

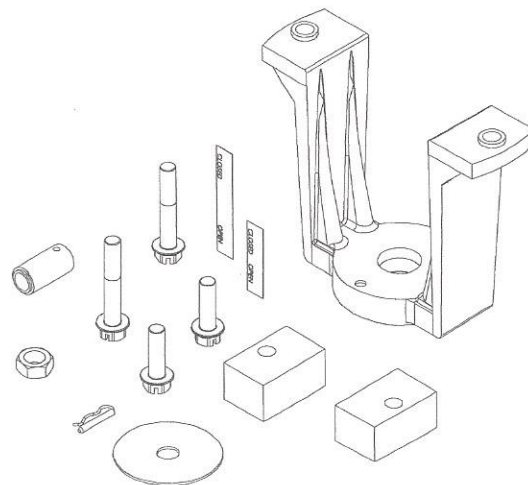
**Valve Linkage for MK-6811 and MK-6911
General Instructions**

Application

The AV-497 valve linkage kit is used to field assemble MK-6811 actuators onto 2-1/2" to 5" VB-8xxx series valves and MK-6911 actuators onto 6" VB-8xxx series valves.

Features

- Die cast aluminum mounting bracket.
- Valve position indication provided as standard.



SPECIFICATIONS

Refer to the *VX-8XXX Selection Guide*, F-27199, for information on close-off pressures, temperature restrictions (ambient and fluid), and valve assembly dimensions.

Table-1 AV-497 Valve Linkage Component Selection.

Valve Body	Valve Size	Actuator	Stem Lock Nut	Spacers	Mounting Bracket	Mounting Bracket Bolts	Connector Pin	Indicating Plate	Stem Extension	Scale Length
VB-8213-0-5-12 VB-8223-0-5-12 VB-8303-0-5-12	2-1/2"	MK-6811 ^a	(1) 1/2"	Not Used	(1)	(2) 1-1/4" Long	(1)	(1) with 1/2" Hole	(1)	1" (25 mm)
VB-8213-0-5-13 VB-8223-0-5-13 VB-8303-0-5-13	3"									
VB-8213-0-5-14 VB-8223-0-5-14 VB-8303-0-5-14	4"									
VB-8213-0-5-15 VB-8223-0-5-15 VB-8303-0-5-15	5"									
VB-8213-0-5-16 VB-8223-0-5-16 VB-8303-0-5-16	6"	MK-6911 ^b		(2)		(2) 2-1/4" Long			(1)	2" (51 mm)

^a AK-42309-500 positive positioner optional.

^b AK-42309-500 positive positioner required.

INSTALLATION

Inspection

Inspect the carton for possible damage. If damaged, notify the appropriate carrier immediately. If undamaged, open the carton and inspect the kit for obvious damage. Return any damaged products.

Requirements

- Tools (not provided):
 - Appropriate wrenches for stem extension, mounting bolts, and lock nuts.
- A source of pressurized air, suitable for applying air pressure to the actuator and sufficient to fully stroke the piston.
- Training: Installer must be a qualified, experienced technician.

Location



Caution:

- Avoid locations where excessive moisture, corrosive fumes, or vibration are present.
- Install all two-way valves so that they close against the flow. An arrow on the valve indicates the proper direction of flow. Flow is from port A (inlet) to port AB (outlet).
- VB-8303 may be piped as a mixing valve (two inlets and one outlet) or a diverting valve (one inlet and two outlets). Flow is from ports A and B to AB (mixing) and from AB to A and B (diverting).
- Do not install the actuator below the centerline of the valve. For steam applications, mount the actuator on the valve body at 45° from vertical.

Mounting

Two-Way Normally Open 2-1/2" to 5" VB-8213 Valves

Refer to Figure-1.

1. The actuator should be in its fully retracted position (no air pressure).
2. Push the valve stem completely down so that the valve disc is seated against the valve seat.
3. Mount the bracket on the valve body by removing the bracket nut, placing the bracket on the valve body, orienting the bracket in a convenient position for piping, and then replacing and tightening the bracket nut.
4. Thread the 1/2" stem lock nut well down onto the valve stem. Next, place the indicator plate (and the AK-42309-500 spring arm if positive positioner being used) on the valve stem. Finally, thread the stem extension well down onto the valve stem. Consult the *AK-42309-500 Positive Positioner General Instructions, F-22909* for information on mounting and calibrating the AK-42309-500 positive positioner.
5. Mount the MK-6811 actuator to the mounting bracket, using the two 1-1/4" long bolts provided.
6. Link the actuator to the valve stem extension as follows:
 - a. Apply air pressure to the actuator until it fully strokes (piston extended).
 - b. Turn the stem extension until the hole in the stem extension lines up with the hole in the actuator piston.
 - c. Turn the stem extension two full turns up, toward the actuator piston.
 - d. Decrease air pressure in the actuator until the hole in the stem extension and the hole in the actuator piston are aligned, and then insert the connecting pin.
7. Tighten the stem lock nut against the stem extension and indicator plate.

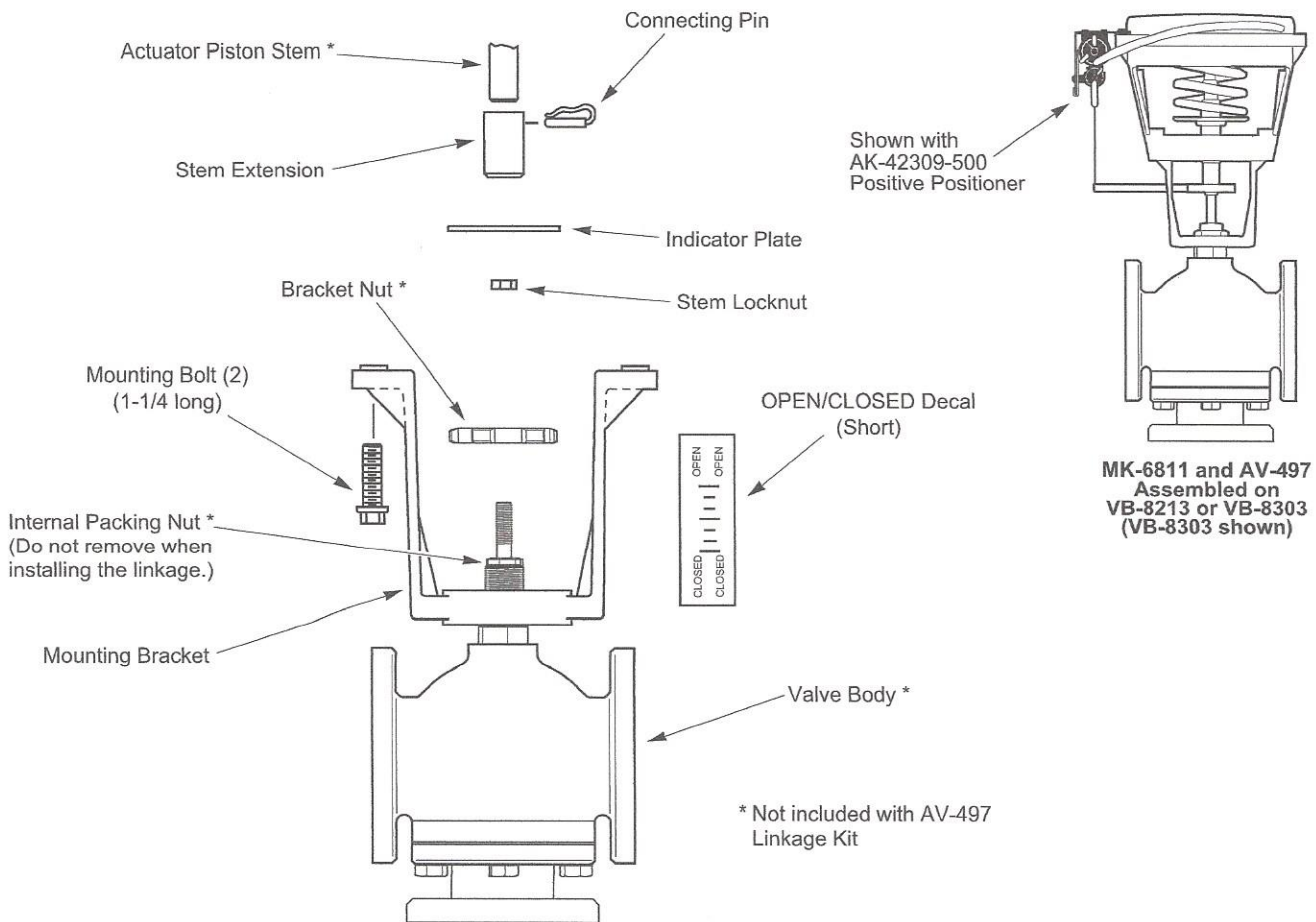


Figure-1 Valve Linkage Assembly for MK-6811 Actuator on 5" VB-8213 or VB-8303 Valve.

Two-Way Normally Closed VB-8223 Valves and Three-Way VB-8303 2-1/2" to 5" Valves

Refer to Figure-1 for VB-8303 valves and Figure-2 for VB-8223 valves.

1. The actuator should be in its fully retracted position (no air pressure).
2. Pull the valve stem completely up so that the valve disc is seated against the upper valve seat.
3. Mount the bracket on the valve body by removing the bracket nut, placing the bracket on the valve body, orienting the bracket in a convenient position for piping, and then replacing and tightening the bracket nut.
4. Thread the 1/2" stem lock nut well down onto the valve stem. Next, place the indicator plate (and the AK-42309-500 spring arm if positive positioner being used) on the valve stem. Finally, thread the stem extension well down onto the valve stem. Consult the *AK-42309-500 Positive Positioner General Instructions, F-22909* for information on mounting and calibrating the AK-42309-500 positive positioner.
5. Mount the MK-6811 actuator to the mounting bracket using the two 1-1/4" long bolts provided.
6. Link the actuator to the valve stem extension as follows:
 - a. Make sure the valve stem is still in the completely up position.
 - b. Turn the stem extension until the hole in the stem extension lines up with the hole in the actuator piston.
 - c. Turn the stem extension two full turns down, away from the actuator piston.
 - d. Push the valve stem down.
 - e. Apply air pressure to the actuator until the hole in the stem extension and the hole in the actuator piston are aligned, and then insert the connecting pin.
7. Tighten the stem lock nut against the stem extension and indicator plate.

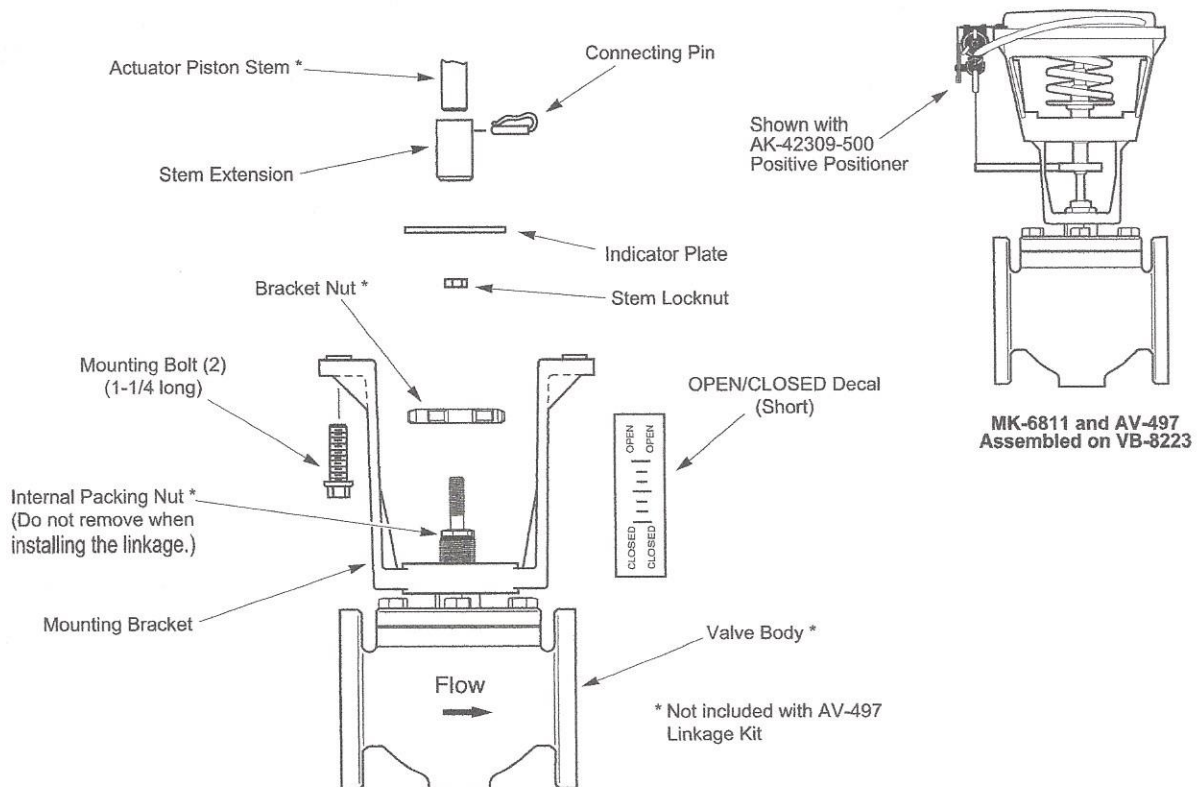


Figure-2 Valve Linkage Assembly for MK-6811 Actuator on 2-1/2" to 5" VB-8223 Valve.

Two-Way Normally Open 6" VB-8213 Valves

Refer to Figure-3.

1. The actuator should be in its fully retracted position (no air pressure).
2. Pull the valve stem completely up.
3. Mount the bracket on the valve body by removing the bracket nut, placing the bracket on the valve body, orienting the bracket in a convenient position for piping, and then replacing and tightening the bracket nut.
4. Thread the 1/2" stem lock nut well down onto the valve stem. Next, place the indicator plate (and the AK-42309-500 spring arm if positive positioner being used) on the valve stem. Finally, thread the stem extension well down onto the valve stem. Consult the *AK-42309-500 Positive Positioner General Instructions, F-22909* for information on mounting and calibrating the AK-42309-500 positive positioner.
5. Mount the MK-6911 actuator to the mounting bracket, placing the two spacers between the actuator and the bracket. Secure the actuator to the bracket, using the two 2-1/4" long bolts provided.
6. Link the actuator to the valve stem extension as follows:
 - a. Turn the stem extension until the hole in the stem extension lines up with the hole in the actuator piston.
 - b. Push the valve stem down.
 - c. Apply air pressure to the actuator until the hole in the stem extension and the hole in the actuator piston are aligned, and then insert the connecting pin.
7. Tighten the stem lock nut against the stem extension and indicator plate.

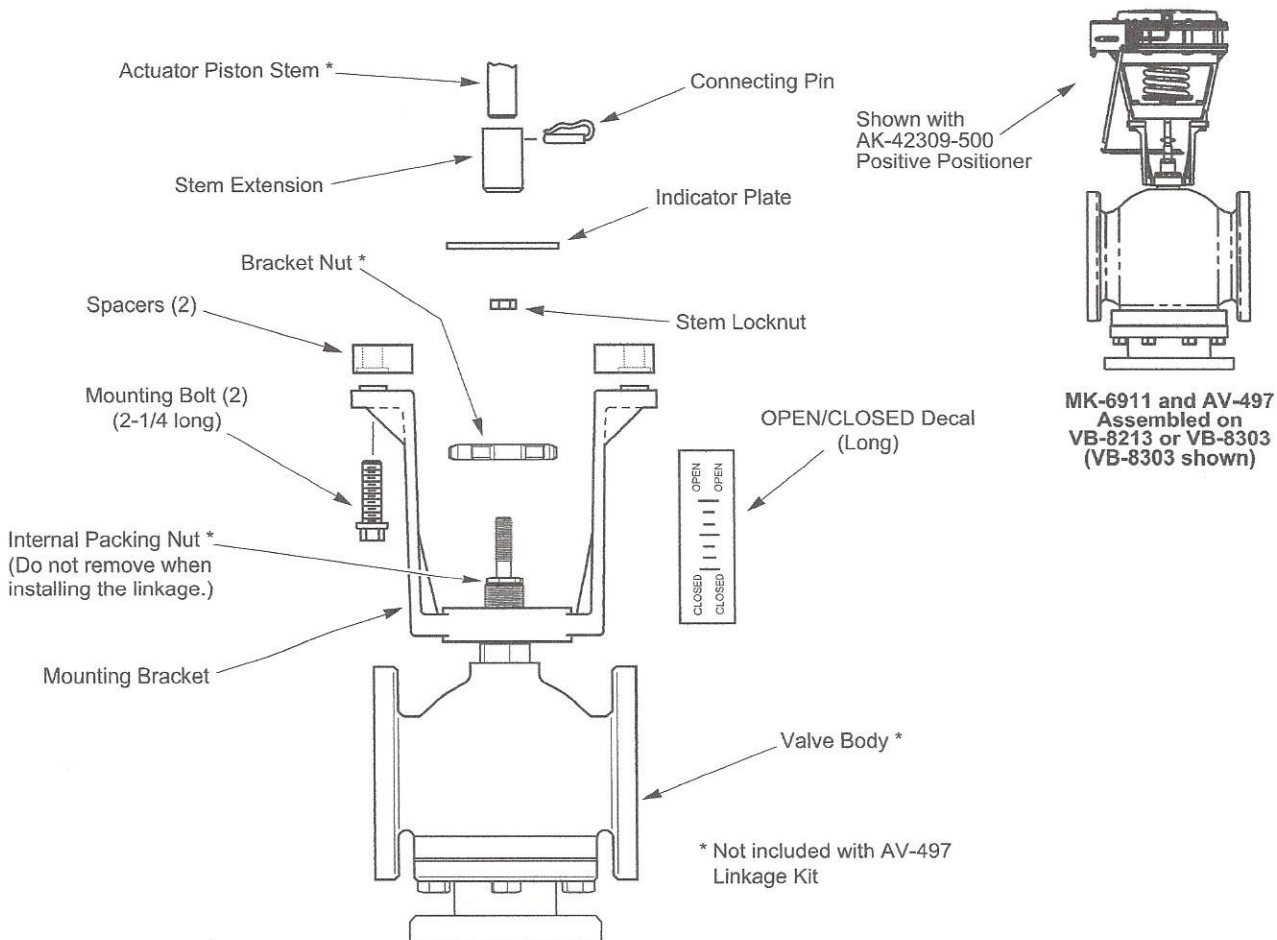


Figure-3 Valve Linkage Assembly for MK-6911 Actuator on 6" VB-8213 or VB-8303 Valve.

Two-Way Normally Closed 6" VB-8223 Valves and Three-Way 6" VB-8303 Valves

Refer to Figure-3 for VB-8303 valves and Figure-4 for VB-8223 valves.

1. The actuator should be in its fully retracted position (no air pressure).
2. Pull the valve stem completely up so that the valve disc is seated against the upper valve seat.
3. Mount the bracket on the valve body by removing the bracket nut, placing the bracket on the valve body, orienting the bracket in a convenient position for piping, and then replacing and tightening the bracket nut.
4. Thread the 1/2" stem lock nut well down onto the valve stem. Next, place the indicator plate (and the AK-42309-500 spring arm if positive positioner being used) on the valve stem. Finally, thread the stem extension well down onto the valve stem. Consult the *AK-42309-500 Positive Positioner General Instructions, F-22909* for information on mounting and calibrating the AK-42309-500 positive positioner.
5. Mount the MK-6911 actuator to the mounting bracket, placing the two spacers between the actuator and the bracket. Secure the actuator to the bracket, using the two 2-1/4" long bolts provided.
6. Link the actuator to the valve stem extension as follows:
 - a. Make sure the valve stem is still in the completely up position.
 - b. Turn the stem extension until the hole in the stem extension lines up with the hole in the actuator piston.
 - c. Turn the stem extension two full turns down, away from the actuator piston.
 - d. Push the valve stem down.
 - e. Apply air pressure to the actuator until the hole in the stem extension and the hole in the actuator piston are aligned, and then insert the connecting pin.
7. Tighten the stem lock nut against the stem extension and indicator plate.

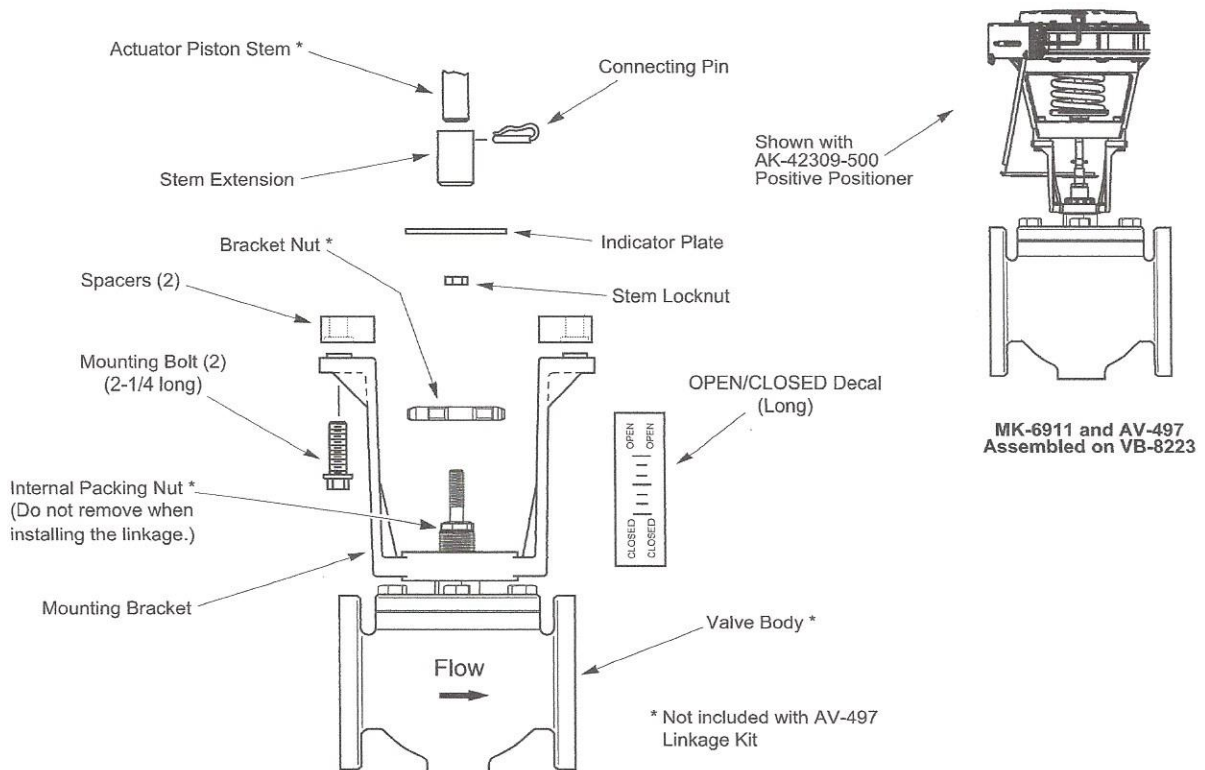


Figure-4 Valve Linkage Assembly for MK-6911 Actuator on 6" VB-8223 Valve.