# Flowserve Anchor/Darling™ Double Disc Gate Valve

## Design Enhancements

Flowserve has enhanced the design of its size 2½ and larger Double Disc gate valves to isolate the actuator torque loads from the valve internals (disc pack) to improve its reliable operation and sealing capabilities. The redesign utilizes a slotted stem to transfer the actuation torques to the anti-rotation collar and valve yoke, thus eliminating the torsional loads on the valve disc pack and valve seating surfaces. (See Figure 1.)

The valve internals have also been redesigned to change the stem-to-upper wedge connection from threaded and pinned to a T-Head design. Disc retainers are now assembled to the upper wedge using fasteners. There is no wedge pin involved with this assembly. (See Figure 2.)

## Features of Design Enhancement

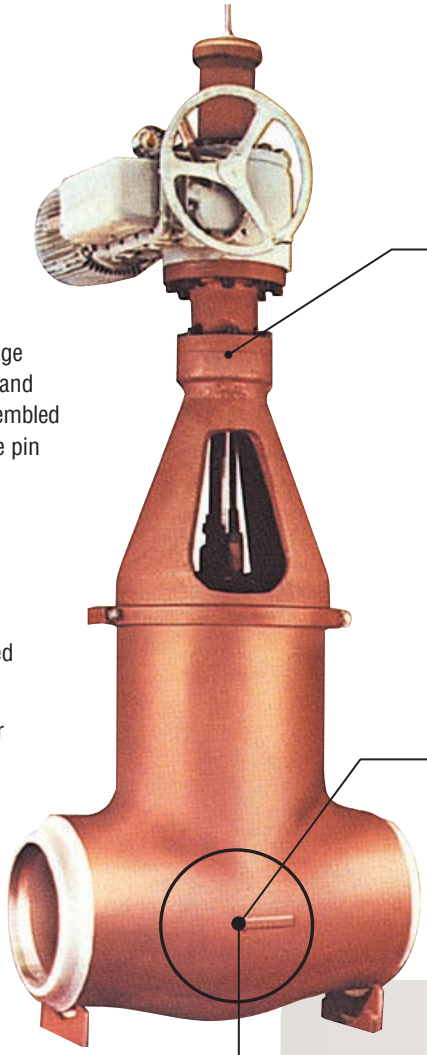
- Actuation torques are eliminated from the valve internals (Disc Pack)
- Stem / Upper Wedge interface is no longer threaded
- Wedge Pin eliminated

Benefiting from the addition of an anti-rotational collar to the top of the valve yoke, the actuation torques are absorbed by the yoke and not the valve internals. The new components and their designs have been analyzed and extensively tested. They also have been proven trouble-free in other Flowserve valve designs.

Installed valves of sizes 2½ and larger may be modified to incorporate these design enhancements. Modification kits include new disc packs (discs, upper and lower wedges, disc retainers and fasteners), stem, yoke, anti-rotation flange, gasket, packing, and installation instructions (including disc pack fit-up for the installed valve). Where appropriate, updated design reports, seismic reports and/or weak-link analysis reports will also be included with the modifications.

New Double Disc gate valve assemblies incorporating the redesign are also available.

For more details on this upgrade and how it can improve the performance of your installed Anchor/Darling Double Disc gate valve, contact your Flowserve-Raleigh sales engineer directly or Flowserve Raleigh at 1-800-225-6989.



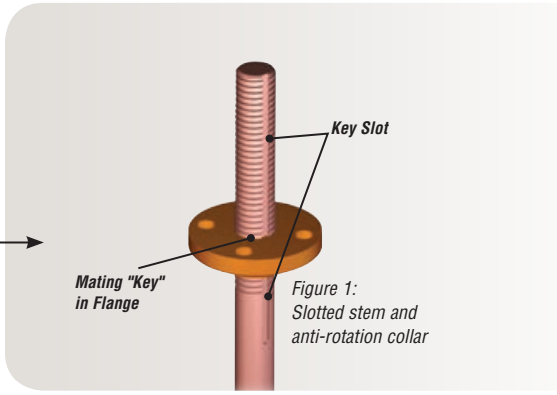



Figure 1: Slotted stem and anti-rotation collar

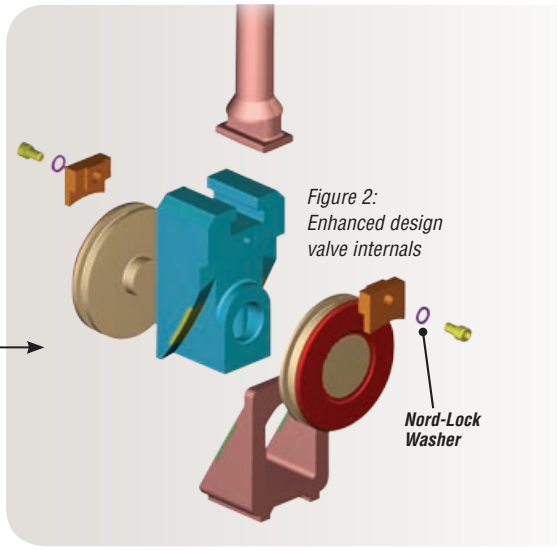



Figure 2: Enhanced design valve internals

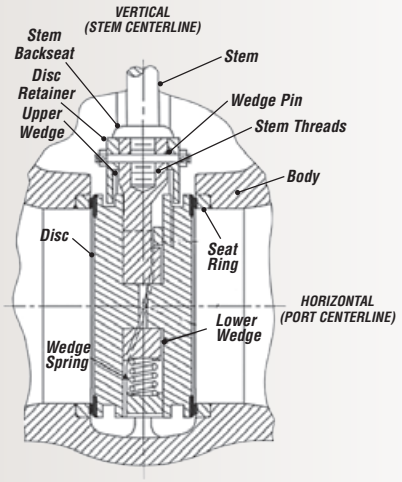



Figure 3: Original valve internals