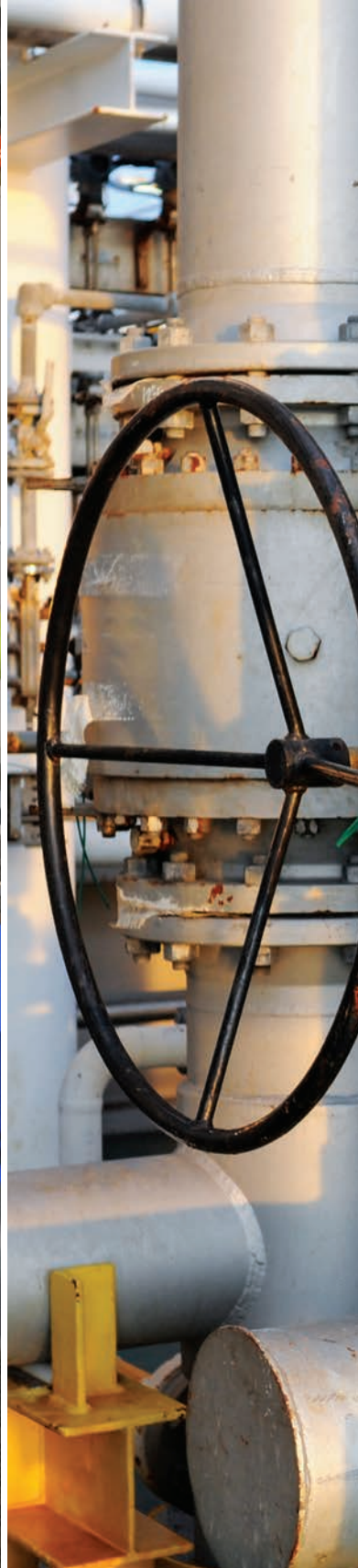
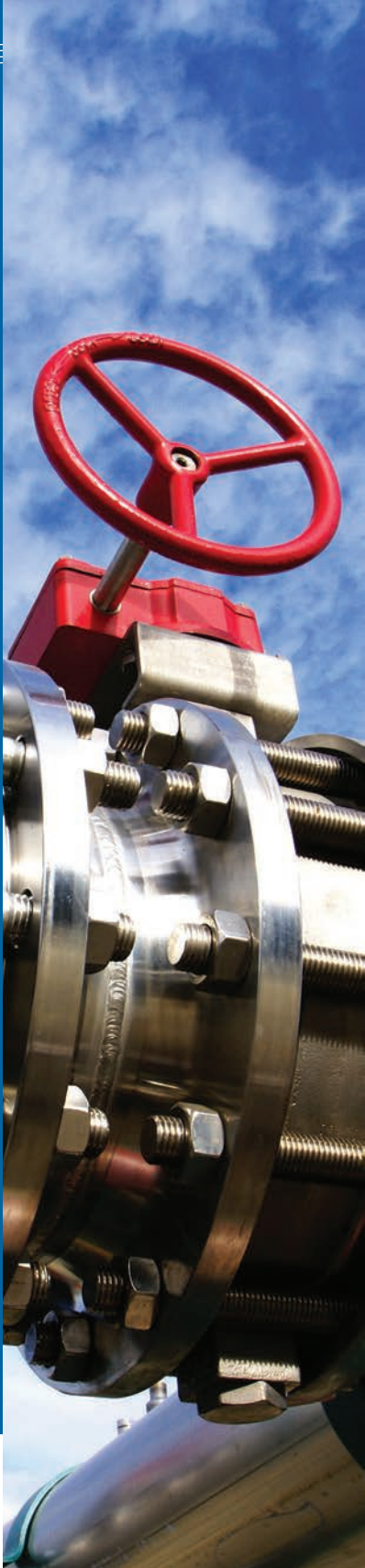


Valve Products and Services





About ValvTechnologies Europe

ValvTechnologies Europe commenced trading in 1990 offering Valve Shutdown and Repair Services to the power generation and process industries.

We service all valves including control valves, safety relief valves, parallel slide gate valves and manual valves. Our size and flexibility enable us to deal with any customer need from a single emergency valve repair to a pre-planned full site overhaul. Driven by continuous improvement, we thrive on solving problems for our customers.

In 2006 ValvTechnologies Europe was acquired by ValvTechnologies, Inc. of Houston Texas and as a wholly owned subsidiary now offers after sales support services to ValvTechnologies product sales throughout Europe. In addition ValvTechnologies Europe is a major stock holder of ValvTechnologies' valves and after sales parts.

In 2015 ValvTechnologies Europe Group plc. began doing business as ValvTechnologies Europe.

To find out more about the products and services visit our website at www.valvEurope.com

About ValvTechnologies

Founded in 1987 and headquartered in Houston, Texas, ValvTechnologies is the leading manufacturer of zero-leakage, severe service isolation valve solutions. Employing more than 500 people worldwide, our offices are located in the United Kingdom, Mainland Europe, China, Middle East, India, Australia and South America.

In addition, ValvTechnologies partners with stocking distributors and independent representatives to service customers around the world.

To find out more about the products and services offered or to locate a representative, visit our website at www.valv.com

Industries

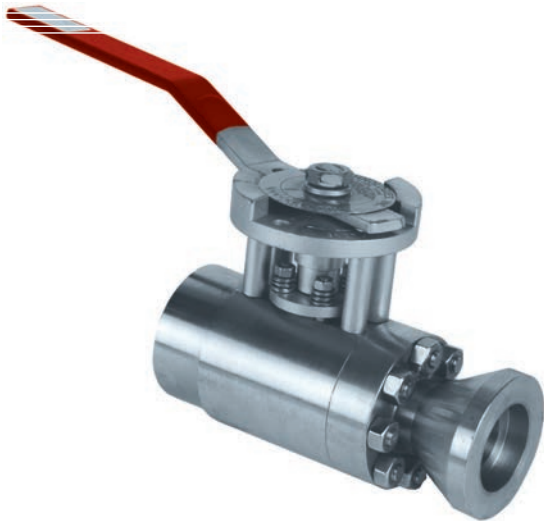
ValvTechnologies Europe's customer base is diverse, because we are flexible to support the differing requirements of specific industries.

Whilst we hold term contracts with major power plant operators and process industry leaders, we are active in any industry which utilizes fluid flow.

- Oil & gas
- Power
- Process industries
- Petrochemical
- Manufacturing
- Automotive
- Marine
- Local authority
- NHS
- Pharmaceutical
- First tier M&E
- Utilities
- Energy from waste



Products



Specializing in severe service applications, ValvTechnologies' valves are supplied with up to four years zero leakage warranty for power applications. ValvTechnologies Europe holds Europe's largest stock of ValvTechnologies' valves, which are available with 24 hour turnaround. ValvTechnologies Europe is also the only approved service and aftersales provider for ValvTechnologies' products in Europe.

V Series Valves

Longer service life means reliable maintenance-free operation and a four year leakage warranty for power industry applications. This is just the start of what you get with ValvTechnologies' seat-supported severe service metal-seated ball valves. The V Series' proven seat design provides improved performance, far beyond the capability of linear operated valves which feature obstructed and torturous flow paths. V1's are engineered to be leak-free, maximizing flow and reducing the overall cost of ownership. Our design and construction deliver the extra safety margin so crucial to maintaining productivity.

V1-1

Forged, High Pressure Valves.
Four Year, Zero-Leakage Guarantee.

- ANSI/ASME Class 900 - 4500
- 1/4" – 4"

V1-2

Flanged, Low Pressure Valves.
Four Year, Zero-Leakage Guarantee.

- ANSI/ASME Class 150 - 600
- 1/2" – 36"

V1-3

Small Bore, Low Pressure, Investment Cast Valves.

- Four Year, Zero-Leakage Guarantee.
 - ANSI/ASME Class 150 - 600
- 1/2" – 2"

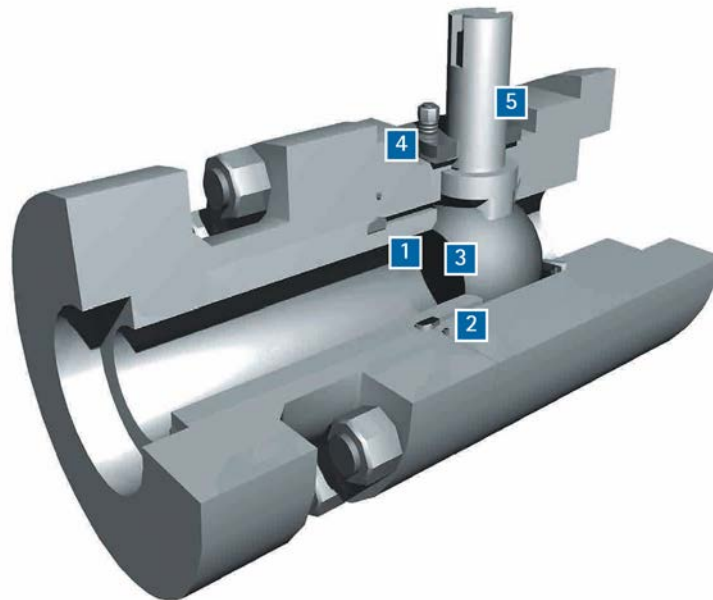
V1-4

Large Bore, High Pressure Valves.
Four Year, Zero-Leakage Guarantee.

- ANSI/ASME Class 900 - 4500
- 4" – 36"

V Series

The Flagship of the ValvTechnologies Product Line.



The ValvTechnologies' design features are the implementation of extensive industry experience.

1 Integral Metal Seat.

With our patented HVOF RiTech™ coating technology, the integral seat in ValvTechnologies' valves is resistant to the attack of abrasive magnetite and ferrous oxides that may be seen in the steam flow.

2 Body Seal Ring.

ValvTechnologies employs a field proven seal ring technology to ensure sealing under all operating conditions, up to 1400° F. The body seal ring is loaded at a pressure higher than 20,000 psi. In addition, valves sized 3" and above contain a secondary Grafoil® seal to further guarantee reliability.

3 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.

4 Live Loaded Gland Area.

The V1 Series gland packing design features a four stud, live-loaded assembly designed for heavy industrial applications. The packing material is high purity Grafoil® surrounded by Carbon Fiber / Inconel anti-extrusion rings. The six Bellville springs (per stud) provide constant load pressure through extreme thermal shocks and prevent wear leaks in high cycle service.

5 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. There are no pins, collars or other devices used to retain the stem in the valve body.

ERV

Electronic Relief Valve.

For Protection of Conventional Safety Relief Valves.

ValvTechnologies' Electronic Relief Valve (ERV) fulfills the need for a zero-leakage, pilot-operated relief valve. The ERV package combines ValvTechnologies' zero-leakage isolation valve with electronic controls to monitor and regulate system pressure. Whether in a capacity relieving function requiring the ASME V-Stamp or simply an over-pressure protection application, the ERV provides reliable protection for standard safety valves in many industries. ValvTechnologies can also provide an integral isolation valve, eliminating the need for costly field welding.

- ANSI/ASME Class 150 - 4500
- 1/2" - 12"
- ANSI/ASME Sec. I, V-Stamp Capacity Certified
- Integral isolation valve available
- Easily adapted to existing controls
- Four year, zero-leakage guarantee

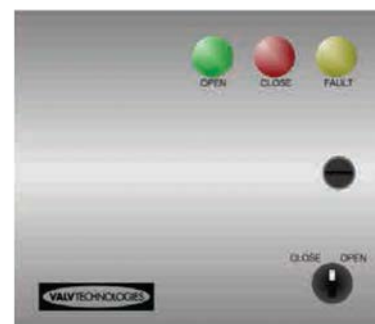


ERV Control Box

Control Box for ValvTechnologies ERV.

ValvTechnologies' new light-weight compact control box operates in much the same way as the old but integrates many improvements including better environmental performance, simplified wiring and control, set point programmability and fault indication.

- Enclosure: NEMA 4X, stainless steel
- Auto/Manual Function: Automatic + DCS Auto
- DCS Function: Dry contact
- Fault indication: Yellow LED
- Pressure transmitter: 4-20mA
- Calibrated by PLC interface



Isotech®

Parallel Slide Gate.

Bi-directional, Zero-Leakage Isolation.

ValvTechnologies' Isotech® valve addresses the need for true in-line valve repairability in large diameter, high energy piping systems. Specifically designed for steam and feedwater applications, the Isotech® provides bi-directional, zero-leakage using the HVOF RiTech™ coating system.

- ANSI/ASME Class 300 - 4500
- 4" - 36"
- Position seated easily automated
- In-line repairable
- Four year, zero-leakage guarantee



Xactrol®

Characterized Trim.

Leak Free Isolation and Control in One.

The Xactrol® product group unites ValvTechnologies' zero-leakage technology with special designs that allow rotary modulating control. From the Mark I's design that features a characterized upstream seat to the Mark III's precision engineered stacked disks, the XACTROL® allows the customer to combine precise flow control with tight shut-off. The XACTROL® is typically used in applications where minimum flow and relatively high differential pressures are required.

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



Trunnion Ball Valves

The Next Generation in Trunnion Technology.

The Nextech® trunnion design provides a severe service solution for tough, high cycling applications.

Nextech® "R" Series

Low Pressure Trunnion. Low Torque, Bi-directional Shut-off.

The Nextech® "R" Series (regular series) valves are a low-cost valve ready for immediate delivery. Engineered with the same quality standards of all ValvTechnologies' products, the Nextech® "R" Series valve has been produced to lower costs and is stocked and ready to ship. While the "R" Series is our base stock model, there is nothing basic about its design and performance. This valve represents the state-of-the-art in severe service metal seated ball valve technology.

- ANSI/ASME Class 300 - 600, 2" - 6"
- ANSI/ASME Class 300, 8"
- Low pressure, trunnion-mounted



Nextech® "E" Series

High Pressure Trunnion. Block & Bleed, Bi-directional Shut-off.

The Nextech® "E" Series (enhanced series) represents a true, engineered-to-spec specialty valve with materials selected to meet the needs of the most demanding applications. These valves are designed and configured to handle corrosive, high temperature and high solids applications requiring tight shut-off.

- 2" - 24"
- ANSI/ASME 300 - 900

The Truntech® trunnion design provides long life in abrasive and erosive conditions.

Truntech®

Designed to API-6D and API-6A.

ValvTechnologies' Truntech™ is designed to address the severe service demands of the upstream and mid-stream oil and gas industries. Its protected seat seals design provides long life and tight shut-off in abrasive / erosive conditions and meets stringent fugitive emission requirements.



- ANSI/ASME Class 150 - 2500
- API 5000 - 15000
- Sized per API 6A and 6D

Isolation Valves for Coking Service

The delayed coker process is one of the most hostile environments in the refinery due to the abrasive and erosive properties of the coke by-product and crucial to a refinery's profitability. Valves are cycled frequently and failure can lead to the complete shutdown of a unit, resulting in large process and financial costs. Optimizing valve life-cycle is critical to operational efficiency.

Coking Valves

Avoid Unscheduled Downtime and Lost Production.

The ValvTechnologies' isolation valve for coking services provides process improvements and reliability through turn-arounds. The simple, yet wear and erosion-resistant, design ensures reduced maintenance time and costs for customers in these severe service applications.

- ANSI/ASME Class 300 - 1500
- 1" - 36"



Switch Valves

Delayed Coker Service Solution. Mechanically-Loaded Design that Eliminates Steam Bellows.

Improve reliability, decrease unscheduled downtime and production losses with ValvTechnologies' switch valve. Enjoy a decade or more between major maintenance requirements and peace-of-mind through tight shut-off with preventative maintenance continuous purge systems.

- ANSI/ASME 900 with 600 connections
- 8" - 18"



Specialty Valve & Actuator Solutions

Four-year guarantee on valve and actuator automation packages.

Available for quick delivery.

ValvXpress®

Quality and Dependability in One Package – Guaranteed.

ValvXpress™ – for customers who demand quick delivery of a zero-leakage automated valve solution for severe service water and steam applications. The package includes the superior quality of the V1-1 valve and ValvTechnologies' actuator, backed with the best four-year guarantee in the industry. ValvXpress™ pre-engineered, automated packages are compact, robust and ready to ship.

Pre-engineered package includes:

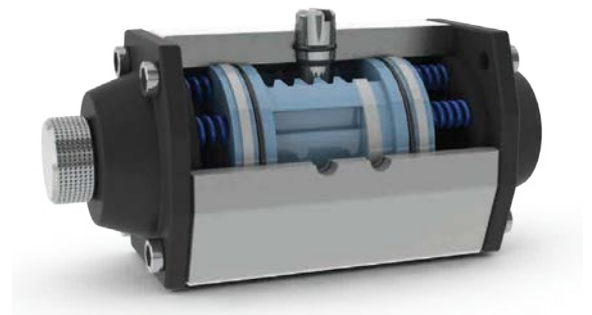
- 1/2" thru 4" metal-seated V1-1 ball valve
- Socket weld and butt weld end connections
- A105, F22, F91 body materials
- 2500# and 4500# pressure classes
- Valve operating conditions to 1400°F (760°C)
- High-cycle pneumatic rack and pinion actuator
- High-cycle mounting hardware
- Limit switch with position indicator – 2-SPDT, quick set cam, IP67, NEMA 4/4X
- NAMUR solenoid – 110V/120V, 230V, 24VDC coils
- Filter/regulator with gauge
- Retainer prevents stem driving into ball



ValvXpress® Actuator

The actuators utilize a rack and pinion design which provides constant torque output in a compact package. The torque output is proportional to the air supply pressure. Twin horizontally opposed cylinders incorporate piston guides to ensure engagement between the rack and pinion. Double acting and spring return models are of comparable compact design.

- Hard anodized body with high-temperature Viton® seals
- Maximum working pressure 142 psi / 10 bar
- Maximum working temperature 320oF / 160oC





ValvPerformance Testing® Innovative Cycle Isolation Measurement

Cycle isolation eliminates energy losses attributable to poorly performing or leaking steam, water cycle isolation valves.

ValvTechnologies encourages end users to apply the principles of asset management to their installed valve population. The ValvTechnologies ValvPerformance Testing™ program, or cycle isolation measurement, utilizes next generation acoustic monitoring instruments to help customers monitor valve performance. These tools allow predictive and preventative maintenance programs to be fine tuned for very large or very small valve populations. Providing cycle isolation services can be as simple as performing a valve survey, or as comprehensive as the management of all valve work during your next outage – from erecting scaffolds to repairing, installing, welding and stress relieving.

ValvTechnologies' Program Highlights:

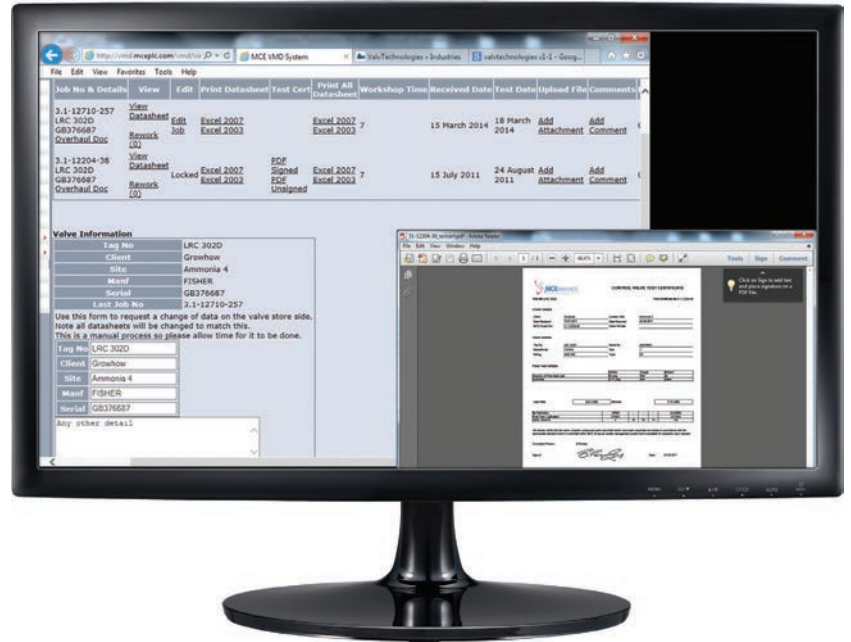
- 1-4% in plant system efficiency increase
- Best-in-class valve leakage diagnostics
- Predictive maintenance savings vs. scheduled maintenance activities
- Overall reduction in maintenance costs
- Target only high-value, fast-payback repairs and replacements
- Ease of execution
- Fast results with minimum effort
- Non-intrusive to plant operations

Most plants will see a thermal efficiency (heat rate) system improvement of 1-4%.

Valve Management Database (VMD)

All valves repaired and tested by ValvTechnologies Europe are uploaded onto our VMD.

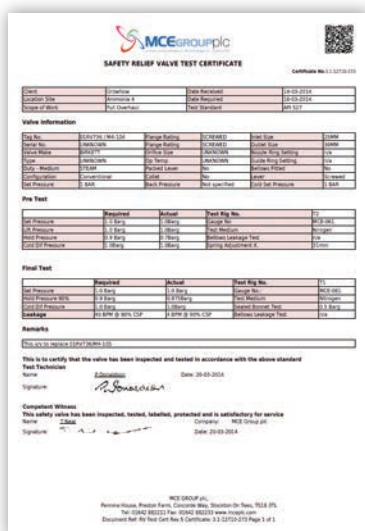
This is a bespoke web based system which logs the maintenance and testing history of each valve. As valves progress through our workshop, their status is updated in real time.



As a customer of ValvTechnologies Europe you will receive a unique secure log-in which allows access to your valves.

The database can then be used to:

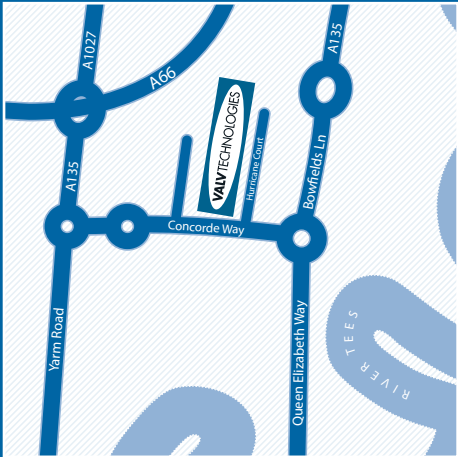
- Track the status of all valves in our workshop in real time
- Search maintenance history
- Download & print current & historic test reports
- Conduct database searches by component, spare part, date, serial number etc.
- Support the maintenance record requirements of Pressure Systems Safety Regulations 2000
- Using a unique QR code on the test certificate, access the VMD via a smart phone or tablet





Monitor, Consider, Execute.

Health & Safety is THE most important aspect to conducting operations. No compromise. ValvTechnologies Europe Group regards the promotion of health, safety and welfare measures as an essential objective for management and employees at all levels.



ValvTechnologies Europe

Pennine House
Hurricane Court
Concorde Way
Stockton-on-Tees
TS18 3TL

T | +44 (0) 1642 88 22 11
F | +44 (0) 1642 88 22 33
E | europe@valv.com
W | www.valvEurope.com

ValvTechnologies Europe is a trading name of MCE Group plc

