



# Installation Instructions for Mounting Gemini 400 Series Pneumatic Actuators to 89 Series Ball Valves

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These instructions detail the procedure for installing a Gemini 400 Series pneumatic actuator on a drive-key equipped Gemini 89 Series ball valve. Valves may be purchased with the drive-key assembled or may be retrofitted with a drive-key conversion kit.

## Assemble Bracket to Actuator

1. Position the bracket gasket on the actuator mounting surface so that the alignment pins engage the slots (B410 Series) or holes (A420 Series) in the gasket. See Figure 1; the mounting surface is cross-hatched.
2. Place the bracket, from the mounting kit, on the mounting surface over the gasket so that the alignment pins engage the blind holes in the bracket.
3. Assemble the bracket to the actuator with two fine-thread socket head screws. (The B410 Series uses button-head socket screws; the A420 Series, standard socket head screws.) Tighten securely.

## Assemble Valve to Actuator

1. Double Acting Actuators: Check the valve to be sure that it is either completely open or completely shut. Observe the OPEN / SHUT indicator mounted on the actuator shaft; turn the shaft if necessary so that the indicator corresponds to the position of the valve.  
Spring Return Actuators: Turn the valve stem to orient the ball in the desired for spring action, i.e. "spring to open" or "spring to close". Observe the OPEN / SHUT indicator mounted on the actuator shaft to assure that it reads correctly. If it does not, remove the two screws which hold the indicator cover and rotate the cover 180 degrees, reinstall the screws.
2. Place the actuator, with the bracket attached, atop the valve so that the 12 point socket engages the stem nut, the shaft notch engages the drive-key. If the valve stem nut will not engage the socket in the coupling, reposition the nut slightly (this should require less than 1/12 turn). Force the actuator and valve together until the actuator bracket bottoms in the valve bracket.
3. Fasten the actuator to the valve with two socket-head mounting screws.

Your Gemini Actuated Valve is now ready for service.

