

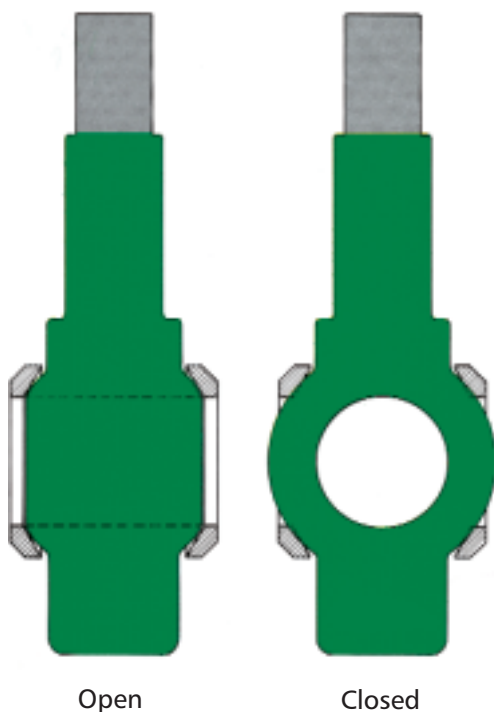
# New Generation of Plastic Lined Valve

The Cam-Line trunnion ball valve was designed to overcome problems inherent in conventional lined plug and ball valves. The design objective was to produce a lined quarter-turn valve with positive shut off at high and low pressures, a valve with a stem seal that seals, and a valve that is convenient and safe to operate.

Design innovation has resulted in the valve we proudly call the Cam-Line. The Cam-Line ball valve combines the proven, patented sealing technology of the Cam-Tite ball valve with a trunnion mounting. The result is tight shut off, reliable stem seal performance, and a dramatic torque reduction never before possible in a plastic lined quarter-turn valve.

The sealing mechanism begins as a sphere with a trunnion running through its vertical center. A waterway (port) passes through the center of the sphere. Around the edge of the waterway the spherical surface is cut away, forming a bevel that passes completely around the edge of the waterway. This is a very important feature of the design since it is the difference in the effective distance across the beveled surfaces and the distance across the spherical surface that actually energizes the seat when the valve is closed.

When the valve is open the seats rest against the beveled surfaces. Sealing takes place during closure of the valve when the spherical surface of the ball engages the seats.



Sealing is the result of designed seat compression, not the result of pressure or of crushing components together. The resultant seal is positive at both high and low pressures. And, since load on the seats is minimized when the valve is in the open position, cold flow of the seat material is dramatically reduced, prolonging seat life. With the sealing load on the seats controlled by the geometry of the components (not external adjustments as in lined plug valves), the Cam-Line is a safe and convenient valve to operate. A 6" Cam-Line requires less than 1,250 inch pounds to operate. No gears or cheaters required here!

An important consideration when using plastics in valves is the dimensional stability of the plastic elements. Reliable performance is dependent upon maintaining design dimensions. The objective is to get two or more components to meet each other so that nothing can get by them. Dimensional stability of the lining in the seal area is thus of prime importance. Conventional plug and ball valves place high loads on the plastic linings to get a seal, but often at the expense of valve life and operating ease.

To maximize valve life, the Cam-Line ball valve uses a trunnion not only to support and center the ball, but also as a method to distribute excess hydraulic load into the valve body in non-critical areas, rather than through the seating area. Result? The Cam-Line performs better and longer, even in thermal cycling applications.

The trunnion also aids the stem seal at the top of the valve. The long trunnion shaft reduces the effects of lateral loading found in conventional ball valves and when coupled with the low operating torques, produces a seal that proves a lined valve can have a good stem seal.

Design innovation didn't stop with the basic valve. The choice of plastics and plastic processes has a direct effect on performance. So we engineered those, too. Our unique glass reinforced RTFE seats, along with a high stability TEFZEL® thermoplastic lining, complete the package.

The Cam-Line® is an innovative design that gives:

- Positive Shut Off
- Reliable Stem Sealing
- Low Operating Torque
- Convenient and Safe Operation
- Long Service Life

And, to make it easy for you to use, the Cam Line® ball valve features ANSI 150# flanges with standard laying lengths and flange pad mounting.