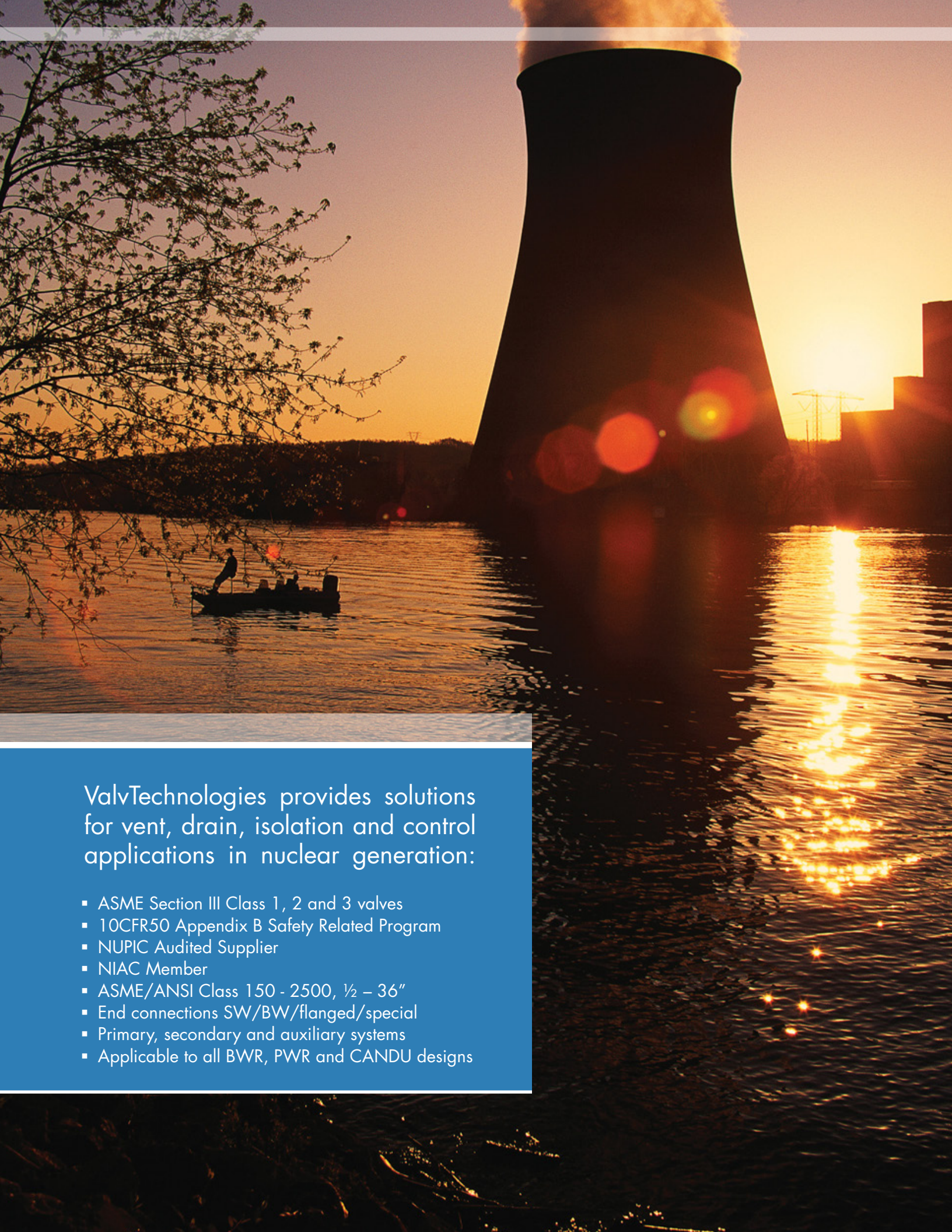


Valves for Nuclear Power

Zero-Leakage Valve Solutions





ValvTechnologies provides solutions for vent, drain, isolation and control applications in nuclear generation:

- ASME Section III Class 1, 2 and 3 valves
- 10CFR50 Appendix B Safety Related Program
- NUPIC Audited Supplier
- NIAC Member
- ASME/ANSI Class 150 - 2500, ½ – 36"
- End connections SW/BW/flanged/special
- Primary, secondary and auxiliary systems
- Applicable to all BWR, PWR and CANDU designs

What is Zero-Leakage?

ValvTechnologies defines zero-leakage as no detectable leakage of gas or a liquid for a period of three minutes or greater. The valve must not leak after multiple cycles and must exhibit zero-leakage at various pressure conditions — from vacuum to full-rated pressure.

More traditional valve manufacturers have published acceptable leakage rates, even when brand new. At ValvTechnologies, we will not ship a valve unless it shuts off completely. We test every valve made according to ASME/ANSI standards (MSS SP-61, ANSI Class V), then we toughen the standard to 100% shut-off (zero bubbles) and attach our signed and witnessed test report to every valve we ship. With this kind of quality control, ValvTechnologies' valves improve plant performance, last longer and reduce maintenance and operation costs.

Zero leakage =
true cost savings

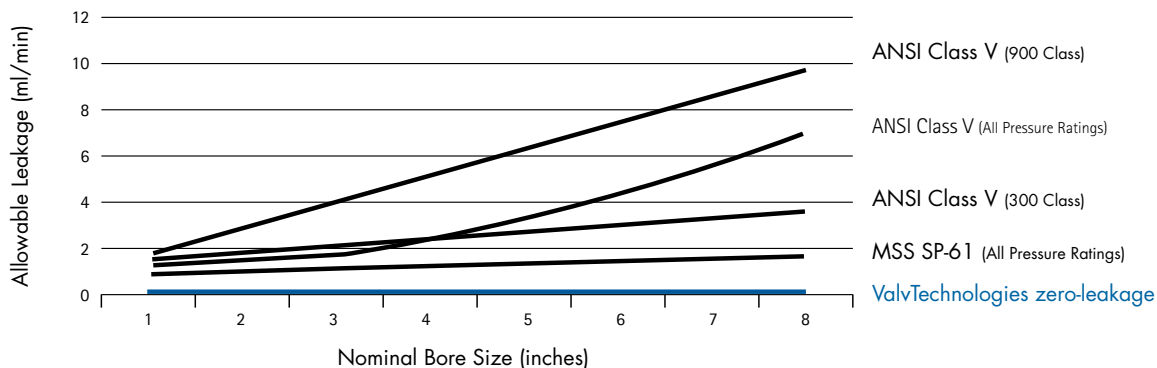
Long-term reliability

Reduce valve maintenance

Improve heat rate

Saves energy, time and money

Allowable Leakage



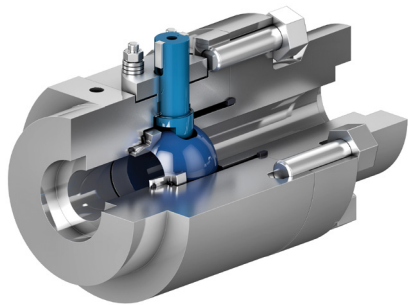
Four-Year, Zero-Leakage. Guaranteed.

All ValvTechnologies' valves manufactured for the nuclear industry are stringently tested to meet the zero-leakage testing criteria and are backed by a four-year, zero-leakage guarantee. In addition, every valve we manufacture for nuclear generation comes with extensive documentation and full materials traceability which include:

- CMTR – certified materials test report
- Certificate of compliance
- Valve test report
- Design report
- Drawings

Zero-Leakage Valve Solutions.

V1 - Product Line



Forged and cast ball valves.
Four-year, zero-leakage guarantee.

- ASME/ANSI Class 150 - 2500
- 1/2" – 36"
- Integral seat design
- Hard coated seat and ball with HVOF RiTech® or equivalent coating - Rc 70
- Blow-out proof stem
- Live-loaded packing

ValvTechnologies' Ball Valve Specification

Body design

- Should be split body, in-line repairable

Seats

- The downstream, main sealing seat is integral to the end cap
- High velocity oxygen fuel HVOF RiTech® overlay or equivalent
- The Rc hardness of the seat must be a minimum of 68 at service temperature

Ball

- 410 SS with HVOF RiTech® overlay or equivalent
- The Rc hardness of the ball must be a minimum of 68 at service temperature

Stem

- The stem should be true blow-out proof, no pins or pinned stem designs acceptable
- Material A638, grade 660 or equivalent
- The Rc hard facing must be a minimum of 68 at service temperature

Fasteners

- Must conform to B16.34 1988 and ASME Section VIII stress values

Packing

- Live-loaded design, containing a four stud and six Belleville® washer configuration



Globe type valves often develop dangerous leak paths due to their torque seated design. Their linear operation requires an operator to seat the plug by exterior force, often repetitively as the flow stream can cause the valve to become unseated.

IsoTech®

Seat protected isolation solution
Four-year, zero-leakage guarantee.

- ASME/ANSI Class 300 - 2500
- 6" – 36"
- Position seated easily automated
- In-line repairable
- Hard coated trim with HVOF RiTech® or equivalent coating - Rc 70



ValvTechnologies provides
field-proven solutions for
the nuclear industry.

ValvTechnologies' IsoTech® Valve Specification

Allowable leakage rates

- Must exceed FCI 70-2 Class V and VI and B16.34 1988; the leakage criteria to be zero bubbles and drops over a three minute period on all tests

Stem

- The stem should be a tee slot design, no threads to hanger, HVOF RiTech® coated and polished

Seats and guides

- The seats and guides are integral to the valve body
- HVOF RiTech® overlay or equivalent
- Protected seats in the open position, the flow through-conduit positioned precisely between the seats, eliminating turbulence and flow impingement on the seats

Discs/gates

- Tee slot configuration no threaded hanger, parallel in the range of travel, fully open and in the closed position
- HVOF RiTech® overlay or equivalent

Packing

- Live-loaded design, four stud and six Belleville® washer configuration

ERV - Power Operated Relief Valve



Electronic Relief Valve.
Protection of Safety Valves.

- ASME/ANSI Class 150 - 2500
- 1/2" – 12"
- ASME capacity certified
- Integral isolation valve available
- Easily adapted to existing controls
- Four-year, zero-leakage guarantee



Xactrol®

Characterized Trim.
Leak-free Isolation and Control in One.

- ASME/ANSI Class 150 - 2500
- 1/2" – 36"
- Integral, characterized downstream seat
- Upstream disc Inserts for modulation



3/8" Bore V1-1

Four-year, Zero-leakage warranty.
Small, Compact Size and Low Weight.

The 3/8" bore valve has all the benefits of the larger sizes but has a greatly reduced weight and size which allows customers to benefit from this reliable solution.

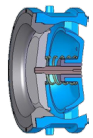
Non-slam Axial Check Valves by DFT, Inc.

Axial check valves for nuclear applications and licensed manufacturer of ASME Section III and Safety Related check valves

ASME/ANSI Class 150 - 2500
1/4" - 24"

Designed to prevent "water hammer"

The spring-assisted, in-line design featured in all DFT® check valves ensures that as the forward flow in a pipeline decreases, the disc begins moving closer to the seat. By the time the flow stops, the disc is closed against the seat preventing flow reversal. This prevents the valve from slamming closed causing "water hammer" and the resultant noise and damage to piping system.



ALC® (ASME/ANSI Class 150 - 300)

The ALC® is an in-line, spring assisted, single guided "wafer" check valve designed to prevent "water hammer" and "reverse" flow. The lightweight compact design fits between mating flanges and meets API 594 face-to-face dimensions.



Basic-Check (450 - 6000 CWP)

The DFT® basic check valve is a versatile all-purpose, spring-assisted, in-line check valve that provides reliable, low maintenance service for a wide range of liquids and gases at various pressure and temperature combinations.



Excalibur® (ASME/ANSI Class 150 - 1500)

Excalibur® check valves are available in a wide range of sizes and pressure ratings and in a variety of metals to meet most check valve requirements.



GLC® (ASME/ANSI Class 150 - 2500)

The GLC® silent check valve consists of a body, seat, spring, disc with stem and guide bushing. The DFT® GLC® check valve has the advantage of minimum pressure loss with silent, non-slam operation.



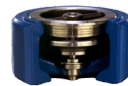
PDC® (ASME/ANSI Class 150 - 1500)

The DFT® Model PDC® silent check valve is specially designed for use on the discharge side of reciprocating air or gas compressors. It includes a pulse damping chamber to maintain the disc in the open position during the momentary reductions in flow associated with each cycle of a reciprocating compressor.



SCV® (750 - 3600 CWP)

The DFT® Model SCV® is a corrosion resistant, dependable, versatile and economical spring-assisted, in-line check valve for a wide range of applications.



WLC® (ASME/ANSI Class 150 - 2500)

The WLC® "wafer" style silent check valve is a lightweight, spring-assisted, center guided, in-line check valve. The joint between the seat ring and body is sealed by the flange gasket upon installation preventing any leakage through the joint when the valve is in service.

DFT[®] INC
Nuclear Check Valves

Valves for Nuclear Power



Worldwide Office Locations

Headquarters & Manufacturing
ValvTechnologies, Inc.
5904 Bingle Road
Houston, Texas 77092 U.S.A.
Telephone +1 713 860 0400
Fax +1 713 860 0499
info@valv.com

To locate a distributor or satellite
office near you, visit us online at:
www.valv.com.

To contact sales anywhere in the
world, email sales@valv.com.

Australia
australia@valv.com

Brazil
brazil@valv.com

Canada
canada@valv.com

China
china@valv.com

Colombia
colombia@valv.com

Eastern Europe
poland@valv.com

India
india@valv.com

Japan
japan@valv.com

Korea
korea@valv.com

Malaysia
malaysia@valv.com

Middle East
middle.east@valv.com

Peru
peru@valv.com

Singapore
singapore@valv.com

Spain
spain@valv.com

United Kingdom
europe@valv.com

