102)	12 (53)	44 (196)	56 (249)	96 (427)	21 (2.37)	21 (2.37)	21 (2.37)			
MK-3111	5 to 10	34 to 69	5 ±1	34 ±7		28 (125)	28 (125)	40 (178)	80 (356)						

<sup>a</sup> Factory setting required for published operating range.

<sup>b</sup> Force and torques based on factory set stroke and starting pressure.

<sup>c</sup> Nominal torque for actuators without positive positioner is based on 1.5 psi pressure change at the actuator.

<sup>d</sup> Adjust pressure reducing valve so that listed pressures are available at the actuator.

## Model Chart (Continued)

Model No.	Nominal Operating Range		Starting Pressure		Nominal Stroke <sup>a</sup>	Maximum Force <sup>b</sup>				Nominal Torque <sup>c</sup> Proportional Control <sup>b</sup>					
						Return Stroke	Power Stroke			Proportional Control <sup>b</sup>					
	psig	kPa	psig	kPa	in. (mm)	Based on 1.5 psi (10 kPa) Pressure to Actuator	15 psi (103 kPa) Supply Dual Press. System	15 psi (103 kPa) Supply Single Press. System <sup>d</sup>	20 psi (138 kPa) Supply Single or Dual Press. System <sup>d</sup>	15 psi (103 kPa) Supply Dual Press. System	15 psi (103 kPa) Supply Single Press. System <sup>d</sup>	20 psi (138 kPa) Supply Single or Dual Press. System <sup>d</sup>			
					lb (N)	lb (N)	lb (N)	lb (N)	lb-in. (N-m)	lb-in. (N-m)	lb-in. (N-m)				
MK-3121	8 to 13	55 to 90	8 ±1	55 ±7	3-1/2 (89), adjustable 2 to 4 (51 to 102)	52 (231)	4 (18)	16 (71)	56 (249)	7 (0.79)	21 (2.37)	21 (2.37)			
MK4-3121 <sup>e</sup>											28 (3.16)	91 (10.28)			
MK-3141	3 to 13	21 to 90	3 non-adj.	21 non-adj.	2-3/4 (70), adjustable 2 to 2-3/4 (51 to 70)	12 (53)	0 (0)	0 (0)	24 (107)	21 (2.37)	21 (2.37)	21 (2.37)			
MK-3151	3 to 6, 9 to 12	21 to 41, 62 to 83	3 to 6	21 to 41							12 (53)		12 (53)	24 (107)	64 (285)
MK-3161	3 to 6, 11 to 17	21 to 41, 76 to 117									0 (0)		0 (0)	24 (107)	0 (0)
MK-3821	8 to 13	55 to 90	8 ±1	55 ±1	3-1/2 (89), adjustable 2 to 4 (51 to 102)	52 (231)	4 (18)	16 (71)	56 (249)	7 (0.79)	21 (2.37)	91 (10.28)			
MK4-3821 <sup>e</sup>	8 to 13										28 (3.16)				

<sup>a</sup> Factory setting required for published operating range.

<sup>b</sup> Force and torques based on factory set stroke and starting pressure.

<sup>c</sup> Nominal torque for actuators without positive positioner is based on 1.5 psi pressure change at the actuator.

<sup>d</sup> Adjust pressure reducing valve so that listed pressures are available at the actuator.

<sup>e</sup> Factory installed positive positioner (AK-42309-500) start point adjustable 2 to 10 psi with span adjustable 2 to 10 psi.

## Specifications

### Construction

**Housing** Die cast aluminum.

**Diaphragm** Beaded molded neoprene.

**Stroke** Refer to Model Chart.

**Nominal Damper Area** Actuator sizing should be done in accordance with damper manufacturer's specifications.

**Start point** Adjustable on most models ±1 psi, refer to Model Chart.

**Spring** Retracts actuator shaft on loss of air pressure.

**Maximum air pressure** 30 psig (207 kPa).

### Ambient temperature limits

**Shipping** -40 to 160°F (-40 to 71°C).

**Operating** -20 to 160°F (-29 to 71°C).

**Air connections** 1/8 in. FNPT.

**Mounting** In any position. Mounting bracket (except MK-3300 Series end mounting) and connector for 5/16 in. (8 mm) diameter push rod included with actuator.

### Dimensions

**MK-3100, MK4-3100 Series** 12 L x 5-7/8 W x 5-1/2 D in. (305 x 149 x 140 mm).

**MK-3800 Series** 20-3/16 L x 7-1/4 W x 6-1/2 D in. (513 x 184 x 165 mm).