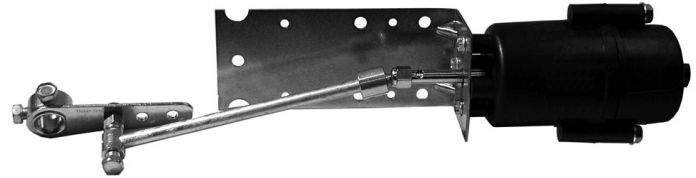


### Description

The KMC MCP-1020/020X Series 2" Pneumatic Damper Actuators are designed to position automatic air dampers in pneumatically controlled systems. They may be used for gradual or two-position applications.

Models are available with right-angle bracket mounting and several linkage options.



(Crank Arm Shown)

### Features

- ◆ Gradual or two-position action
- ◆ Post or right-angle mounting bracket
- ◆ Fits 1/2" or 3/8" damper shafts
- ◆ Variety of spring ranges, mounting brackets, and linkages provide flexibility

### Models

#### MCP-1020 X YYY

#### "X" Spring Ranges and Retracted/Extended Torque (Based on 0 and 20 psi applied, at 90°)

- 2: 3 to 12 psi; 10/26 in-lbs. (21 to 83 kPa; 1/3 N•m)
  - 3: 5 to 10 psi; 16/32 in-lbs. (34 to 69 kPa; 2/4 N•m)
  - 5: 8 to 13 psi; 26/22 in-lbs. (55 to 90 kPa; 3/2 N•m)
  - 6: 10 to 15 psi; 32/16 in-lbs. (69 to 103 kPa; 4/2 N•m)
  - 8: 4 to 8 psi; 13/38 in-lbs. (28 to 55 kPa; 1/4 N•m)
- (MCP-020X is for the actuator alone)

#### "Y" Linkage

- 308: with ball joint
- 311: with 1/2" crank arm
- 312: with 3/8" crank arm

### Accessories and Repair Parts

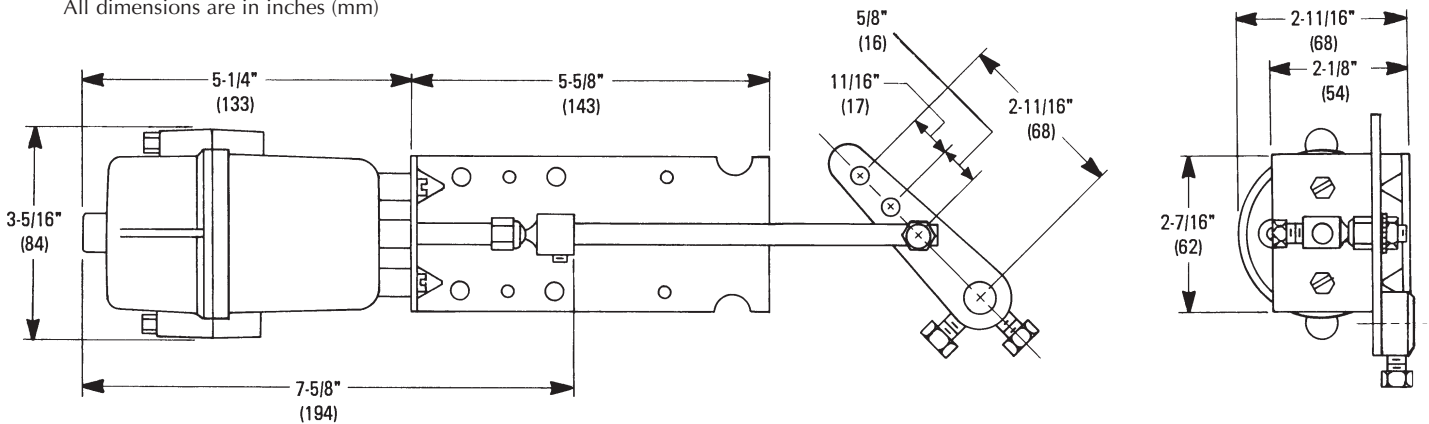
- CMC-1001 Non-metallic positive positioner
- CMC-1002 Metal positive positioner
- VTD-0803 Ball joint, 1/4-20 male x 5/16-24 female for use on end of actuator shafts
- VTD-0804 Ball joint, 1/4-20 male x 1/4-20 female for use with VTD-1400 series crank arms
- VTD-0903 Right-angle bracket for MCP-1020 series
- VTD-1414 3-hole crank arm for 3/8" damper shafts
- VTD-1415 3-hole crank arm for 1/2" damper shafts
- VTD-1630 Push rod, 5/16 x 6-1/4"
- VTD-9422 Replacement actuator diaphragm
- MCP-0202 3 to 12 psi actuator for MCP-1020 series
- MCP-0203 5 to 10 psi actuator for MCP-1020 series
- MCP-0205 8 to 13 psi actuator for MCP-1020 series
- MCP-0206 10 to 15 psi actuator for MCP-1020 series
- MCP-0208 4 to 8 psi actuator for MCP-1020 series

#### ▲ 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.

## Details

All dimensions are in inches (mm)



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

(Refer to the damper torque ratings provided by the damper manufacturer. If the damper ratings are unavailable, this chart provides general guidelines for actuator selection.)

## Specifications

**Effective Area** 3 square inches (19 sq. cm)

**Stroke** 2 inches (51 mm)

### Material

**Body** Glass-filled nylon (Nylatron GS63-13)  
**Diaphragm** Neoprene  
**Piston** Glass-filled nylon (Nylatron GS63-13)  
**Shaft** Cold rolled steel with nickel plating  
**Bearings** Glass-filled nylon (Nylatron GS63-13)

### Damper Ratings @ 1,000 fpm

**Gradual** 3 sq. ft. (0.28 sq. m)  
**Two Position** 4.5 sq. ft. (0.42 sq. m)

**Weight** 1.2 lbs. (0.54 kg)

### Control Signal Pressure Input

0–20 psig (138 kPa) operating,  
30 psig (207 kPa) maximum

*See note under Temperature Limits*

**Supply Connection** 3/16" (5 mm) fitting for 1/4" (6 mm) O.D. polyethylene tubing

### Temperature Limits

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

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

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