

## Badger Meter, Inc.

Research Control Valve  
6116 East 15th St.  
Tulsa, Ok 74158



### GENERAL INSTALLATION TIPS

Dear Customer:

Congratulations on your purchase of an excellent control valve. Great care has been taken in the design and manufacture of your valve. As with any fine instrument, care should be taken in the installation and operation of the valve. Your particular valve may be of special design and may require additional information; however, these tips cover several points of concern with all models.

1. All valves with actuators should be supported [especially those with positioners or accessories] to preclude damage from vibration or shock.
2. Some form of pipe thread sealant should be used on NPT body threads; however, we do not recommend the use of Teflon or other film tape on valves fitted with innervalves size "K" or smaller, as the small pieces of tape may plug the extremely small innervolve clearances. Also, sealing paste with metallic particles should not be used.
3. Use a wrench on the hex or flat part of the body to tighten end fittings. Never use the actuator for leverage.
4. The packing has been tested at the factory; however, if adjustments are necessary, take care to not overlighten the gland nut. It should be tightened only enough to stop leakage. Overlightening can cause packing damage or excess stem drag.
5. Filtration is beneficial on small innervalves since they can plug from particles or debris in the flow stream. Factory personnel can assist in choosing the proper filter size.
6. If the air connection[s] on the actuator are not oriented to suit your piping system, be sure to apply air to the actuator [if Air to Open] and raise the innervolve off the seat before re-orienting. Rotation of the innervolve while on the seat can damage the seating surface.  
If re-orientation of the actuator on a bellows-type valve is required, consult the factory for instructions. The stem of the bellows valve is fixed, and rotation of the stem will damage the bellows.
7. **Do Not use Teflon tape on air connections of a positioner as small pieces of tape can, and commonly do, plug the positioner pilot. DO NOT overtighten the air fittings of the positioner or actuator. Overtightening can crack the aluminum housing. The fittings need only be snug.**
8. The actuator has been adjusted to open at approximately 3.5 psig on Air To Open models and close at approximately 14.5 psig on Air To Close models. Any excess air pressure can cause AT0 units to over stroke and can cause ATC models to damage small innervalves.  
If spring tension adjustments are necessary, they should be made with no pressure on the actuator. Normal supply pressure to a positioner is 22 psig. Some with heavy duty springs may require more. If the factory is aware that extra supply pressure is needed, normally a tag is attached to the positioner.
9. Positioners are shipped with two [2] vented plugs in the ports marked "load" and "aux. load". These should be left in place, as is. The solid plug in the port marked "valve" should be left plugged or plugged with a gauge to indicate positioner output. Be careful to use a gauge of the same pressure range as the gauge in the supply pressure line.

Should you need maintenance manuals or assistance with your particular valve, please contact your area representative or the factory at 836-8411 or by FAX at 832-9962.