VALV TECHNOLOGIES

Xactrol®

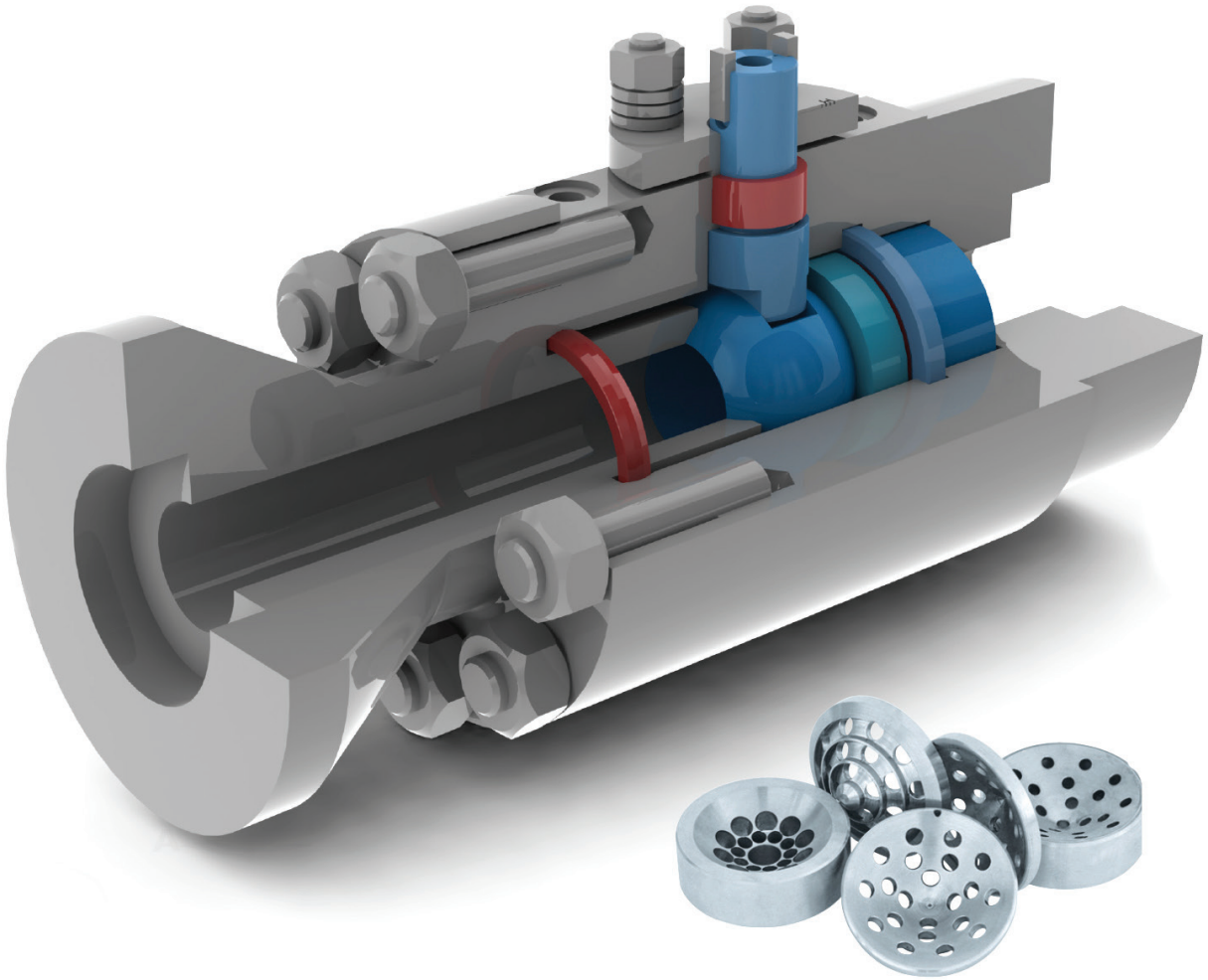
Control Valves

Xactrol® Control Valves

ValvTechnologies Xactrol® severe service control valves are engineered for applications where minimum flow and relatively high differential pressures are required. They provide an “exact” flow control solution every time, from minimum or normal control, to full rangeability across a wide range of pressure drops andconditions.

The Xactrol® product group unites ValvTechnologies’ zero-leakage technology with special designs that allow rotary modulating control. From the Mark I design that features a characterized upstream seat, to the Mark III’s precision engineered stacked discs, the Xactrol® allows the customer to combine precise flow control with tight shutoff.

- **1/2 - 36”**
- **ANSI/ASME 150-4500 Class**



Xactrol® - Engineered for precision.

Applications

ValvTechnologies' valves are built to withstand the most severe applications. High-pressure, high temperature, high-cycle, abrasive, corrosive and caustic media have all been considered in the design of our product line.

Fossil Fuel

- Continuous blowdown
- Boiler feed pump recirculating bypass
- Main steam start-up vent
- Cutting water isolation

Downstream & Chemical Processing

- Pump outlet flow control
- Tank level control valve

Mining & Minerals

- Makeup water control
- Dilution water control
- Process water isolation
- Process water control

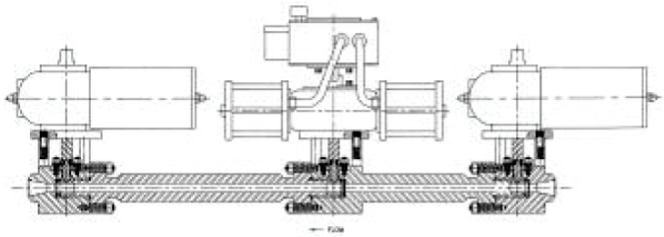
*partial application list

ValvTechnologies' designs include superior failure resistance and reliability.

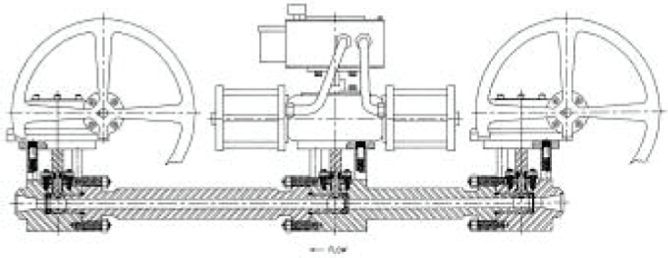
Available Designs

Mark I	Mark II	Mark III
1/2 - 36”, ANSI/ASME 150 - 4500	1/2 - 36”, ANSI/ASME 150 - 4500	1/2 - 36”, ANSI/ASME 150 - 4500
Designed for minimum/normal flow control conditions	Designed for minimum/normal flow control conditions	Designed for minimum/normal flow control condition
Variety of characterized upstream seats available	Variety of characterized upstream seats available	Variety of characterized upstream seats available
Engineered to meet your control needs	Engineered to meet your control needs	Engineered to meet your control needs
Zero-leakage	Zero-leakage	Zero-leakage
	Includes a second flow port designed to handle continuous minimum flow conditions	For applications requiring very high-pressure drops
		Includes a series of upstream pressure reducing plates
		For the most difficult control applications

Common Configurations



Tandem arrangement with automated conrols valves



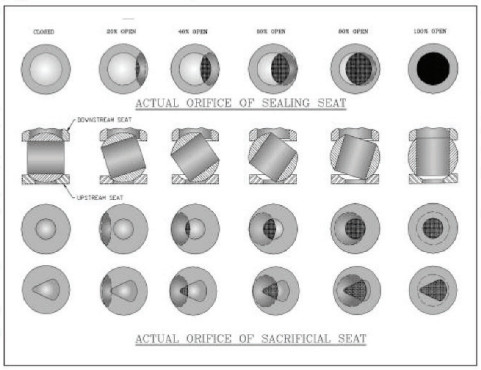
Tandem arrangement with automated conrols valves

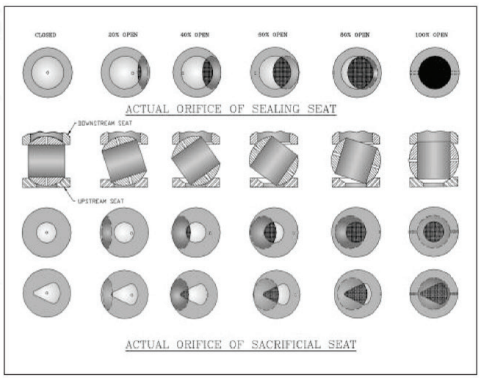
From simple minimum or normal flow control to full rangeability over a wide range of pressure drops and conditions, we have the solution for you.

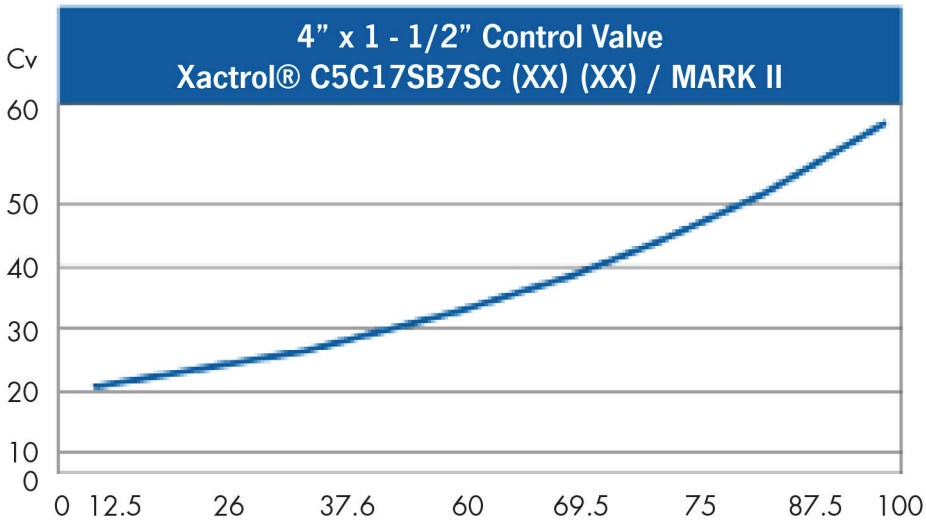
Our Xactrol® Mark I is designed for minimum or normal flow control conditions as is experienced in a large number of flow control applications. The Mark I comes with a variety of characterized upstream seats, which can be specifically engineered/designed to suit your control needs.

The next step is the Mark II (see page 3). In addition to the normal flow conditions, the Mark II has a second flow port through the ball which is designed to handle your continuous minimum flow conditions.

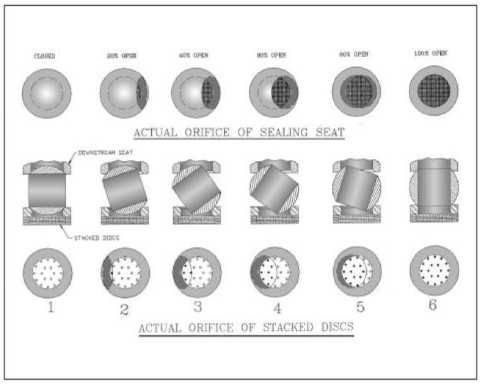
For applications where very high-pressure drops are required, we offer the Mark III (see page 3), which has a series of upstream pressure reducing plates. The plates will successfully reduce, stage by stage, the pressure in the system, which when combined with the full rangeability of control through the control ball and seat, will solve the toughest of control applications.







Each valve package will come complete with its own flow test curve to ensure complete reliability. The above graph is from an actual flow loop test as supplied to the customer.



Dynamics of a Mark III Xactrol® Control Valve

Upstream pressure reducing plates are stacked so maximum flow (pressure) travels through plate A (Fig. 3) then splits and pressure continues to be reduced as flow proceeds to follow tortuous 90° paths through succeeding holes in various stacked pressure reducing plates. See plates B, C & D (Fig. 3).

Multi-stage pressure reducing plates are positioned such that the diverging streams through the various plates actually collide with each other – greatly reducing their energy – before entering the next plate (Fig. 1).

Pressure reduction is at the upstream side of the valve, thus reducing the torque required to open and close the valve.Downstream sealing face is protected from flow, thus offering repeatable zero-leakage.

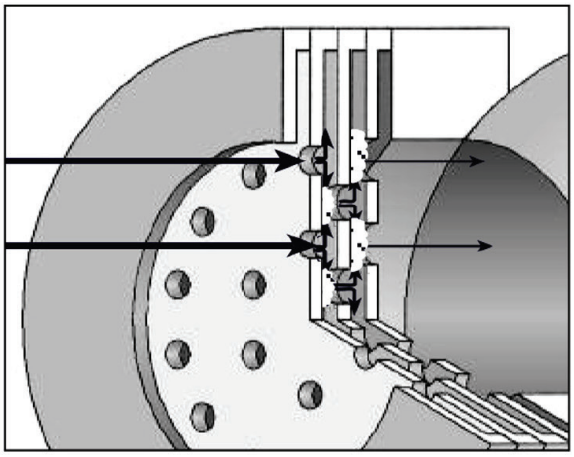


Figure 1

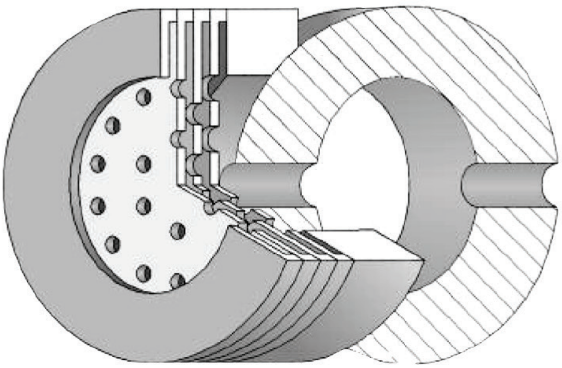


Figure 2

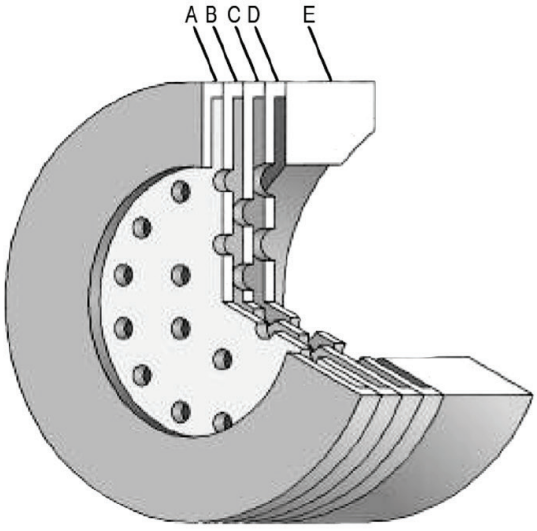


Figure 3

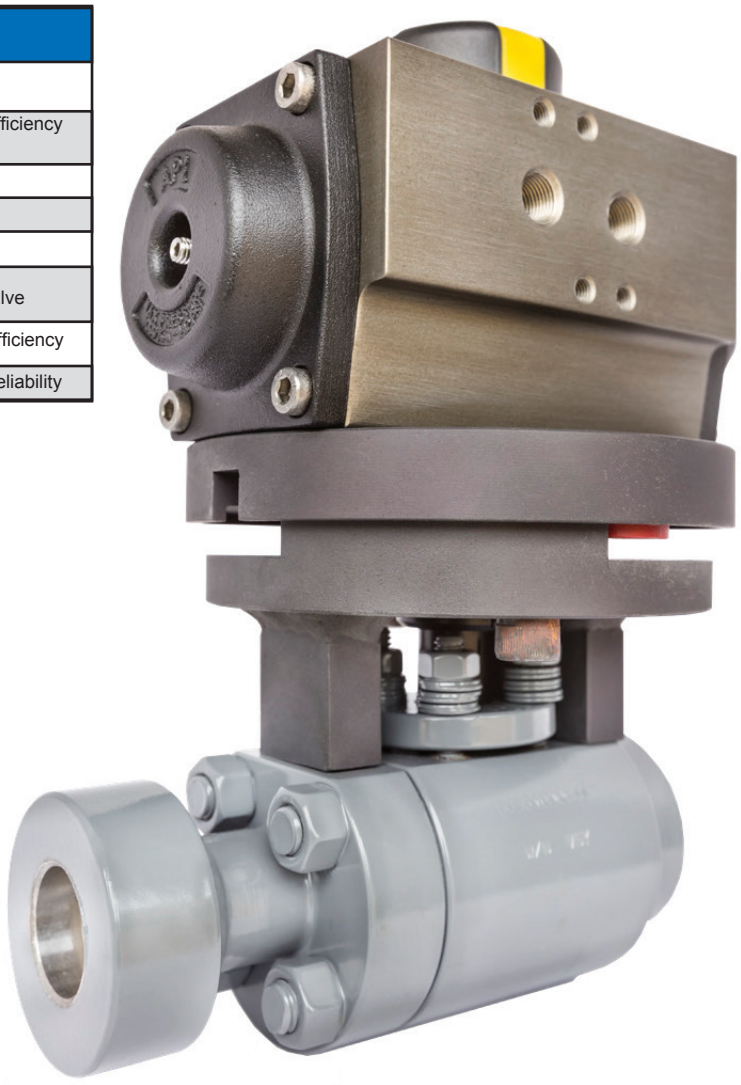
Precise flow control. Zero-leakage. All in a single unit.

The Benefits of an Xactrol® Solution

Xactrol® zero-leakage valves are the premier solution where isolation is required for critical and severe service control valve applications, providing increased safety and reliability, while reducing emissions, contributing to a cleaner environment.

ValvTechnologies is committed to excellence in the design, manufacturing, service and testing of its Xactrol® severe service control valves, while providing control solutions to meet and exceed customer expectations.

Features	Benefits
Superior failure resistance and reliability	Enhanced process safety
Constant packing load maintained with four-stud, live-loaded packing assembly	Increased safety, enhanced process efficiency environmentally friendly
Real flexibility in application	Increased process efficiency
Custom-engineered	Process optimization
Consistent flow-rates	Reduced fluid costs
Control trim made from extremely hard components	Reduced wear, increased life of the valve
Zero-leakage	Enhanced process safety, increased efficiency
Resistance to small entrained solids	Lower maintenance costs, increased reliability



Zero-leakage Valve Solutions

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