



6400 Corporate Avenue  
Portage, MI 49002  
269-323-2495 or 800-374-0234  
Fax: 269-323-0630 or 866-879-5982  
www.colonialengineering.com

## ACTUATOR BRACKETS FOR 3 & 4" FULL BLOCK™ True Union Ball Valve Part numbers V30501P (for 3") and V40501P (for 4")

### INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING COLONIAL VALVE VALVES, STRAINERS, FILTERS, AND OTHER ASSOCIATED PRODUCTS. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN SERIOUS INJURY.

1. Colonial Valve guarantees its products against defects in material and workmanship only. Colonial Valve assumes no responsibility for damage or injury resulting from improper installation, misapplication, or misuse of any product.
2. Colonial Valve assumes no responsibility for damage or injury resulting from chemical incompatibility between its products and the process fluids to which they are subjected. Compatibility charts provided in Colonial Valve literature are based on ambient temperatures of 70°F and are for reference only. Customer should always test to determine application correctness.
3. Consult Colonial Valve literature to determine operating pressure and temperature limitations before installing any Colonial Valve product. Note that the maximum recommended fluid velocity through any Colonial Valve product is FIVE feet per second. Higher flow rates can result in possible damage due to water hammer effect. Also note that maximum operating pressure is dependent upon material selection as well as operating temperature.
4. Colonial Ball valves are to be operated in the Open or Closed position. Do not attempt to meter or throttle in a partially open/closed position.
5. Colonial Ball valve products are designed primarily for use with non-compressible liquids. They should NEVER be used or tested with compressible fluids such as compressed air or gas.
6. Temperature effect on piping systems should always be considered when the systems are initially designed. Piping systems are required to be designed and supported to prevent excess mechanical loading on Colonial Valve equipment due to system misalignment, shock, vibration, weight, and the effects of thermal expansion and contraction.
7. Because PVC and CPVC plastic products become brittle below 40°F, Colonial Valve recommends caution in their installation and use below this temperature.
8. Published operating torque requirements are based upon testing of new valves using clean water at 70°F. Valve torque is affected by many factors including fluid chemistry, viscosity, flow rate, and temperature. These should be considered when sizing electric or pneumatic actuators.
9. Due to differential thermal expansion rates between metal and plastic, transmittal of pipe vibration, and pipe loading forces **DIRECT INSTALLATION OF METAL PIPE INTO PLASTIC CONNECTIONS IS NOT RECOMMENDED.** Wherever installation of plastic valves into metal piping systems is necessary, it is recommended that at least 10 pipe diameter in length of plastic pipe be installed upstream and downstream of the plastic valve to compensate for the factors mentioned above.

The V30501P and V40501P actuator brackets are designed to allow safe and reliable mounting of Electric and Pneumatic actuators on Colonial 3 & 4" FULL BLOCK™ True Union Ball Valves made after 1/1/2013. The bracket is mounted to the valve using a set of anchoring screws and nuts. Therefore, it can be mounted with the actuator and shipped as a complete assembly, or it can be field-mounted to an installed valve at a later date.

#### Parts included:

PVC Bracket and a set of anchoring screws and nuts

#### Parts sold separately:

True Union Ball Valve of your selection from the FULL BLOCK™ series  
K11033 Stem Coupling

#### Parts to be furnished by user:

The four mounting bolts and washers needed to mount the actuator to the bracket. Colonial does not include these because the thread-type and bolt length may vary depending on the brand of actuator used. Minimum bolt length: 1". Flat washers must be used to protect the plastic surface of the bracket.

**Description:** The bracket is molded from High Impact PVC (colored light gray), and is suitable for use on both PVC and CPVC ball valves, providing that the atmospheric temperature does not exceed 120 deg F. It is designed for use in the HORIZONTAL position (valve stem facing up), not for vertical (valve stem facing to the side) applications. The maximum allowable weight for the actuator is 25 lbs. The bracket and stem coupling comply with ISO 5211 F10 mounting (PCD of 102mm and 17mm square stem coupling).

#### Installation instructions:

1. Remove handle from valve. The handle is retained on the stem with a molded "snap-fit" rib, so removal requires some carefully applied force. Turn the handle so the valve is in the closed position. The valve body must be fixed (installed in piping or firmly secured to a bench). Hold one side of the handle and gently hammer the bottom of the handle on the other side with a rubber mallet. This will allow the handle to rise up on the stem and become free.
2. After you have freed the handle from the stem, place it loosely over the top of the stem again\*, just enough to allow you to turn the stem back to the OPEN position. \*or us an adjustable wrench over the flats of the stem.

Valve with Handle (Shown in Open Position)



Valve with handle removed



3. Place the bracket over the top area of the body, allowing the molded “ears” on the body to mate with the slots on the sides of the bracket.



4. Use the supplied anchoring screws (#10 socket head cap screw) and nuts to secure the bracket to the valve body. Note – for the 4” bracket, there is a molded flat area on one side. Place the NUT at this location. The flat area will allow you to hold the nut with an open-end 3/8” wrench while turning the screw with a 5/32 Allen Wrench. The nuts have nylon inserts to prevent loosening from vibration. Tighten the screws only until bracket is making contact with the ears on the body. Do NOT over-tighten.



5. Place the stem coupling over the stem through the top of the bracket. You are now ready to mount the actuator of your choice.



**UNION NUT CONNECTIONS:** Tighten union nuts with the valve in the OPEN position. It is mandatory to avoid the misalignment of the mating pipes, as this can cause excess stress on the valve, and can create a false “hand-tight” condition. With proper alignment, all union nut connections for ½-2” plastic valves should be “hand-tight”. For valves 2” and larger, a strap wrench or approved union-nut wrench may be used to tighten the nut 1/10<sup>th</sup> turn maximum past hand-tight.

**Climate conditions:** PVC valves (and pipe & fittings) are pressure rated at 73 deg F, and must be de-rated as operating temperatures increase. Normally, we are referring to the fluid passing through the system, but in this case, we are also talking about the exterior environment. Once plastic pipe, valves and fittings are in a box and / or down hole, away from direct sunlight, they will be closer to ambient, so they can function at their rated pressure.

PVC & CPVC Valves and piping components exposed to direct sunlight can reach temperatures of up to 140 deg F. PVC is fully de-rated for pressure at 140 deg, and can start to mal-form when pressurized. So these components may be damaged and unusable after reaching this rate of heat.

Avoid storing valves in direct sunlight or very hot areas.  
Avoid leaving valves exposed to sunlight in open trenches  
Allow valves, pipe and fittings to cool and settle before pressurizing them with water.  
These recommendations apply to any thermoplastic pipe, valves & fittings (PVC, or HDPE).