

# Control Valves

A Comprehensive Range for Process Control and Automation



# Control Valves

Forbes Marshall is leading manufacturer of steam engineering and control instrumentation solutions. We help our customers save energy, improve process quality and throughput, and run a clean and safe factory.

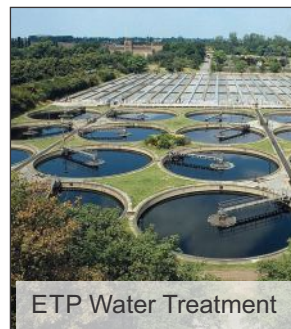
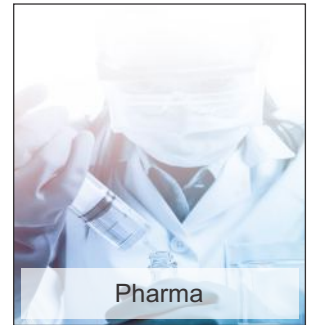
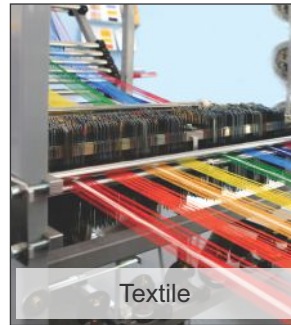
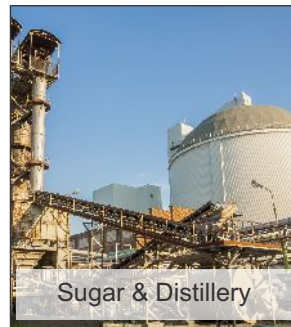
A joint venture between Forbes Marshall and ARCA Regler GmbH Germany was signed in 1985 and the company, aligned towards rapid technological change, successfully started manufacturing and marketing in India, serving various industry verticals with a wide variety of applications.

Forbes Marshall ARCA's leadership in the technology market is based on more than 30 years of experience and continuous development. World class manufacturing plants in Pune provide the best quality products. Production, which is of the highest technical quality and certified according to the relevant quality standards, guarantees a high degree of reliability.


Forbes Marshall ARCA is a leading supplier for all types of Control Valves, Steam Conditioning and Desuperheating solutions. The company designs, manufactures and supplies control valves to various industries like Chemicals, Food & Beverage, Steel, Power, Petrochemical and others. A high degree of vertical integration makes the manufacturing process flexible and ensures a high delivery capacity.


Technical consulting and immediate support is provided by highly-trained service personnel in India and throughout the world.

## Industries We Cater To




## Ecotrol® Control Valve




2 - Way Valve		
	<b>Size</b>	: ½" to 16"
	<b>Pr. Rating</b>	: #150 to #2500
	<b>MOC</b>	: WCB, WC6, WC9, CF8M, CF3M and others.
	<b>Bonnet</b>	: Standard /extended/bellow sealed and pressure sealed
	Features	Advantages
<p>Single piece design for valve plug and spindle</p> <p>Drop in type reversible seat</p> <p>Top flange/bonnet is SS up to 2 inch and &gt;3 inch bonnet same as body MOC but with bush of SS316</p> <p>Special V ring gland packing design with micro-sealing element</p> <p>Tubless actuator, design as per NAMUR</p> <p>Special pressure sealed bonnet without boltings suitable for high pressure applications</p>	<p>Increases the durability and strength for high pressure applications</p> <p>Increased life and self alignment of the seat</p> <p>Resistance to corrosion and reduced maintenance</p> <p>Zero gland leakage</p> <p>Compact and sturdy design</p>	

3 - Way Valve		
	<b>Size</b>	: 1" to 10"
	<b>Pr. Rating</b>	: #300 (#600 available on request)
	<b>MOC</b>	: WCB, WC6, WC9, CF8M, CF3M and others.
	<b>Bonnet</b>	: Standard/extended/bellow sealed
	Features	Advantages
<p>Special slotted trim design for mixing and diverting applications</p> <p>Robust valve body</p>	<p>Efficient and precise control</p> <p>Optimises flow conditions with large volumes</p>	


## PRDS Valves

Top Entry PRDS Bottom Entry PRDS		
	<b>Size</b>	: 1" to 12"
	<b>Pr. Rating</b>	: #300 to #1500
	<b>MOC</b>	: WCB, WC6, WC9, CF8M, CF3M and others.
	Features	Advantages
	<p>Pressure reduction and desuperheating in a single valve</p> <p>No water carry over problems</p> <p>Compact design</p> <p>High turn down ratio</p>	<p>Reduction in the length of piping due to elimination of separate desuperheater</p> <p>Water is injected at the "Vena Contracta" point which is the most turbulent zone, causing complete atomisation.</p> <p>Efficient mixing of spray water, no water hammering and improved rate of heat transfer</p>


## Desuperheaters

	<table border="1"> <tr> <td><b>Mini Cooler Desuperheater</b></td> <td><b>Steam Line Size</b> : 1" to 4"</td> </tr> <tr> <td></td> <td><b>Pr. Rating</b> : #300 to #2500</td> </tr> <tr> <td></td> <td><b>MOC</b> : WCB, WC6, WC9, CF8M, CF3M and others.</td> </tr> <tr> <td></td> <td><b>Bonnet</b> : Standard</td> </tr> <tr> <td colspan="2"><b>Advantages</b></td> </tr> <tr> <td colspan="2">                     No moving parts, hence no choking                      Unique device for specific applications like ejector/gland sealing steam where the cooling water injection quantity is very low                      Ideal for use in conjunction with water control valve and control system                 </td> </tr> </table>	<b>Mini Cooler Desuperheater</b>	<b>Steam Line Size</b> : 1" to 4"		<b>Pr. Rating</b> : #300 to #2500		<b>MOC</b> : WCB, WC6, WC9, CF8M, CF3M and others.		<b>Bonnet</b> : Standard	<b>Advantages</b>		No moving parts, hence no choking Unique device for specific applications like ejector/gland sealing steam where the cooling water injection quantity is very low Ideal for use in conjunction with water control valve and control system	
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## Roboters

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## Positioners

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## Positioners

SmartPOZ	Features	Advantages
	<ul style="list-style-type: none"> <li>Non-contact sensing technique</li> <li>Low air consumption</li> <li>Compatible with HART</li> <li>In-built position feedback option available</li> <li>Tubeless NAMUR mounting</li> </ul>	<ul style="list-style-type: none"> <li>Easy maintenance and no wear and tear of the parts</li> <li>Faster ROI</li> <li>Auto mode calibration and diagnostic features</li> <li>Split range applications</li> <li>Works with volume booster and quick exhaust valves</li> <li>Special settings for desuperheater</li> <li>Works with any single acting linear globe valve</li> </ul>

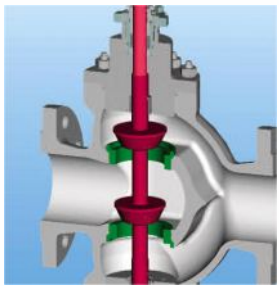
## Angle Type Combined PRDS and Pressure Reducing Valves

	Features	Advantages
	<ul style="list-style-type: none"> <li>Drop in type reversible seat</li> <li>Common guide bushings for different bonnets</li> <li>Modular design catering to high pressure drop applications</li> </ul>	<ul style="list-style-type: none"> <li>Reliable pressure reduction with advanced trim design</li> <li>Retrofitting for existing valves is possible</li> <li>High pressure reduction of boiler steam</li> <li>Reliable pressure control for critical applications</li> </ul>


## BIOVENT® Hygienic Valves

	Features	Advantages
	<ul style="list-style-type: none"> <li>Stainless steel spherical housing with zero dead space</li> <li>CIP capable hygiene-committed design</li> <li>Special combination sealing element with wiper ring on the dynamic seal of the valve stems</li> <li>Replaceable plug and clamped valve seat</li> <li>Complies with FDA standards</li> </ul>	<ul style="list-style-type: none"> <li>Helps to maintain ideal flow conditions</li> <li>All residue is drained making the valves easy to clean</li> <li>Prevents media from settling and damage by oxidation</li> <li>Easily adapts to different operating conditions</li> </ul>


## Double Seated Valves

	Features	Advantages
	<ul style="list-style-type: none"> <li>Suitable for pretention and versatile control application</li> <li>The classical double-seat construction is largely pressure balanced</li> <li>Double-shaft guiding</li> </ul>	<ul style="list-style-type: none"> <li>The low force requirement and a short stroke allow application of small, low-cost actuators</li> <li>High and solid reliability under difficult operating conditions</li> </ul>


## Jacketed Valves


	Features	Advantages
	<ul style="list-style-type: none"> <li>Complete stainless steel body jacketing</li> </ul>	<ul style="list-style-type: none"> <li>Avoids phase change due to temperature and viscosity variations</li> </ul>

## PFA Lined Valves


	Features	Advantages
	<p>Inner PFA lining</p> <p>Special PTFE bellows</p> <p>Suitable for highly corrosive and acidic applications</p>	<p>Reliable and robust</p> <p>Cost effective (compared to exotic metallic valves)</p>


## Special Trims

VHEN Trim	Features	Advantages
	<p>Specially designed series of discs with number of turns in the parallel paths</p>	<p>Suitable for very high pressure drop, anti-cavitation, high velocity and high sound applications</p>

SPLINE Trim	Features	Advantages
	<p>Specially designed trims for micro flow with Kv as low as 0.006</p> <p>Exit diffusers present as an integral part of the trim</p>	<p>No damage to valve body due to exit jet stream</p>

## Actuators

811 U - Series	Features	Advantages
	<p>Field reversible</p> <p>Suitable for high actuating thrust process</p> <p>Light weight and corrosion resistant housing</p> <p>Low maintenance and universal design</p>	<p>Suit different accessories</p> <p>Can be modified at site to suit customer plant/control philosophy with minimal changes</p>

812 U - Series	Features
	<p>Compact design</p> <p>Press steel housing</p> <p>Tubless design as per NAMUR</p> <p><b>Note:</b> Piston actuators available on request</p>



Forbes Marshall  
 Krohne Marshall  
 Forbes Marshall Arca  
 Codel International  
 Forbes Solar  
 Forbes Vyncke  
 Forbes Marshall Steam Systems

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