

ValvTechnologies' V Series Bi-directional Valves



1 - 36"

Cut Sheet

DESIGN FEATURES

Bi-directional sealing. ValvTechnologies' V Series standard valves with bore sizes 1.06" and greater can be provided with bi-directional sealing capability. This is accomplished by adding a Grafoil® seat seal and a metal segment ring in the upstream seat pocket. The upstream face of the ball and the upstream seat are then mated to provide exceptional area contact for a tight seal. Bi-directional valves are zero-leakage in the preferred installation direction (flow toward the integral seat with the upstream seat on the higher pressure end) and ANSI Class V leakage or better in the opposite direction. One hundred percent of our bi-directional valves are factory leak tested in both directions before shipping. As a standard design feature for all V Series valves, the seat spring is fully protected from damage or deformation in the event of severe back pressure in the system.

Integral metal seat. With ValvTechnologies' trademarked HVOF RiTech® coating process, the integral seat in ValvTechnologies' V Series valves are resistant from the attack of abrasive magnetite or ferrous oxides in steam or contaminated feedwater flow.

Body seal ring. ValvTechnologies employs a field proven seal ring technology to ensure sealing under operating conditions up to 1500°F. The body seal ring is loaded at a pressure higher than 20,000 psi. In addition, valves 3" and larger contain a secondary Grafoil® seal to further guarantee reliability.

Patented coating process. The sealing surfaces are overlaid with tungsten or chromium carbide using our HVOF RiTech® coating process. These surfaces have a hardness of 68 - 72 Rc to provide uninterrupted operation in the most severe conditions.

Live-loaded gland area. The V Series' sealing design features a four stud, live-loaded assembly designed for heavy industrial applications. The sealing material is high purity Grafoil® surrounded by stainless steel wire mesh anti-extrusion rings. The six Belleville springs (per stud) provide constant load pressure through extreme thermal shocks and prevent wear leaks in high-cycle service.

True blow-out proof stem. ValvTechnologies' design utilizes a one-piece, hard-faced, blow-out proof stem that is inserted through the inside of the body cavity eliminating the possibility of blow-out through the gland area.



Attemperator spray block bi-directional valves operating maintenance-free for over five years



Installation of ValvTechnologies' high-pressure bi-directional valve

Absolute zero-leakage. ValvTechnologies tests every valve according to ANSI procedures, however, we toughen the standard and define zero-leakage as no detectable leakage of gas or a liquid for a period of three minutes or greater. The ValvTechnologies' standard is zero drops and zero bubbles in the preferred installation direction, guaranteed.

