

A Significant Advantage. . .

Sun's Floating Style Screw-in Cartridge

The floating style cartridge construction was pioneered by Sun Hydraulics and provides performance and reliability advantages compared to competitors' product offerings.

A significant advantage of the Sun cartridge is the free floating nose, allowing the close tolerance working parts to "float" in the body. This design significantly reduces the cartridge torque sensitivity and tendency of the internal moving parts to bind.

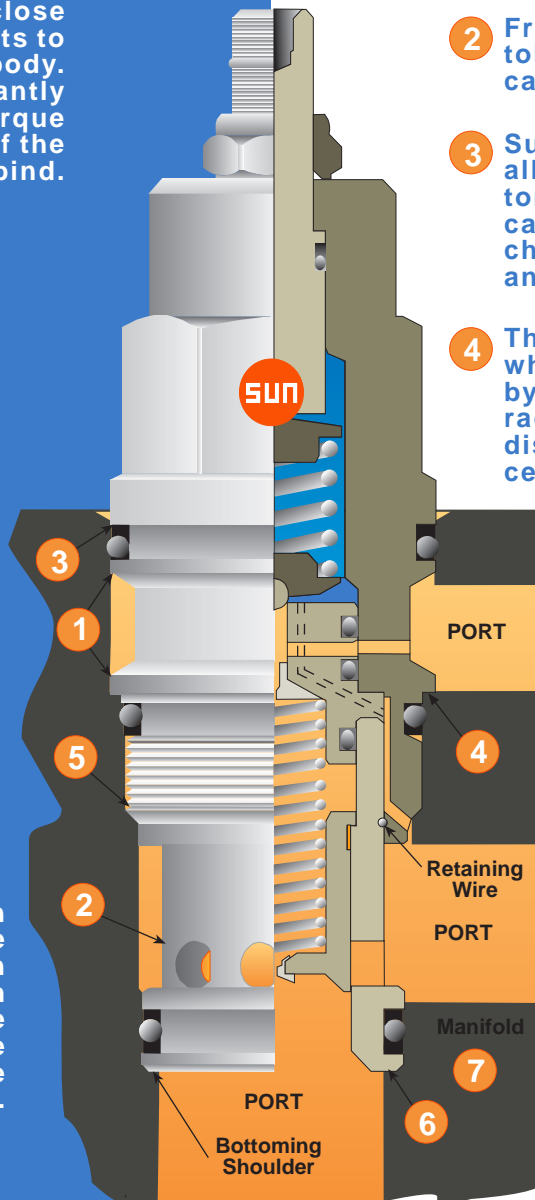
Cartridge valves can be removed from their cavities for cleaning or inspection without changing the setting or breaking any piping.

Sun cartridge valve internal components are heat treated for wear, impact, and fatigue resistance which extends the life of the cartridge.

Every Sun cartridge receives a functional hydraulic test prior to shipment.

The Sun cartridge valve design allows engineers to create systems that result in maximum flow and minimum pressure drop with the greatest efficiency in space and ease of cartridge installation.

In order to ensure valve reliability, the cavity for the cartridge must be considered. . .



- 1 The shoulder diameter at the threads provides a guide to ensure that the cartridge is centered in the cavity.
- 2 Free floating subassembly tolerates eccentricity between cavity and cartridge nose.
- 3 Sun floating cartridge design allows much higher installation torque, resulting in better cartridge retention and less chance of cartridge loosening and leaking during operation.
- 4 The flat shoulder provides a stop which supports the load generated by the thread without inducing radial load, causing cartridge distortion. Squareness with the centerline can be readily maintained.
- 5 For a given thread size, the central thread position results in maximum flow capacity, minimizes the effect of eccentricity, and distributes thread loads deep in the manifold.
- 6 The stop in the bottom of the cavity supports the free floating subassembly during operation; retaining wire is used only during assembly.
- 7 Sun porting consistency allows maximum design flexibility and minimizes manifold tooling requirements.

Sun cartridges are forgiving of cavity manufacturing variances to allow maximum valve performance and guarantee valve-to-valve repeatability.