

## Installation Guide

### Mounting

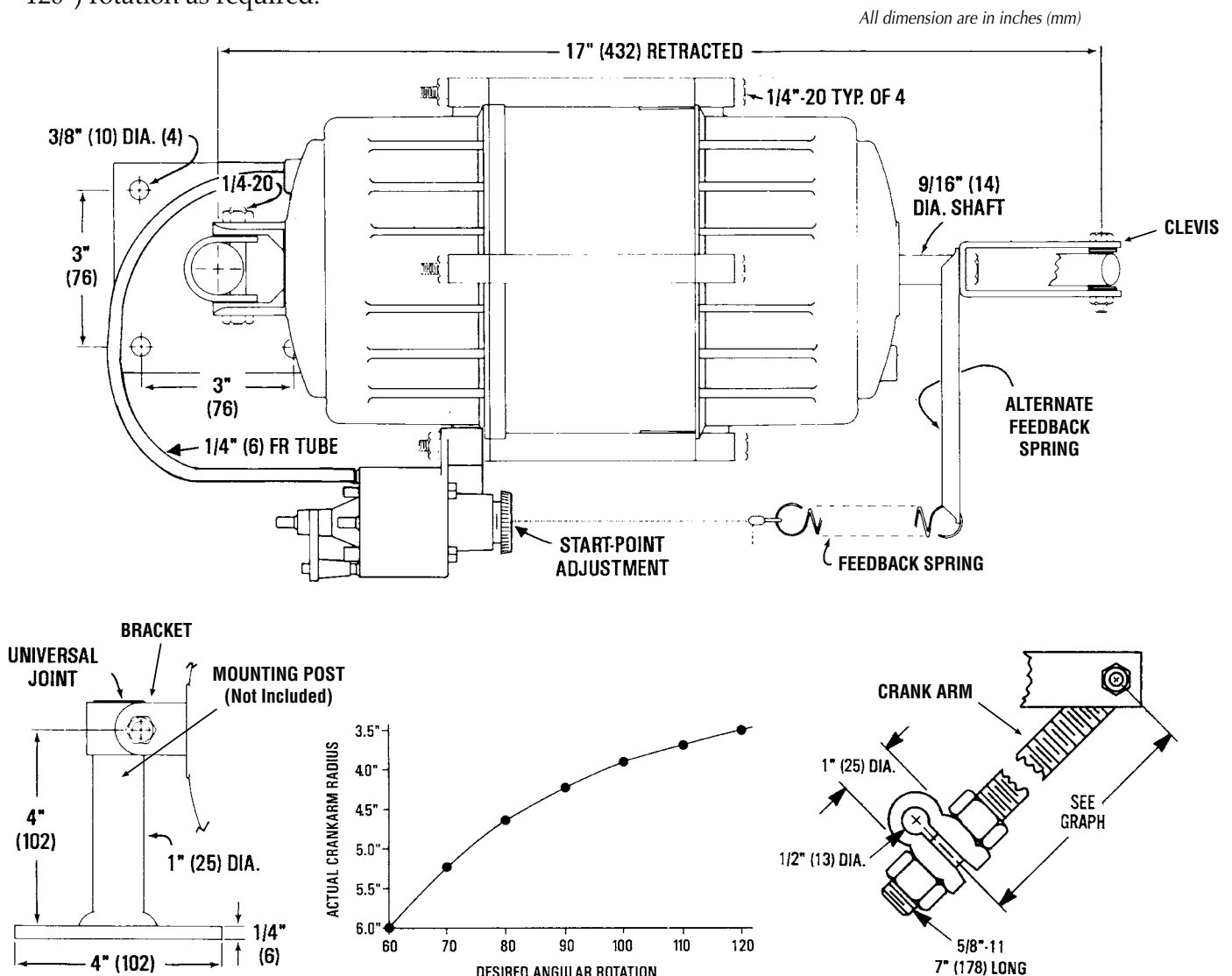
The MCP-1160 series actuator **MUST** be mounted on a rigid surface due to the force generated at, or near, maximum air pressure.

1. Align the actuator with the controlled device. The mounting joint allows the actuator to be located in a different plane from the controlled device.
2. Attach the actuator to the rigid surface.
3. Adjust the crank arm assembly length (see the chart) to provide the (minimum 60° to maximum 120°) rotation as required.

4. Do **NOT** tighten the universal joint. The actuator must be free to swivel as it operates.
5. See the Connection section on the next page.

### ⚠ 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.



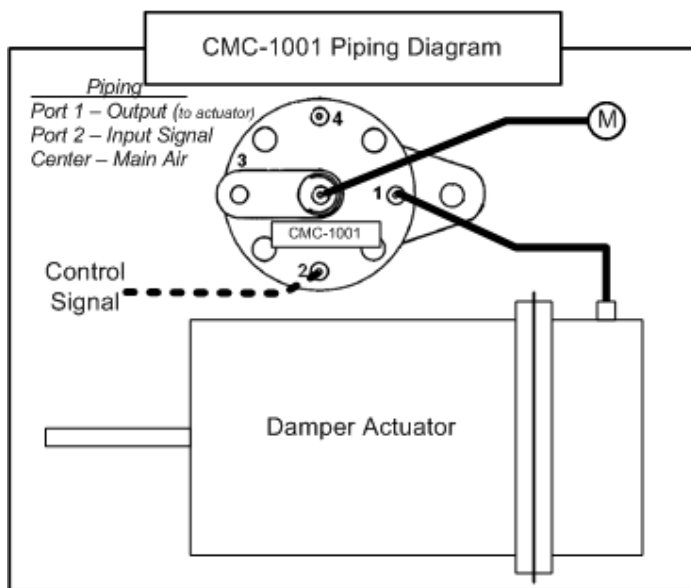
## Connections

**NOTE:** Use 1/4" (6 mm) O.D. FR polyethylene tubing and only clean, dry control air.

**NOTE:** MCP-1160 models ordered with CMC-1001 positioners are factory-piped between the positioner and the actuator.

1. Connect the **input control signal** to the actuator port (if no positioner is used) or to the positioner (CMC-1001 input) Port 2 (see the diagram).
2. Connect the **main air** (20 psi) to the positioner (CMC-1001 center) port.
3. If a positioner is not factory-piped to the actuator, connect the actuator input port to positioner (CMC-1001 output) Port 1.

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



## Adjustments and Calibration

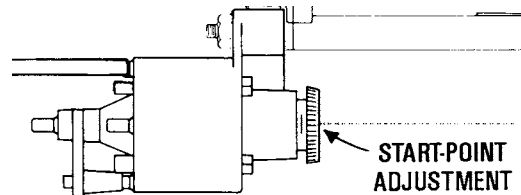
### ▲ DANGER

The MCP-1060 contains a large powerful spring. Exercise extreme caution if disassembly is required. The actuator shaft **MUST** be restrained to prevent the spring from expanding.

The MCP-1160 contains an 8-13 psi spring. A CMC-1001 positioner allows the unit to operate over any 5 psi span with the start-point adjustable from 3-10 psi. Replace the 5 psi spring with a 7 or 10 psi spring to widen the span.

To change the positioner start-point:

1. Apply the desired signal pressure.
2. Rotate the start-point adjuster until the actuator starts to stroke.



## Maintenance

No routine maintenance is required. However, care should be taken during any installation or maintenance due to the power of the actuator. Each component is designed for dependable, long-term reliability, and performance. Careful installation will also ensure long-term reliability and performance.

## Important Notices

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## More Information

For specifications and other information about the actuators, see the [MCP-1160 Series Data Sheet](#) on the [KMC web site](#). For information about the positioner, see [CMC-1001 Data Sheet](#).

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