

A photograph of industrial process control equipment. In the foreground, a large green valve is partially visible, with a blue banner overlaid on it. The background shows a complex network of silver pipes, tanks, and other machinery under a clear blue sky.

**Forever keeping process control  
safe, efficient, and intuitive.**

**Catalog of Fisher™ Control Valves and Instruments**  
Enabling the performance and safety of industry.



## Proper control valve selection is critical for your process loop.

Performance and safety are two of the key concerns in plants today. Since control valves are the only devices in the control loop that actually move to adjust the process, their performance is fundamental. If they don't perform properly, you can't meet production schedules and maintain product quality.

Then there's safety. When there's a lack of knowledge of control valve position or operation, you could threaten worker safety, cause environmental concerns, and potentially damage operating equipment.

That's a lot of pressure on you to select the right control valve type, right control valve design, and right control valve manufacturer for performance and safety.

To achieve above-peer growth in a low growth world, best-in-class firms are innovating with products that offer more automation, safety, and simplicity features.  
–Baird Industrial Research



The criterion of capacity or size can be an overriding constraint on control valve selection.



Standards committees have not agreed upon a single method for selecting valve trim for severe service applications that experience cavitation, noise, or flashing.



Because control valves are installed in many different and unique applications, control valve accessories are necessary. Diagnostics may also be needed to provide control valve performance and health evaluations.





Your control valves are critical to the performance and safety of your process, but when there are so many to choose from, you may feel uncertain about which ones offer the most value.

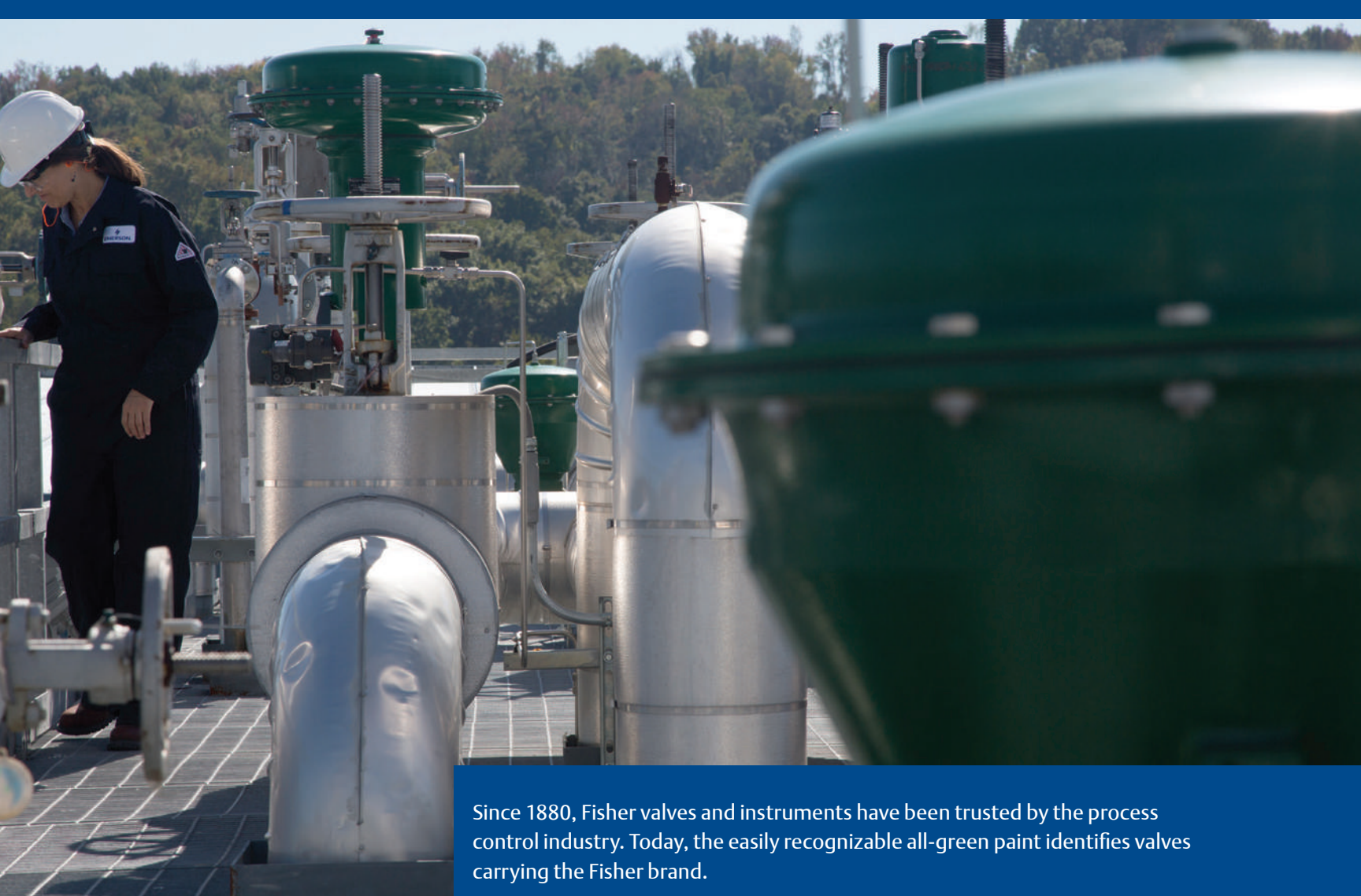
## Emerson's Fisher control valves and instruments put you on the path to better performance and safety.



We realize there's a good chance that your control valves and instruments will need to last you decades—even in harsh environments. By selecting Fisher brand control valves (globe, rotary, severe service), controllers, and instruments you can more easily meet your performance and safety requirements. This is possible because their as-designed performance integrity has been tested to ensure the highest degree of lasting reliability is achieved.

Fisher valves and instruments can help you increase performance and safety from general to the most severe or critical service conditions you experience.

**FISHER™**



Since 1880, Fisher valves and instruments have been trusted by the process control industry. Today, the easily recognizable all-green paint identifies valves carrying the Fisher brand.

## Meet changing process demands with valve trim variations.

Fisher globe control valves have a selection of cages or plugs that can be interchanged to modify the inherent flow characteristic to meet changing flow demands.

[Globe Control Valves ▶ p5](#)

## Get high capacity, precise flow control for a lower total cost of ownership.

Fisher rotary control valves provide high capacity control across a broad range of applications.

[Rotary Control Valves ▶ p7](#)

## Extend valve operating life in the most difficult installations.

Fisher critical and severe service control valves solve tough control challenges and give longer service life and a lower total cost of ownership. Protect against cavitation, flashing, erosive fluids, high-pressure flow, and excessive noise and vibration.

[Critical and Severe Service Control Valves ▶ p9](#)

## Modulate control valves and monitor process variables.

Fisher controllers and instruments modulate valve position and control variables such as level, pressure, or temperature. Diagnostics provide insight into valve performance and reliability.

[Controllers and Instruments ▶ p11](#)



## Globe Control Valves

Meet changing process demands with control valve trim variations.

Fisher globe control valves are available in a variety of sizes (NPS ½ thru 36) and provide users with performance and flexibility. They can help solve an array of application needs from big to small, hot to cold, general to severe. Fisher globe control valves have a selection of valve cages or plugs that can be interchanged to modify the inherent flow characteristic to linear, equal percentage, or quick opening to meet capacity demands from 0.0001  $C_v$  up to 12,000  $C_v$ . Fisher easy-e™ control valves pioneered the use of cage-guided trim.

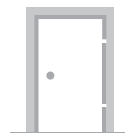
### What's your challenge?



To achieve above-peer growth in a low growth world, best-in-class firms are innovating with products that offer more automation, safety, and simplicity features.

—Baird Industrial Research

### What's your opportunity?



The singular valve body design of the Fisher easy-e valve adapts to a broad range of applications. A choice of trim sizes and styles enables you to maximize control as well as minimize your investment.

## Globe Valves



**Globe Valves** use a linear motion to move a closure member into and out of a seating surface. They have a body distinguished by a globular-shaped cavity around the port region. Many single-seated valve bodies use cage or retainer-style constructions to retain the seat ring, provide valve plug guiding, and provide a means for establishing particular valve flow characteristics. Cage or retainer-style single-seated valve bodies can also be easily modified by the change of trim parts to provide reduced capacity flow, noise attenuation, or reduction or elimination of cavitation. ▶ [easy-e ED](#) | [easy-e ES](#) | [easy-e ET](#) | [easy-e EZ](#) | [easy-e EW](#) | [easy-e Cryogenic](#) | [HP and EH](#) | [GX](#) | [D](#) | [D3](#) | [D4](#) | [RSS](#)

## Angle Valves



**Angle Valves** are a globe valve design in which the inlet and outlet ports are perpendicular to each other. Angle valves are commonly used in boiler feedwater and heater drain service and in piping schemes where space is at a premium and the valve can also serve as an elbow. The valve can have cage-style construction or expanded outlet connections, restricted trim, or outlet liners for reduction of erosion, flashing, or cavitation damage. Angle valves achieve excellent control of liquid services in high-pressure applications. ▶ [HP and EH Angle](#) | [DA](#) | [FB](#) | [D2T FloPro](#) | [461](#)

## Three-Way Valves



**Three-Way Valves** are a type of globe valve that have three pipeline connections to provide converging (flow-mixing) or diverging (flow-splitting) service. Variations include cage-, port-, and stem-guided designs, selections for high-temperature service, and end connections can be specified to mate with most piping schemes. ▶ [YD and YS](#) | [GX](#)





## Rotary Control Valves

Get high capacity, precise flow control for a lower total cost of ownership.

Rotary control valves generally have much higher maximum capacity than globe valves for a given body size. This fact makes rotary control valves attractive in applications where the pressure drop is rather small. Rotary control valves include ball, segmented ball, high-performance butterfly, and eccentric plug styles with such familiar names as Fisher Vee-Ball™ and Fisher Control-Disk™ valves.

### What's your challenge?



The criterion of capacity or size can be an overriding constraint on control valve selection.

### What's your opportunity?



The advantages of rotary control valves include greater flow capacities, higher control ranges, compact overall sizes, superior shaft sealing, and being applicable to a wide range of control situations.



## Ball Valves



**Ball Valves** with trunnions help maintain consistent flow rates for high capacity, heavy-duty applications. They have a rotatable ball with a cylindrical flow passage through the center to the control flow. When the ball is turned one-quarter of the way, the flow stops. The port of a full-port or full-bore ball valve equals the pipeline diameter and presents little or no restriction to flow to allow for pigging when not attenuated. The port of a reduced-port or reduced-bore ball valve is smaller than the pipe to absorb a small amount of pressure drop. ▶ [V250](#) | [V260](#) | [V270](#)

## Segmented Ball Valves



**Segmented Ball Valves** provide high capacity, precise control across a broad range of applications. They are similar to a conventional ball valve, but with a contoured V-notch segment in the ball. This control valve has good rangeability, control, and shutoff capability. The V-notch ball provides positive shearing action and produces an inherent equal percentage flow characteristic. It provides non-clogging, high capacity flow control. The V-notch ball has been specially contoured to maximize capacity and enhance seal life and shutoff integrity. ▶ [Vee-Ball V150](#) | [Vee-Ball V200](#) | [Vee-Ball V300](#) | [Vee-Ball V150S](#) | [Vee-Ball V150E](#)

## High-Performance Butterfly Valves



**High-Performance Butterfly Valves** are used in throttling applications requiring large flow capacities and small installed footprints. They use a rotating eccentric disk to control flow through a pipe. The disk is generally operable through 90 degrees and provides a linear flow characteristic. Their advantages include a straight-through flow path, very high capacity, and ability to pass solids and viscous media. These valves have nominal sizes from DN50 to DN1800 (from NPS 2 to 72) and pressure class up to PN420 (CL2500 according to ASME) depending on the model. ▶ [Control-Disk](#) | [A11](#) | [8532](#) | [8560](#) | [8580](#) | [8590](#)

## Eccentric Plug Valves



**Eccentric Plug Valves** combine globe valve ruggedness with the efficiency of a rotary valve so they're also referred to as rotary globe. They have a plug-shaped, flow-restricting member that follows an eccentric path as it rotates. ▶ [V500](#) | [CV500](#)

## Severe Service Ball Valves



**Severe Service Ball Valves** have a simplistic, two-piece floating ball design with integral metal seat meant to provide tight shutoff in high temperature, high pressure, and erosive applications across all industries. ▶ [Z500](#)



Visit [Emerson.com](https://www.emerson.com)/[Fisher.com](https://www.fisher.com) to find additional resources or contact a sales office.



## Critical and Severe Service Control Valves

Extend valve operating life in the most difficult installations.

Fisher severe service control valves are used in the most difficult installations within your process plant. These installations commonly including cavitating, erosive, corrosive, flashing, outgassing, noisy, high pressure, high temperature, high pressure drop, or high velocity media that can cause premature failure. A severe service control valve may or may not be a critical service valve—one that's essential to the operation of the plant. To maximize longevity in harsh conditions, we offer standard control valves, modified-standard control valves, and custom control valve designs. Popular severe service trims include Fisher Whisper Trim™, Fisher WhisperFlo™, Fisher Cavitrol™, and Fisher Dirty Service Trim (DST).

### What's your challenge?



Standards committees have not agreed upon a single method for selecting valve trim for severe service applications that experience cavitation, noise, or flashing.

### What's your opportunity?



With advanced technology comes the potential for increased complexity. Leverage Emerson expertise to identify a control valve configuration that can meet your required performance level and eliminate concerns like noise and cavitation.

## Noise Control Trims



**Aerodynamic and Hydrodynamic Noise Control Trims** are trusted and tested to protect your personnel and the surrounding environment from excessive noise risks. High pressure drops and high mass flows involving liquids, gases, vapors, or steam can lead to unwanted and dangerous noise levels. Allowing this noise to continue puts you at risk of fenceline noise regulation fines or potential employee hearing loss. High noise levels can also lead to equipment damage through vibration and process control issues. Mitigate your risk by choosing Fisher products. ▶ [Whisper Trim I](#) | [Whisper Trim III](#) | [WhisperFlo](#) | [Inline Diffusers](#) | [Vent Diffusers](#)

## Cavitation Control Trims



**Clean and Dirty Service Anti-Cavitation Trims** prevent cavitation as the liquid undergoes a portion of the total pressure drop in each stage. This prevents the liquid in any stage from falling to or below its vapor pressure, avoiding cavitation. Cavitation is a concern for plant operators and maintenance personnel because it not only decreases flow capability through control valves, but it may also cause material damage, excessive noise, and excessive vibration. A wide range of cavitation-control technologies are available for clean and dirty service. ▶ [Cavitrol III](#) | [CAV III Micro-Flat](#) | [DST](#) | [NotchFlo DST](#) | [Micro-Flat](#) | [CAV4](#)

## Digital Isolation Solutions



**Digital Isolation Solutions** are specifically designed for critical applications where safety is imperative. As the final control element within the Safety Instrumented System, each solution is comprised of a complete, intelligent valve assembly that has been pre-engineered for functional safety. Factory testing and documentation provide a "birth certificate" so you can be confident solutions will perform as needed. All solutions are supported by a team of Emerson safety, application, and service experts. ▶ [Trunnion-Mounted Ball Valve](#) | [Triple Offset Valve](#)

## Steam Conditioning Valves and Desuperheaters



**Steam Conditioning Valves** represent state-of-the-art control of steam pressure and temperature by combining both functions within one integral control unit. ▶ [TBX](#) | [TBX-T](#)

**Desuperheaters** inject a controlled, predetermined amount of water into a steam flow to lower the temperature of the steam. ▶ [DMA](#) | [DMA/AF](#) | [DSA](#) | [DFA](#) | [DVI](#)



Visit [Emerson.com](https://www.emerson.com)/[Fisher.com](https://www.fisher.com) to find additional resources or contact a sales office.



## Controllers and Instruments

Modulate control valves and monitor process variables.

A wide selection of Fisher digital, pneumatic, and electronic instruments control valve position and variables such as level, pressure, or temperature. They are added to control valves for five basic reasons: to improve process control; improve safety; monitor the valve responsiveness; diagnose issues; and improve valve performance or speed of response. We were the first to develop digital valve controllers—Fisher FIELDVUE™ instruments—and performance diagnostics for improved control and predictive maintenance.

### What's your challenge?



Because control valves are installed in many different and unique applications, control valve accessories are necessary. Diagnostics may be needed to provide control valve performance and health evaluations.

### What's your opportunity?



With Fisher instruments, you get peace of mind that they have been tested to hold up to your process conditions, no matter how extreme. We have instruments for vibration, extreme temperatures, and high pressures.

## Digital Valve Controllers and Traditional Positioners



**Digital Valve Controllers** are microprocessor-based instruments that are compatible with HART®, FOUNDATION™ fieldbus, and PROFIBUS communication protocols. The microprocessor enables diagnostics and two-way communication to simplify setup and troubleshooting. FIELDVUE digital valve controllers have logged billions of operating hours and have sold over 2 million products since being introduced in 1994. They can be used in Safety Instrumented Systems to control the safety shutdown function of the valve. ▶ [DVC6200](#) | [DVC6200 SIS](#) | [DVC6200p](#) | [DVC6200f](#) | [DVC2000](#)

**Traditional Positioners** deliver pressurized air to the valve actuator so that the position of the valve stem or shaft corresponds to the set point from the control system. They are typically pneumatic or analog I/P. ▶ [3570](#) | [3582](#) | [3582i](#) | [3610J](#) | [3610JP](#) | [3620J](#) | [3620JP](#) | [3660](#) | [3661](#) | [3710](#) | [3720](#)

## Transducers



**Electro-Pneumatic (I/P) Transducers** convert an electronic signal to a pneumatic signal. They are routinely used in control loops that require an electronic control signal from a programmable logic controller or distributed control system to be converted to a usable pneumatic signal for operation of a control valve. I/P transducers operate by using a current to pneumatic converter to produce a proportional pneumatic output. ▶ [i2P-100](#) | [846](#) | [646](#) | [546](#)

## Pneumatic and Process Valve Controllers



**Pneumatic Controllers** are mechanical devices designed to measure temperature or pressure and transmit a corrective air signal to the final control element. Bourdon tubes, bellows, temperature elements, or displacers are used as the sensing elements. The power supply and output of a pneumatic controller is compressed air or natural gas. ▶ [C1](#) | [4194](#) | [4195K](#) | [4196](#) | [4660](#)

## Wireless Products and Valve Accessories



**Wireless Products** provide access to valves and other equipment in hard-to-reach places where a wired solution is not feasible. A wireless position monitor eliminates the need for wiring to an on/off pneumatically actuated valve by monitoring the equipment position with a percent of span plus on/off indication. ▶ [4320](#)

**Valve Accessories** help ensure your process runs as expected with a variety of additional valve and actuator components. Volume boosters amplify or boost the volume of air supplied to the valve actuator. ▶ [2625](#) | [VBL](#)



Visit [Emerson.com/Fisher.com](http://Emerson.com/Fisher.com) to find additional resources or contact a sales office.

# We're here to help you succeed!



## Design

- Materials analysis.
- Design and casting verification.
- Unrivaled engineering with over 400 U.S. patents for Fisher technologies since 1960.
- Customized solutions.
- Boundless design potential with additive technologies.

## Testing

- Vibration.
- Cryogenic.
- Noise.
- Emissions.
- Multi-phase flow.
- High cycle.

## Expertise

- Research and engineering.
- Severe and critical service application knowledge.
- Additive manufacturing.
- Solutions Centers with Plantweb™ digital ecosystems.
- Valve sizing and selection.

## Software and Apps

- Specification Manager software.
- FIELDVUE ValveLink™ software.
- Severe Service app.

## Service

- Repair.
- Parts.
- QuickShip™ program.
- Educational training.

## Manufacturing



From the smallest part to the largest control valve assembly, Fisher control valves and instruments are manufactured throughout the world to exactly the same specifications.

## Research and Engineering



Our global research and engineering facilities are designed to demonstrate how Fisher valves and instruments are installed, function, and integrate with other critical components.

► [View our brochure to learn more.](#)

## Sales Offices



Regardless of your process or industry, Emerson has people to help you before and after the sale. We have sales offices around the world.

► [Find a sales office near you at Emerson.com/ContactUs.](http://Emerson.com/ContactUs)

## Main Valve Partner™



Reduce the complexity of multiple vendors and ensure compatible technologies with Emerson as your Main Valve Partner. Our brands include Fisher™, Sempell™, Bettis™, Anderson Greenwood™, Crosby™, Keystone™, KTM™, and Vanessa™.

## Locations

► **Manufacturing** • Brazil—Sorocaba • China—Bao'an; Wuqing • France—Cernay; Armentieres • Germany—Korschenbroich • Hungary—Szekesfehervar • India—Chennai • Japan—Sakura • Kingdom of Saudi Arabia—Jubail • Malaysia—Nilai • Mexico—Toluca • Russia—Chelyabinsk • Singapore • United Arab Emirates—Dubai • United States—Marshalltown, Iowa; Mansfield, Massachusetts; Sherman, Texas

► **Research and Engineering** • China—Wuqing • France—Cernay • United States—Marshalltown, Iowa

# Fisher products are designed to help your process run better, for longer.



## FISHER™

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Cernay, 68700 France  
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