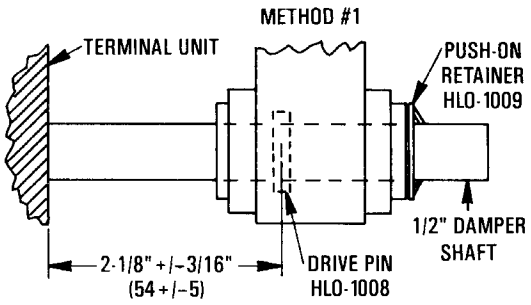
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Installation Guide

Mounting

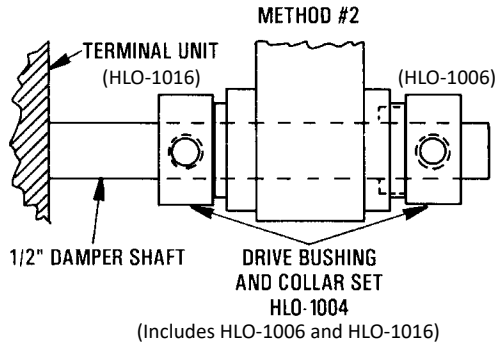
Mounting Method #1, for 1/2-inch diameter shafts

1. Locate a 3/16-inch cross-hole in the shaft.
2. Align the hole parallel, or perpendicular, to the damper blade depending on how the actuator will be mounted and whether the damper is to be Normally Open or Normally Closed.
3. Insert drive pin (HLO-1008) and slide actuator onto the shaft to engage.
4. Note the direction of rotation.
5. Slide the retainer (HLO-1009) onto the shaft to lock actuator.
6. Rotate the actuator to the desired damper position.
7. Install the anti-rotation bracket (HMO-1003) provided.



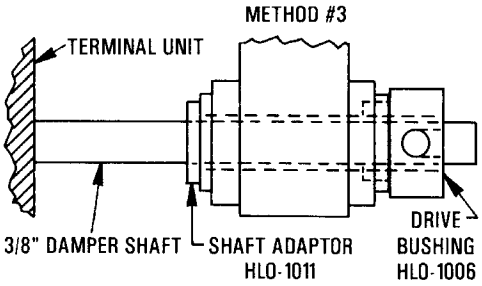
Mounting Method #2, for 1/2-inch diameter shafts

1. Slide the HLO-1016 collar onto the shaft.
2. Slide the actuator onto shaft noting directional rotation.
3. Slide drive bushing (HLO-1006) onto the shaft and into the actuator.
4. Align the actuator with the damper.
5. Lock the collar and drive bushing setscrews.
6. Install the anti-rotation bracket (HMO-1003) provided.



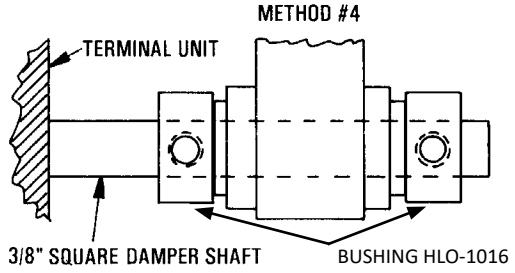
Mounting Method #3, for 3/8-inch diameter shafts

1. Note the direction of rotation.
2. Slide the shaft adaptor (HLO-1011) into the rear of the actuator.
3. Slide the actuator onto the shaft.
4. Slide the drive bushing (HLO-1006) onto the shaft and into the actuator.
5. Align the actuator with the damper.
6. Align the drive bushing setscrews with the slots in the adaptor and tighten the screws.
7. Install the anti-rotation bracket (HMO-1003) provided.



Mounting Method #4, for 3/8-inch SQUARE shafts

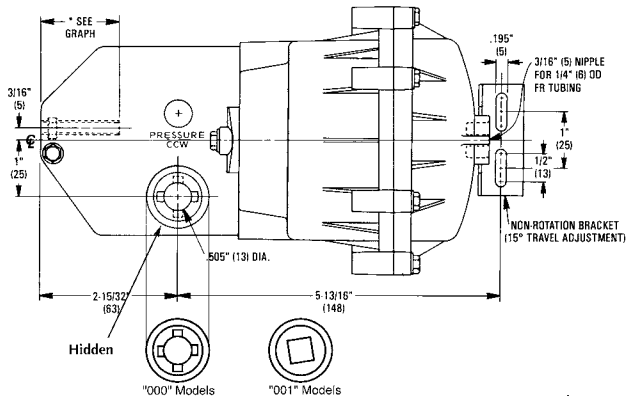
1. Note the direction of rotation.
2. Slide the collar (HLO-1016) onto shaft or correctly position HLO-1009 on damper shaft to hold actuator in position.
3. Slide the actuator onto the shaft, noting the directional rotation.
4. Slide the drive bushing (HLO-1006) onto the shaft.
5. Align the actuator with the damper.
6. Tighten the collar and drive bushing setscrews.
7. Install the anti-rotation bracket (HMO-1003) provided.



Connections

- Use 1/4-inch (6 mm) O.D. FR polyethylene tubing
- Use only clean, dry control air. No attempt should be made to use any other medium.
- Connect the signal (0 to 20 psig) to the 3/16-inch fitting on the base of the actuator.

NOTE: If the application requires operation near the maximum temperature and maximum pressure, add a tubing restraint to the actuator connection.

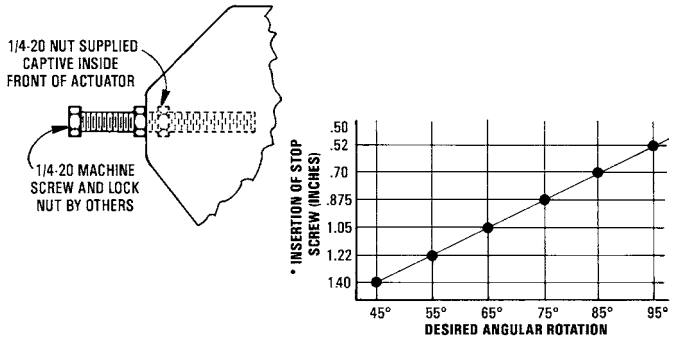


Adjustments and Calibration

To limit actuator rotation:

1 Insert a 1/4-20 stroke-stop screw into the front end of the actuator.

2. Refer to the graph for the desired rotation compared to insertion of stop screw length



⚠ DANGER

The MCP-3631 contains a large powerful spring. Exercise extreme caution if disassembly is required. The actuator shaft MUST be restrained to prevent the spring from expanding!

Specifications

Effective Area	8 sq. in. (52 sq. cm)
Normal Rotation	100°
Supply Pressure	0 to 20 psig (138 kPa) operating; 30 psig (207 kPa) maximum
Temperature Limits	
Operating	–20° to 180° F (–29° to 82° C)
Shipping	–40° to 180° F (–40° to 82° C)

Spring Range and Retracted/ Extended Torque*

**Based on 0 and 20 psi applied*

3 to 12 psi; 25/68 in-lbs. (21 to 83 kPa; 3/8 N•m)

5 to 10 psi; 42/85 in-lbs. (34 to 69 kPa; 5/10 N•m)

8 to 13 psi; 68/59 in-lbs. (55 to 90 kPa; 8/7 N•m)

3 to 8 psi; 25/102 in-lbs. (28 to 55 kPa; 3/12 N•m)

Material	
Body	Glass-filled nylon
Diaphragm	Neoprene
Weight	1.5 lbs. (0.68 kg)

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Maintenance

No routine maintenance is required. Each component is designed for dependable, long-term reliability, and performance. Careful installation will also ensure long-term reliability and performance.

⚠ 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.

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