

Descriptions and Applications

KMC MCP-8031 Pneumatic Actuators are designed to control small dampers in HVAC air handling systems or air terminal units. They feature a right-angle bracket for mounting to the side of VAV terminals, ductwork, or damper frame. The metal body is also suited to ceiling plenum installations where non-metallic actuators are not allowed.

The actuator may be rotated in its bracket (supplied on most models) so air connections can be made where needed. Actuators are supplied with a clevis and optional clevis/cotter pins or crank arm linkage.

Accessories

HPO-0004	Retainer, bracket	
HPO-0005	Clevis pin	
HPO-0006	Cotter pin	
VTD-1611	Push rod	
VTD-1403	Short crank arm, 3/8" shafts	
VTD-1404	Short crank arm, 1/2" shafts	

Models

Bronze Bushing with Clevis and Cotter Pins

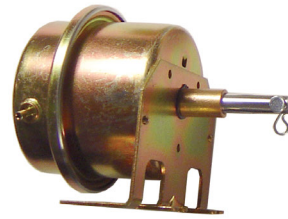
MCP-80312101	3 to 12 psi spring range
MCP-80313101	5 to 10 psi spring range
MCP-80315101	8 to 13 psi spring range
MCP-80318101	4 to 8 psi spring range

Bronze Bushing WITHOUT Clevis and Cotter Pins

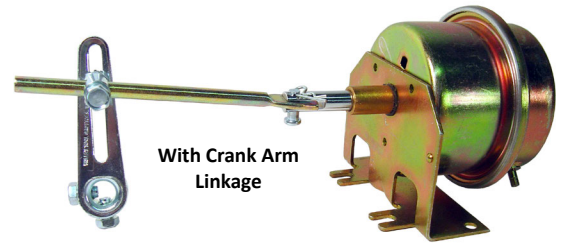
MCP-80312100	3 to 12 psi spring range
MCP-80313100	5 to 10 psi spring range
MCP-80315100	8 to 13 psi spring range
MCP-80318100	4 to 8 psi spring range

Delrin (Plastic) Bushing WITHOUT Clevis and Cotter Pins

MCP-80312102	3 to 12 psi spring range
MCP-80313102	5 to 10 psi spring range
MCP-80315102	8 to 13 psi spring range
MCP-80318102	4 to 8 psi spring range



With Clevis and Cotter Pins



With Crank Arm
Linkage

Features

- ◆ The metal body is ideal for ceiling installations
- ◆ Mounting bracket supplied on all models except -2099 and -3003
- ◆ Crank arm linkage or direct connection between damper and actuator shaft available

Delrin (Plastic) Bushing with Clevis and Cotter Pins but WITHOUT Mounting Bracket*

MCP-80313003	5 to 10 psi spring range
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Bronze Bushing (w/ Special 1" Stroke) WITHOUT Clevis and Cotter Pins or Mounting Bracket*

MCP-80312099	3 to 8 psi spring range
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Bronze Bushing w/ Linkage for 1/2" Damper Shaft

MCP-80312111	3 to 12 psi spring range
MCP-80313111	5 to 10 psi spring range
MCP-80315111	8 to 13 psi spring range
MCP-80318111	4 to 8 psi spring range

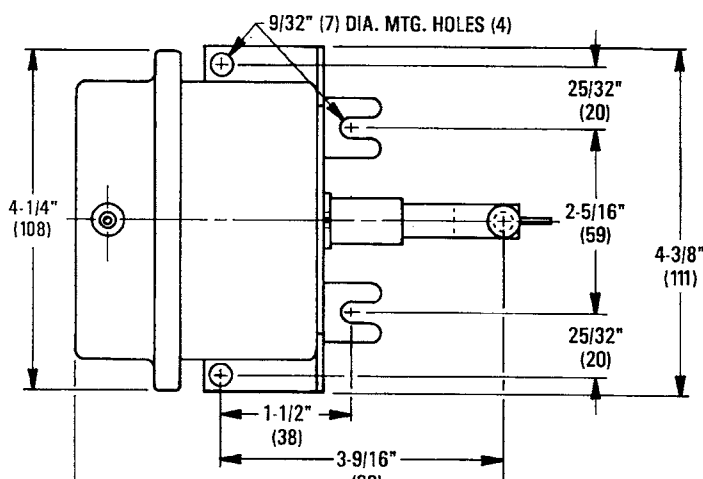
Bronze Bushing w/ Linkage for 3/8" Damper Shaft

MCP-80312112	3 to 12 psi spring range
MCP-80313112	5 to 10 psi spring range
MCP-80315112	8 to 13 psi spring range
MCP-80318112	4 to 8 psi spring range

*NOTE: All models except -2099 and -3003 have a right-angle mounting bracket.

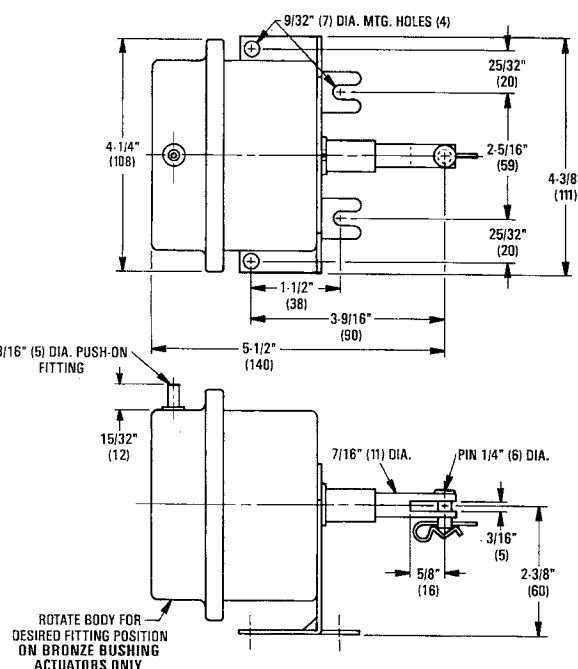
Details

All dimensions in inches (mm).



CAUTION

Pneumatic devices must be supplied with clean, dry control air. Any other medium (e.g., oil or moisture contamination) will cause the device to fail.



DAMPER TYPE	Up to 1000 FPM	1000 to 2500 FPM	2500 to 3000 FPM
Opposed Blade without seals	3 in.-lb. / sq.-ft	4.5 in.-lb. / sq.-ft	6 in.-lb. / sq.-ft
Parallel Blade without seals	4 in.-lb. / sq.-ft	6.0 in.-lb. / sq.-ft	8 in.-lb. / sq.-ft
Opposed Blade with seals	5 in.-lb. / sq.-ft	7.5 in.-lb. / sq.-ft	10 in.-lb. / sq.-ft
Parallel Blade with seals	7 in.-lb. / sq.-ft	10.5 in.-lb. / sq.-ft	14 in.-lb. / sq.-ft

Specifications

Effective Area	8 sq. inches (52 sq. cm)
Stroke	1-11/16" (43 mm)
Supply Connection	3/16" (5 mm) OD metal fittings
Supply Pressure	0 to 20 psi (138 kPa) operating, 30 psi (207 kPa) maximum

NOTE: If application requires operation near maximum temperature AND maximum pressure, install a tubing restraint at the actuator connection.

Temperature Limits

Operating	-20 to 180° F (-29 to 82° C)
Shipping	-40 to 180° F (-40 to 82° C)

Material

Body	CRS with zinc and dichromate
Diaphragm	Neoprene
Bearings	Bronze or Delrin (plastic)
Shaft	CRS with nickel plating
Weight	2.0 lb. (0.9 kg)

Damper Rating @ 1000 fpm (5.08 m/s)

Gradual	8 sq. ft. (0.74 sq. m)
Two-position	10 sq. ft. (0.93 sq. m)

Spring Ranges and Retracted/Extended Torque

(Based on 0 and 20 psi applied)

3-8 psi (21-55 kPa), 20/81 in.-lb. (2/9 N•m) @ 90°
4-8 psi (28-55 kPa), 27/81 in.-lb. (3/9 N•m) @ 90°
3-12 psi (21-83 kPa), 20/54 in.-lb. (2/6 N•m) @ 90°
5-10 psi (34-69 kPa), 34/67 in.-lb. (4/8 N•m) @ 90°
8-13 psi (55-90 kPa), 54/47 in.-lb. (6/5 N•m) @ 90°

Tolerance +0.5/-1.0 psi at start point and
+/-1.0 psi at finish point

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