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 and conditions.

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

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

<table>
<thead>
<tr>
<th></th>
<th>Mark I</th>
<th>Mark II</th>
<th>Mark III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Designed for minimum/normal flow control conditions</td>
<td>Designed for minimum/normal flow control conditions</td>
<td>Designed for minimum/normal flow control conditions</td>
</tr>
<tr>
<td>Seats</td>
<td>Variety of characterized upstream seats available</td>
<td>Variety of characterized upstream seats available</td>
<td>Variety of characterized upstream seats available</td>
</tr>
<tr>
<td>Control</td>
<td>Engineered to meet your control needs</td>
<td>Engineered to meet your control needs</td>
<td>Engineered to meet your control needs</td>
</tr>
<tr>
<td>Leakage</td>
<td>Zero-leakage</td>
<td>Zero-leakage</td>
<td>Zero-leakage</td>
</tr>
<tr>
<td>Additional Features</td>
<td>Includes a second flow port designed to handle continuous minimum flow conditions</td>
<td>For applications requiring very high-pressure drops</td>
<td>Includes a series of upstream pressure reducing plates</td>
</tr>
<tr>
<td></td>
<td>For the most difficult control applications</td>
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# Common Configurations

- Tandem arrangement with automated control valves
- Tandem arrangement with manual isolation 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.

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.

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

Worldwide Office Locations

Australia  
Brazil  
Canada  
Chile  
China  
Colombia  
India  
Japan  
Kazakhstan  
Malaysia

Poland  
Saudi Arabia  
Singapore  
South Korea  
Spain  
Thailand  
Turkey  
United Arab Emirates  
United Kingdom  
United States

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info@valv.com.

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