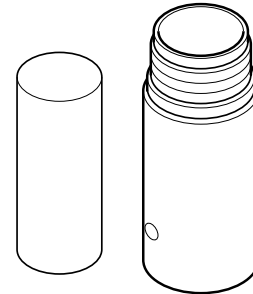


## Application

The AV-601 linkage extension is required for all heating valves with MF-5X13, MP-541X, MP-551X, MPR-561X, MPR-571X, and MPR-581X actuators. It is recommended for cooling valves with MF-5X13, MP-541X, MP-551X, MPR-561X, MPR-571X, and MPR-581X actuators. It is also used for higher ambient and fluid temperatures with MA-521X or MP-521X actuators.



## Features

- AV-601 provides thermal insulation between valve and actuator.

## Applicable Literature

- Environmental Controls Cross-Reference Guide, F-23638
- Environmental Controls Reference Manual, F-12683
- Environmental Controls Application Manual, F-21335
- Pneumatic Products Catalog, F-27383
- Environmental Controls Valve Selection Guide, F-26094
- EN-205 Water System Guidelines, F-26080
- AV-600 Hydraulic Actuator Valve Linkage Kit General Instructions, F-26279
- AV-7600 Hydraulic Actuator Valve Linkage Kit, F-26235

## SPECIFICATIONS

### Temperature Restrictions

Verify that temperature of the media in the valve versus the ambient temperature at the actuator does not exceed the ratings shown in Table-1.

**Table-1 Restrictions on the Maximum Ambient Temperature for the Valve Actuator.**

Maximum Temperature of Media in the Valve Body (Check Ratings of the Valve)	Maximum Ambient Temperature of MF-5X13, MP-541X, or MPR-5X1X		Maximum Ambient Temperature of MA-521X or MP-521X	
	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> Only for Chilled Water Applications Only	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> & AV-601	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> Only	AV-600 <sup>a</sup> or AV-7600 <sup>b</sup> & AV-601
366°F (180°C)	Do Not Use	88°F (31°C)	90°F (32°C)	90°F (32°C)
340°F (171°C)	Do Not Use	93°F (34°C)	100°F (38°C)	100°F (38°C)
281°F (138°C)	Do Not Use	103°F (39°C)	115°F (46°C)	140°F (60°C) <sup>c</sup>
181°F (83°C)	Do Not Use	120°F (48°C)	140°F (60°C) <sup>c</sup>	140°F (60°C) <sup>c</sup>
80°F (26°C)	140°F (60°C) <sup>c</sup>	140°F (60°C) <sup>c</sup>	140°F (60°C) <sup>c</sup>	140°F (60°C) <sup>c</sup>

<sup>a</sup> For detailed valve linkage installation instructions, refer to **AV-600 Hydraulic Actuator Valve Linkage Kit General Instructions, F-26279**.

<sup>b</sup> For detailed valve linkage installation instructions, refer to **AV-7600 Hydraulic Actuator Valve Linkage Kit General Instructions, F-26235**.

<sup>c</sup> Maximum allowable ambient temperature of the actuator.

## INSTALLATION

### Inspection

Inspect the package for damage. If damaged, notify the appropriate carrier immediately. If undamaged, open the package and inspect the device for obvious damage. Return damaged products.

### Requirements

- Tools (not provided):
  - Two (2) 3/8" wrenches
  - TOOL-19, 1/8" diameter rod
  - TOOL-20-1, Packing and linkage wrench
  - TOOL-37, 1-5/8" open-ended wrench (optional)
  - 6" or longer ruler
- Training: Installer must be a qualified, experienced technician.

---

#### Caution:

- Avoid locations where excessive moisture, corrosive fumes, or vibration is present.
  - Install all two-way valves so that they close against the flow. An arrow on the valve body or a tag indicates the proper flow direction.
  - Always install three-way mixing valves with two inlets and one outlet.
  - Always install three-way diverting valves with one inlet and two outlets.
  - Do not install the actuator below the center line of the valve. For steam applications mount the actuators above the valve body at 45° from vertical.
-

## Extension Installation

Refer to Figure-1 when installing the AV-601 Linkage Extension.

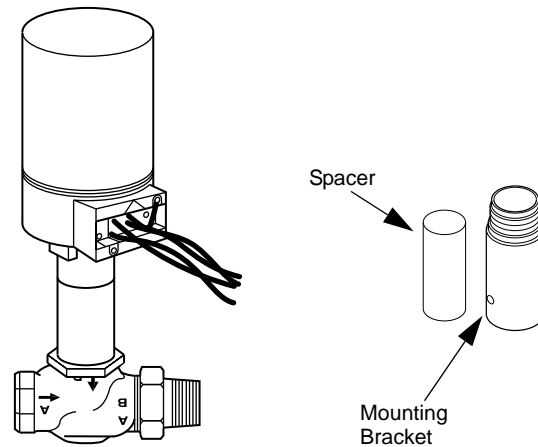


Figure-1 Installation of AV-601.

1. If the actuator is installed on the valve body, it must be removed by unscrewing the mounting nut on the valve.

---

**Caution:** Do not twist or exert any force on the actuator housing during installation. Either turn the base of the actuator by hand or, if necessary, use a 1-5/8" open end wrench (TOOL-37) on flats provided on the actuator base and valve body mounting nut.

---

2. Insert the AV-601 mounting bracket over the previously assembled AV-600 or AV-7600 valve linkage.
3. Screw the mounting bracket on to the valve body mounting nut.
4. Insert the spacer from the AV-601 into the mounting bracket.
5. The actuator is attached by screwing the mounting bracket into the base of the actuator. The actuator may be rotated as desired for ease in making wiring connections.

---

**Note:** The AV-601 linkage adds 2-1/32" (52 mm) to the height of the valve assembly. In environments where condensate exists and the actuator is mounted at an angle from vertical, position the weep hole of the AV-601 to obtain maximum drainage. Do not trap moisture by insulating above mounting nut.

---

## MAINTENANCE

The Actuator Linkage requires no maintenance.

Regular maintenance of the total system is recommended to assure sustained, optimum performance. Hard water leaves abrasive deposits and reduces component life. To maximize valve life consult **EN-205, Water System Guidelines, F-26080**.

