

**Proven solutions to optimize
your plant's performance**



Fluid Control & Pneumatics for Process Industries

Proven automation solutions and local expertise to help you overcome your toughest challenges.





In an increasingly competitive landscape, relationships with reliable expert partners become critical for your success.

More complexity and connectivity across process industries creates challenges—and opportunities

The global ecosystem of process manufacturing is re-inventing itself. Across industries we see customers faced with pressure to increase productivity, cut costs and to meet consumers' needs—all while becoming more environmentally friendly and predicting the changes necessary to thrive in the future. Each decision on an individual component has long-term network effects on system efficiency and the potential to improve performance. In this evolving landscape, it is clear that better technologies, deeper expertise, and a stronger commitment to value-creating solutions guarantees a market advantage.

Need for more advanced technologies. Your peers and customers are considering the future of manufacturing—requiring you to invest in innovative technologies that can improve your operations and last or flex.



Need for truly expert partners. Your business is different from other manufacturers and processors, requiring relationships with suppliers who offer applied engineering knowledge and a dedication to partnership.



Need for more than products—needing solutions. Your role requires thoughtful decision making around the right products to purchase, but can also benefit from services and experiences that make your job easier.



Turn to Emerson to improve and innovate your operations without increasing risk

Emerson's fluid control & pneumatics portfolio is designed to address the attention-to-detail and emphasis on execution requirements unique to the process industries. Working with our brands ASCO™, AVENTICS™, TESCO™ and TopWorx™ means you can expect intentionally designed fluid control and pneumatics solutions, precisely measured performance, careful consideration of regulatory environments and a nuanced understanding of where your plant lives in its lifecycle.



Smarter technology performing consistently & communicating seamlessly

- Trust in the unmatched reliability of our products—featuring longer service lives
- Invest in forward-thinking products that are easily integrated and mastered
- Benefit from the data advantage through smarter solutions that measure performance

“Their technology is the best. If we find ourselves buying a commoditized product we are doomed to failure. My company cannot survive without the right tech.”

–Pharmaceutical Customer



Immersed industry experts who know your applications

- 500 patents
- 327 global certifications
- 2,796 tech support specialists around the globe

“They will call and say ‘we’re doing this for another customer and think it could help you—we can fit it to your application.’ It’s great, they really know how to design the products.”

–Food Customer



The right solutions and services for your unique operations

- Take advantage of a truly consultative approach to optimize your long term success
- Train your employees to master solutions with the help of our experts
- Visit an Emerson Solution Center for live advisory services and collaborative problem-solving

“Continuous improvement is a big KPI for us. Emerson always looks for different ways to help us continuously improve and be competitive.”

–Water Customer

High-quality engineering is our offering— applied industry expertise is our promise



Oil & Gas

Rugged products certified to thrive in extreme environments and designed for critical and safety related applications—with renowned expertise in fluid control

Refining & Chemical

Dependable valve actuation, pneumatic and precision fluid control solution with extended service lives and low power consumption for critical points in your processes

Power Generation

Nuclear-qualified solenoid valves designed at the inception of the industry and championed by engineering experts for nuclear projects at any stage

Water & Wastewater

Rock-solid valve solutions with unequaled water seal control capabilities and unmatched corrosion resistance—delivering dependable solutions for your water-driven systems

Food & Beverage

Anti-corrosive components certified for your regulatory needs, suitable for heavy cleaning and designed to be monitored within complex processes

Life Sciences

Solutions facilitating the scalability and repeatability of the production process from fermentation to purification, API synthesis to Form Fill Finish



Process Control & Safety Indication

Dependable and flexible process control solutions that can survive tough environments—reducing engineering times and improving uptime. [Learn more.](#) ► p6

Valve Actuation Controls

Bespoke solutions for your valve actuator control application that meet international safety standards and deliver beyond expectations on productivity. [Learn more.](#) ► p10

Process Valves & Sensors

Ultra-reliable and rugged process valve solutions that are compact, compatible with your process applications and offered as part of a comprehensive portfolio. [Learn more.](#) ► p8

Precision Fluid Control

Customizable precision fluid control systems and solutions to prevent shutdowns, reduce material costs, and protect the safety of your personnel. [Learn more.](#) ► p12

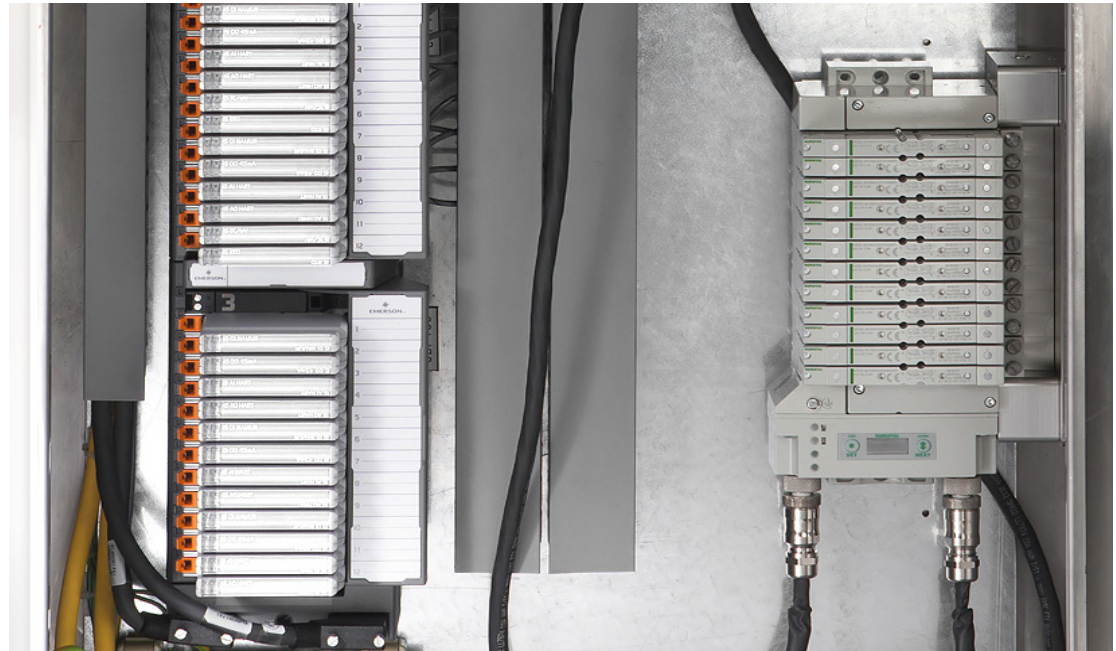
Process Control & Safety Indication

No matter where they stand in their lifecycle, process plants across diverse, severe environments can benefit from improved process control. Emerson offers dependable process control solutions that are certified for any environment, renowned for assuring uptime and guaranteed to safely guard against spurious trips. These critical components offer predictive diagnostic capabilities that make troubleshooting simpler—and operate standalone or integrated into your process architecture.



What's your opportunity?

- Utilize durable products designed to endure diverse environments, from explosive petrochemical sites to food washdown areas
- Understand impending failures ahead of time to improve the repair process
- Improve process efficiency and safety while reducing overall cost and unplanned outages



Application engineers by your side.

Emerson specialists are deeply immersed in the process manufacturing world—engaging early and often to inform and improve project design. When you need input beyond the product or component, our engineering specialists weigh in.



Services offered...

- Technology and application support delivered by experienced global representatives
- Rapid product repair or replacement services anytime, anywhere

Featured System Solutions

ASCO Redundant Control System (RCS)



The only pilot valve system with no single point of failure that can result in an unwanted closure of the process valve.

- Fit for use in SIL 3 applications and greatly reduces spurious trip rates
- Achieves a higher level of process safety and reliability by using a redundant, fault tolerant architecture and automated testing
- Keyed bypass allows on-line maintenance without process interruption

ASCO Actuator Control System (ACS)



Control system improving the reliability of your installation and reduces engineering time.

- Available in 1/4" and 1/2" sizes with a full 316L stainless steel construction, which enables the ACS to be corrosion resistant
- System is custom designed by ASCO engineers, saving you engineering time
- Designed to meet the maximum possible pressures and temperatures of your application

TESCOM ER5000 Series Electropneumatic Actuator

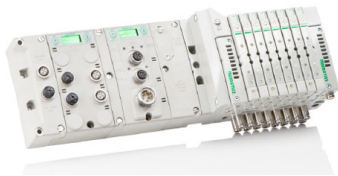


Microprocessor based PID (Proportional, Integral, Derivative) controller that brings precise algorithmic pressure control to a wide range of applications.

- Closed loop PID control
- 25 ms update rate
- Controls pressure up to 20,000 psi
- Controls pressure and flow rates
- Provides data acquisition

Featured Fieldbus Solutions

ASCO G3 Electronic Fieldbus Platform



Innovative Graphic Display used for easy commissioning, visual status, & diagnostics.

- Integrates communication interfaces with input/output (I/O) capabilities, permitting easy access to connections
- Simple to assemble, install, commission, and maintain
- Functionality allows programmable logic controllers to more
- The only pneumatic valve manifold that contains a graphical display used for configuration, commissioning and diagnostics

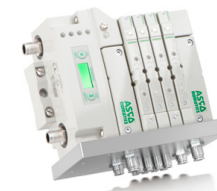
AVENTICS Series AV03 and AV05 Valve Systems



Complete automation solution that continuously adapts to application requirements.

- Proven successful in a broad spectrum of applications
- Smaller, lighter, and more efficient than comparable valves by any competitor
- The unique diagonal shape of the valve optimizes flow capacity, and the plug-in design allows for quick valve changeout
- Custom online configuration of the valve manifolds makes it fast and easy to find your optimal solution

ASCO 580 CHARM Node



Designed for easy solenoid valve integration into Emerson's DeltaVTM & trade S-series distributed control system (DCS) with Electronic Marshalling technology.

- Provides a single connection
- Configures the same as any other CHARM on DeltaVTM
- Uses native capabilities of DeltaVTM for diagnostics of pneumatic valves
- Brings CIOC redundant communication and power connections to pneumatic valve manifolds

Process Valves

When it comes to improving your plant's performance, your choice of process valve is critical. It can affect the reliability of your system and the output of your process. Emerson's extensive portfolio of process valves is widely turned to as the choice for compactness, product life and relevance to your unique application. These valves come in flexible styles that best suit your control applications and optimize operability.



What's your opportunity?

- Simplify and speed up your design and build process by selecting and configuring assemblies online so you can rest assured you made the right choice efficiently
- Trust the long-lasting design of Emerson process valve components
- Work alongside dedicated experts—often a single point of contact—that know your systems and can assist in designing the right assemblies



Find or configure a design fit for your plant.

Emerson's customer experience is thoughtfully designed to ensure you have access to experts that can optimize your design. Our process valves are engineered to suit specific applications and meet strategic goals. If you want the right solution and expert guidance, Emerson can help.

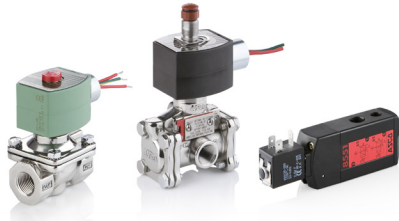


Services offered...

- Intuitive online configuration tools that simplify the design of valve packages
- Quick shipping of components to ensure system and process optimization

Featured Solenoid Valve Solutions

ASCO 2-Way, 3-Way, 4 Way Solenoid Valves



The widest range of solenoid valves available, ideal for bioreactors, CIP/SIP, or any of your air and liquid flow control requirements.

- Reliable spool valve technology for continuous process availability
- Low power construction for more efficiency
- Global certification, including ATEX, CUTR, UL, SIL, and more
- Solenoid Valve Series 551, Series 8210, & globe valves Series 290
- Corrosion resistant: 316L stainless steel body

ASCO Series 298 Air Operated Solenoid Valve



Rugged 2-way piston valve, built to withstand steam, superheated water and corrosive fluids making it ideal for curing press applications.

- Available in normally closed and normally open constructions
- High-performance, maintenance-free stuffing box that is resistant to thermal shock
- Anti-water hammer design
- Pressure can be applied to any port as needed by the process

Featured Aseptic Valves

ASCO Manual or Pneumatic-Operated Aseptic Valves



Technologically advanced to meet the most rigorous standards, our aseptic valves can be applied in the most severe processes for biotechnology and pharmaceutical industries.

- Offered with a range of diaphragm materials and have contoured, polished and self-draining bodies
- Can be provided as a custom solution with fully assembled and welded inlet and outlet piping for easy installation
- Resistant to steam, acids and other fluids used in typical cleaning or sterilization
- Welded assembly design minimizes the time taken to assemble, reduces dead legs and enhances hygiene

Featured Piston Valve

ASCO Series 290 Pressure Operated Piston Valve



Pressure-operated, direct acting angle-body piston valve built for demanding applications.

- Straight-through body design is available in bronze or stainless steel
- Suitable for general service applications (air, inert gas, water, oil, and light slurries), plus steam, hot water, and auxiliary fluids within the food and beverage industry
- Optional features available include a visual/electrical position indicator, or a stroke limiter

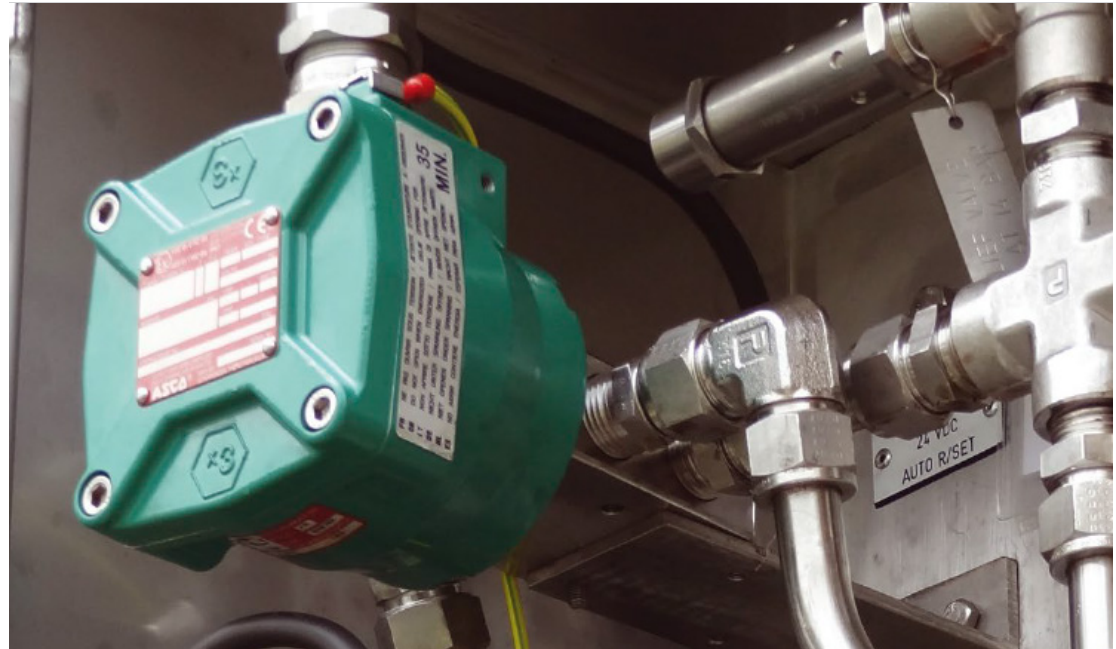
Valve Actuation Controls

Your choice of valve actuation controls has considerable impact on the way you engineer a project and on plant performance, reliability and safety. Regardless of your industry, Emerson can provide unparalleled expertise and product quality with our ASCO range of solenoid valves and associated products. When you are tight on time or short on resources, our ASCO and TopWorx ranges of products can provide a bespoke solution for your valve actuator control application.



What's your opportunity?

- Do not compromise on safety or reliability with the selection of SIL rated Solutions and Redundant Control systems
- Partner with experts in safety loops that can help design your Safety Instrumented System
- Explore sensing and switching technologies suited to your actuator or valve assembly for better control and understanding of performance



Data-informed design and easy installation.

Emerson experts can take what you know about your system's performance and transform that knowledge into a smart solution that arrives assembled, tested and ready to be incorporated in your plant.



Services offered...

- Actuation control system design
- Consulting to optimize the assembly process

Featured Solenoid Valves

ASCO Series 327 Solenoid Valve



Solenoid valve offering the optimum balance between high flow rates and low power consumption, with proven high-cycling capabilities.

- Proven excellence in valve actuator applications with high flow requirements
- One of the most reliable valves of its type in aggressive atmospheres
- Reduces engineering time, lowers installation and commissioning costs, and features a unique sealing system and non-stick design that you can rely on

ASCO Series 316 Solenoid Valve



High flow, general service solenoid valves, which can be used to pilot large actuators and provide quick closing of large control valves.

- Mountable in any position
- Diaphragm poppet design is suitable for controlling air, inert gas, and liquids
- Resilient seating achieves tight shutoff

Featured Solenoid Spool Valves

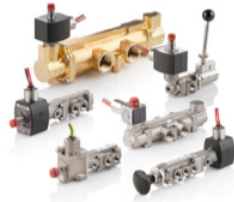
ASCO Series 551 Solenoid Spool Valve



Compact solenoid spool valves that are ideal for controlling air or inert gas in challenging environments.

- Unique design provides bubble-tight shutoff, dirt resistance, and multi-million cycle reliability
- Suitable for the harsh conditions found in a variety of applications

ASCO Series 362 and 562 Solenoid Spool valves



Offers reliable and robust design with high flow performance for any industry.

- Ideal for Valve Automation solutions in upstream to Downstream Oil and Gas and other Harsh environments
- Highest flow per pipe size in the market place; up to Cv 15.5
- Features Factory Sealed Leads that reduce your installation time

Featured Valve Monitoring and Sensing

TopWorx Switchbox



Actuator switch boxes with a universal design, modular components, and global certification.

- Easy selection to reduce complexity and drive standardization
- Certified for use in every world area
- Provides full functionality in compact, direct-mount enclosures

TopWorx GO™ Proximity Sensor



All-in-one position sensor and limit switch.

- Durability in mission-critical applications and explosive environments
- Proven reliability across a variety of industries
- Superior current rating, pressure rating, temperature rating, and hazardous area ratings
- Superior resistance to physical abuse, corrosives, and salt water

Precision Fluid Control

When precision fluid control means ensuring the sanctity of a well, monitoring the purity of water or medicine, or even maintaining the difference between safe & dangerous operations, it is important to get it right. Emerson offers reliable precision fluid control solutions that prevent unexpected shutdowns, reduce material costs, and ensure ease of service while protecting the safety of your employees and equipment.



What's your opportunity?

- Seamlessly service your instrumentation measurement installations while ensuring personnel safety
- Minimize over and under injection while preventing infrastructure failure and excessive chemical costs
- Achieve consistent and accurate pump discharge pressure in a wide variety of applications
- Ensure process purity for critical applications in life sciences



Benefit from highly customizable product design.

Emerson experts work with you to understand your needs and engineer an optimal regulator design or instrument piping installation for your application. Our deep technical experience can ensure your project is a success from initial unit/line design through implementation.



Services offered...

- Technology and application support delivered by experienced global representatives
- Custom assemblies and systems for the control of pressure and flow

Featured Pressure Control Solutions

TESCOM 56 Series Regulator for Chemical Injection



Rugged regulator providing accurate flow control that allows for consistent injection rates over the life of a well.

- Specially engineered for offshore chemical injection
- Available for manual or fully automated use to control injection rate

TESCOM 26-1700 Series Back Pressure Regulator



Regulator ideal for pump discharge pressure control, reactor pressure control and over-pressurization relief.

- Controls pressures up to 15,000 psig / 1034 bar
- Suitable for gas or liquid service
- Pairs well with the TESCOM 56 series for a chemical injection system

TESCOM 44-2200 Series Single Stage Regulator



Compact, lightweight high purity single-stage regulator for specialty, flammable, and industrial gas flows of less than 5 SCFM / 141 SLPM.

- Diffusion-resistant metal diaphragm seal ensuring gas purity and integrity
- Ideal for use in laboratory and point-of-use gas or sampling systems
- Ideal for use in gas cylinder fuel supply

TESCOM Pharmpure Single Stage Regulators



High purity, high flow single-stage regulators offering a compact, USP Class VI and BPE compliant design.

- Suitable for biotech and pharmaceutical applications
- Gas flows of 5-400 SCFM / 142-11,320 SLPM
- Ideal for use in sparge gases, clean steam, and vessel head space pressurization

Featured Instrumentation Valves

TESCOM HD33/HD33MK and F63/F64



Anderson Greenwood Instrumentation Primary Isolation Valves feature integrally forged, one piece slimline double block and bleed assemblies for primary isolation of pressure take-offs.

- Suitable for double block and bleed applications, including pressure and flow measurement, sampling, and chemical injection
- Instruments may be mounted directly to the valve outlet or remotely with gauge lines/ impulse pipe work

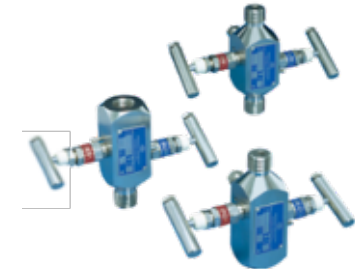
TESCOM M4A/M4T



Anderson Greenwood Instrumentation Pressure three valve manifolds are designed for use with differential pressure transmitters.

- Two main block valves and an equalizing valve for direct or remote mounting at pressures up to 6000 psig (414 BarG)
- Ability to be installed in an enclosure to protect against the effects of climate, corrosion, or tampering

TESCOM M25/M251



Anderson Greenwood Instrumentation Block and Bleed Gauge Valves combine isolating, calibrating, and venting facilities in a single compact unit.

- Option to mount directly into the process piping or remotely on a two inch pipe stand
- Enable gauges, pressure transmitters, or switches to be installed reliably by reducing potential leak points
- Treaded and plugged vent port enables safe installation of exhaust piping/tubing on hazardous service

A distinct, expert offering backed by the experience and resources of Emerson

Emerson's fluid control and pneumatics portfolio applies industry expertise and clever solutions to your unique business challenges today and tomorrow. We are forward-thinkers—ready to help you with smart technologies, unmatched product reliability and a proactive, consultative partnership approach designed to improve your performance.

Working with Emerson means you can innovate your process business operations without incurring unnecessary risk. Emerson experts understand the critical reliability required for your industry and foresee how fluid control and pneumatics can improve your business. With our expertise, your resources can be free to focus elsewhere.



Consulting Services

- Application-specific expert consultations
- Auditing and walkdown services
- Ready-to-install customized packages



Project Services

- On-site service within 24 hours
- Malfunction analysis beyond our products



Lifecycle Services

- Rapid Engineered Solutions
- Online product & CAD configurators



Educational Services

- Emerson Solution Centers for customers
- Trainings for your sales force





Emerson addresses the world's most critical needs. Reach out to become part of our powerful, global network and speak with our dedicated, industry experts in fluid control and pneumatics.

Get started



Emerson delivers time-tested and innovative fluid control & pneumatics solutions designed to help you improve your operation's overall performance, today and tomorrow. Contact us now for world-class technologies and services that can maximize your efficiency. Getting started is easy. Visit [Emerson.com](https://www.emerson.com)

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