

AV-497

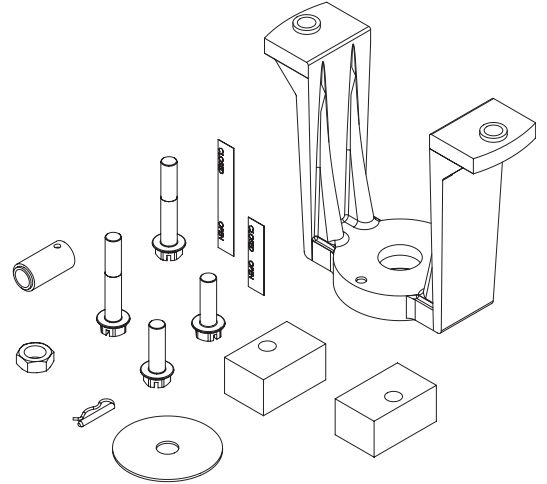
Valve Linkage for MK-6811 and MK-6911 General Instructions

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.




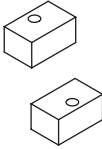
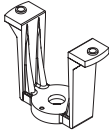
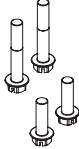

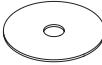

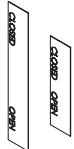
Applicable Literature

F-Number	Description	Audience	Purpose
F-27383	Pneumatic Products Catalog	Sales Personnel Application Engineers Installers Service Personnel Start-up Technicians	Provides features, specifications, mounting dimensions, and other criteria useful to the selection of Vx-8xxx series valves.
F-27199	Vx-8xxx Series Selection Guide		Provides a comprehensive listing of Schneider Electric component products, describing their features and specifications, and provides other reference material useful to their selection.
F-27193	VB-8213 Flanged Valves General Instructions		Describes the valve's features, specifications, and possible applications. Provides step-by-step mounting instructions.
F-27194	VB-8223 Flanged Valves General Instructions		
F-27197	VB-8303 Flanged Valves General Instructions		
F-13985	MK-6600 Series, MK-6800 Series, MK-6911 Pneumatic Actuators General Instructions		
F-22909	AK-42309-500 Positive Positioner General Instructions		Describes the positioner's features, specifications, and possible applications. Provides step-by-step mounting and adjustment instructions.
F-26080	EN-205 Water System Guidelines	Application Engineers Installers Service Personnel Start-up Technicians	Provides treatment guidelines for water and steam systems.

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	2-1/2"	MK-6811 ^a																
VB-8223-0-5-12																		
VB-8303-0-5-12																		
VB-8213-0-5-13	3"																	
VB-8223-0-5-13																		
VB-8303-0-5-13																		
VB-8213-0-5-14	4"										(1) 1/2"	Not Used	(1)	(2) 1-1/4" Long	(1)	(1) with 1/2" Hole	(1)	1" (25 mm)
VB-8223-0-5-14																		
VB-8303-0-5-14																		
VB-8213-0-5-15	5"																	
VB-8223-0-5-15																		
VB-8303-0-5-15																		
VB-8213-0-5-16	6"	MK-6911 ^b	(1) 1/2"	(2)	(2) 2-1/4" Long	(1)	(1) with 1/2" Hole	(1)	2" (51 mm)									
VB-8223-0-5-16																		
VB-8303-0-5-16																		

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.

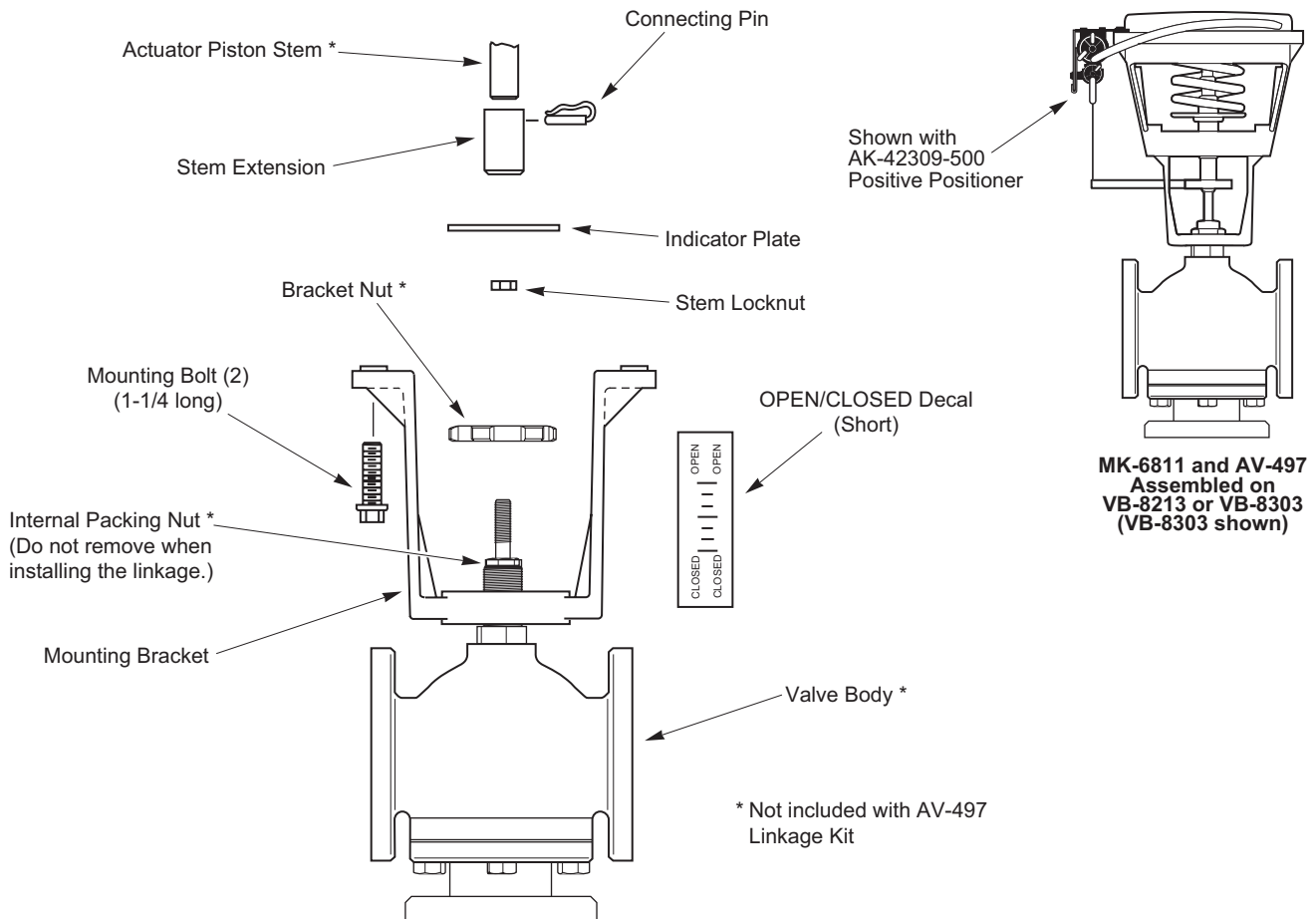


Figure 1. Valve Linkage Assembly for MK-6811 Actuator on 5" VB-8213 or VB-8303 Valve.

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.

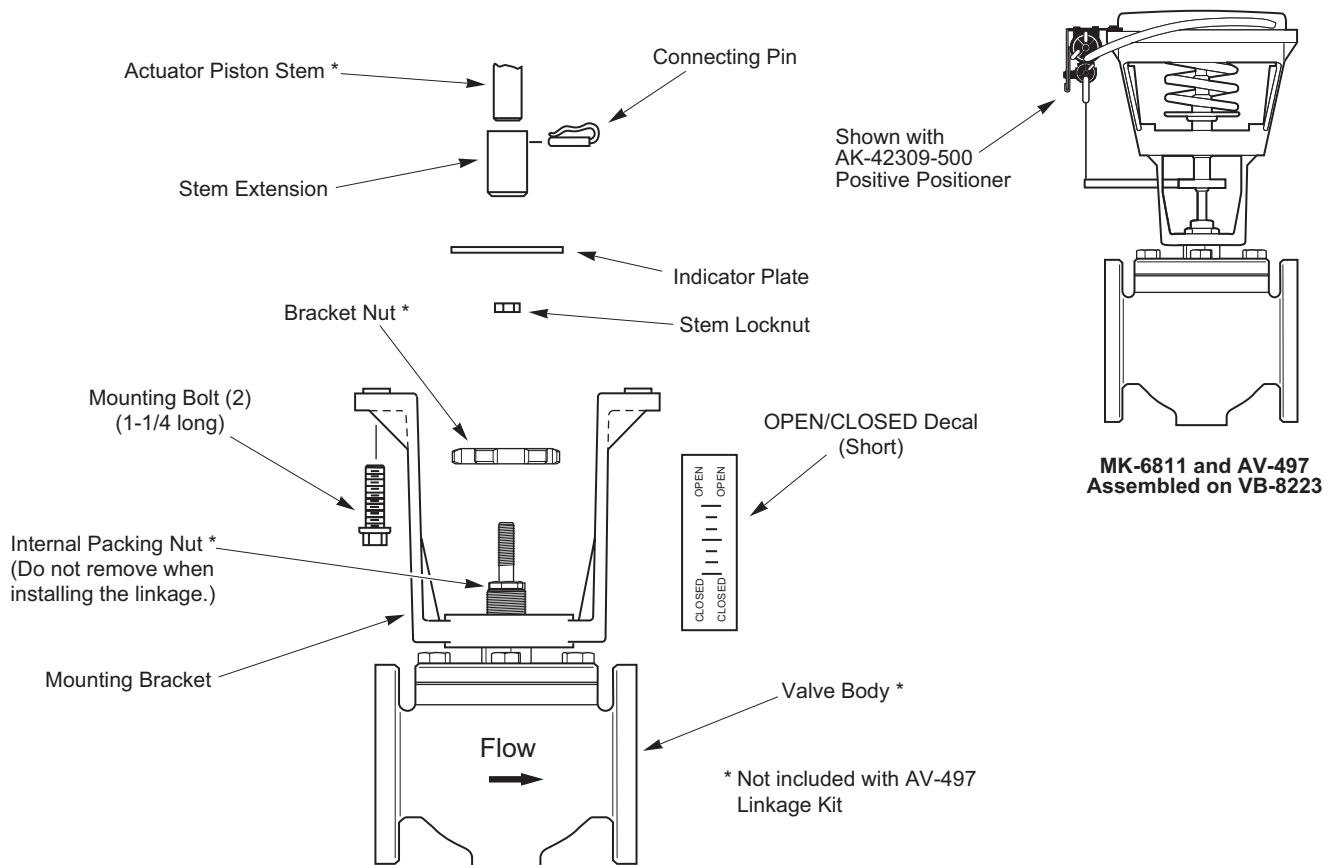


Figure 2. Valve Linkage Assembly for MK-6811 Actuator on 2-1/2" to 5" VB-8223 Valve.

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.

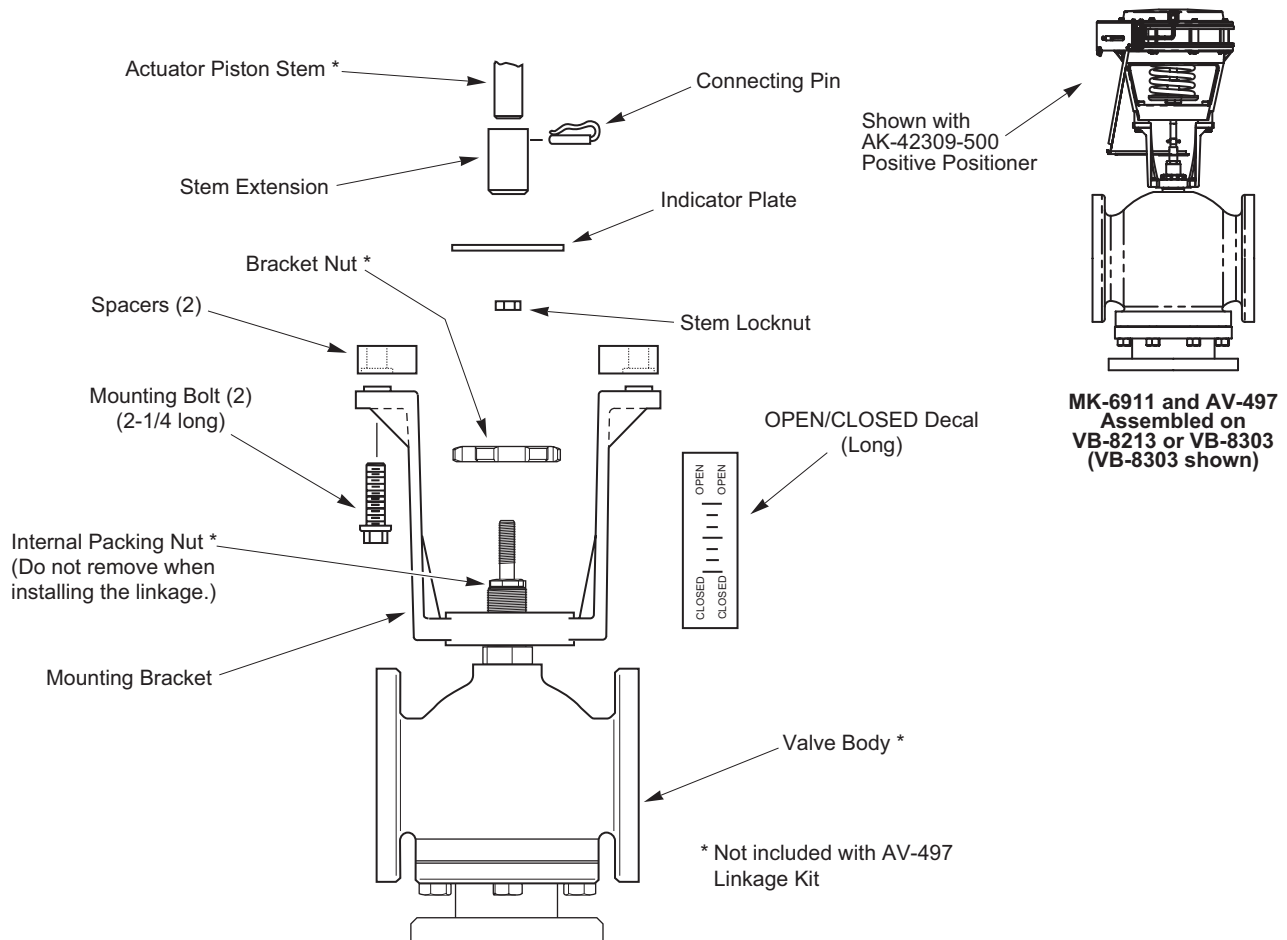


Figure 3. Valve Linkage Assembly for MK-6911 Actuator on 6" VB-8213 or VB-8303 Valve.

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.

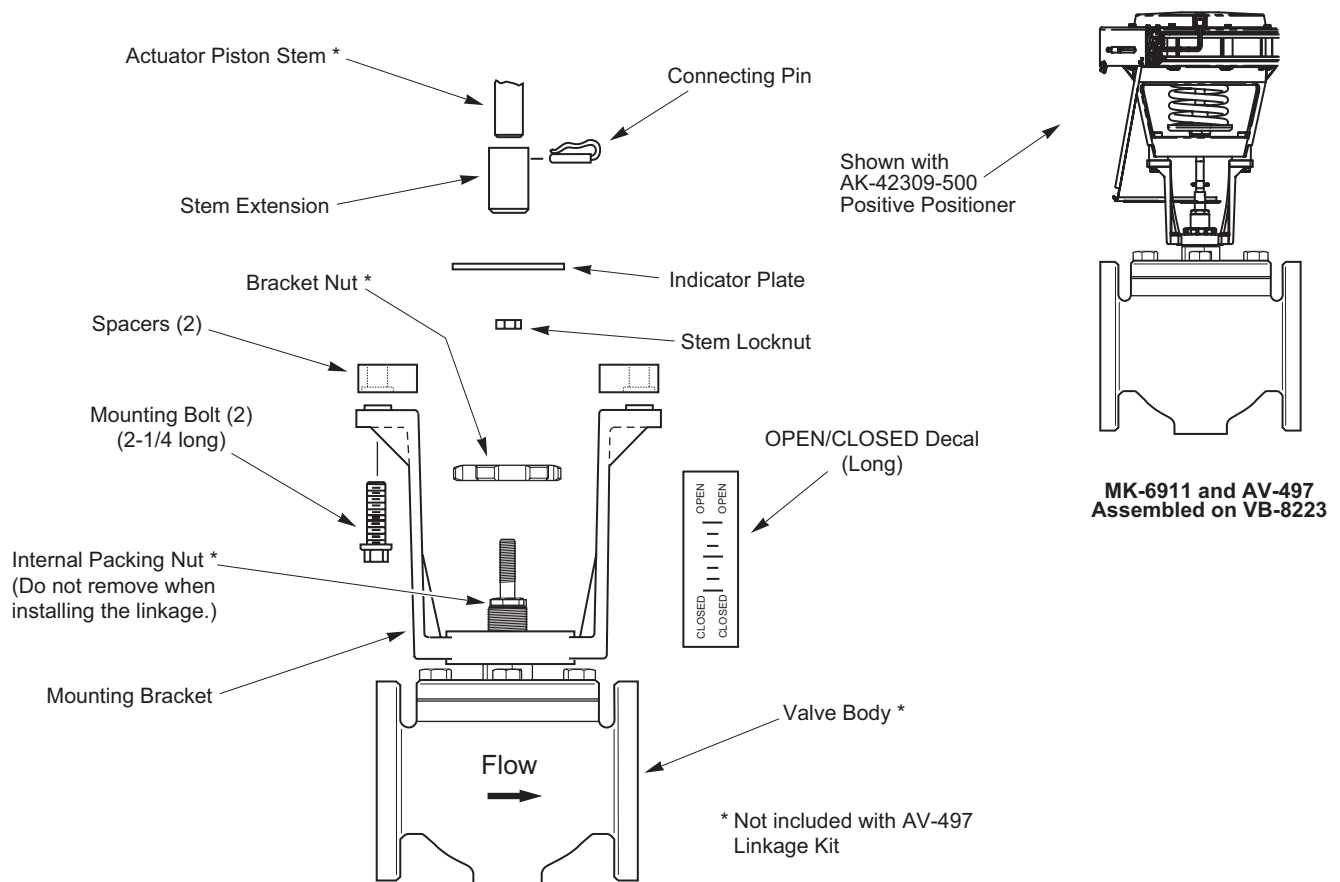


Figure 4. Valve Linkage Assembly for MK-6911 Actuator on 6" VB-8223 Valve.