



Get tapped into how Emerson can
optimize your brewing operation

Proven Fluid Automation for the Brewing Industry
Industry leading solenoid and air operated valve solutions





You need a supplier you can trust with your most challenging demands.

Delivering a wide range of fluid automation solutions that meet today's most challenging brewing demands

A reliable fluid automation system is essential in the brewing industry – but determining the right solution isn't always easy. At Emerson, we know what you're up against. With our extensive range of products, we can help provide a solution to ensure efficient and reliable performance from brewing to packaging.

In today's highly competitive brewing industry, production efficiency is paramount yet difficult to achieve with the rising cost of resources, increased regulation, and a lack of operational flexibility.



It's challenging to find suppliers with a comprehensive product offering of solenoid and air-operated valves, cylinders, actuators, sensors, and indicators used throughout the brewing lifecycle.



Brewers face potential challenges across many critical processes; ranging from energy consumption, physical space constraints, installation and maintenance. Components need to be efficient, reliable, durable, and up to par with the industry's standards.



Fluid automation solutions – all from a single supplier

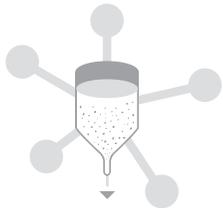
Emerson has one of the broadest offerings of fluid automation products for the brewery industry. Our engineers have extensive technical knowledge and understand the most pressing needs. Whether you are a local craft, regional or global-sized operation, we will work with your team to design a simplified, high-performing fluid automation system that meets your most challenging and complex requirements. Our solutions are customized, already engineered, assembled, tested, and ready to install.



Provide you with operational flexibility without compromise

- Our team has extensive experience within the brewery industry
- Our fluid automation systems reduce complexity and add manufacturing value
- We address the most important challenges in your operation

When an important calculation for a new controls solution was overlooked, the result threatened to keep a new aging tank for a brewery offline. Substituting solenoid valves with built-in power management brought the equipment online.



An extensive portfolio to fit your needs

- The right fit, for the right application that spans across your brewing operation
- Choose from a wide variety of solenoid and air-operated valves, cylinders, pilot valves, sensors, and indicators – from valves, controls to sensors
- Customized and packaged - fluid automation technologies that can be incorporated as an integrated enclosure solution that greatly simplifies your fluid automation setup, designed, engineered, and ready to install

Having a broad portfolio of products available, a brewery no longer needed several independent components suppliers, significantly streamlining their procurement processes.



Efficient, reliable, and intelligent fluid automation products

- Directional control valves with an innovative graphic display used for easy commissioning and visual status. Serves as a centralized point for maintenance, diagnostics, and recovery – minimizing downtime
- Efficient solenoid technology designed and manufactured to lower operating cost and increased performance
- With our wide range of approvals, our products are reliable to meet some of the most demanding wash-down environments

Increase plant throughput via our sophisticated integration of advanced fieldbus electronics and proportional technology.

Rely on automation to maximize performance and keep product quality high

Today's brewers depend on automation. Whether it's a microbrewery with a few valves, or a large brewery with complex processes, all need fluid and motion control solutions that keep product quality high — and their operations running trouble-free. These solutions must have long service lives, be compact and easy to install in tight spaces, and provide rapidly available replacement components and technical support to minimize downtime. Brewers and OEMs require fluid and motion control solutions crafted to their own specific needs. Only Emerson's comprehensive portfolio of **ASCO™**, **ASCO Numatics™**, and **Topworx™** products can fulfill these challenges with ultra-reliable components – delivered and serviced with speed and responsiveness.

The U.S. now has over 4,000 active breweries, the highest number since 1873.

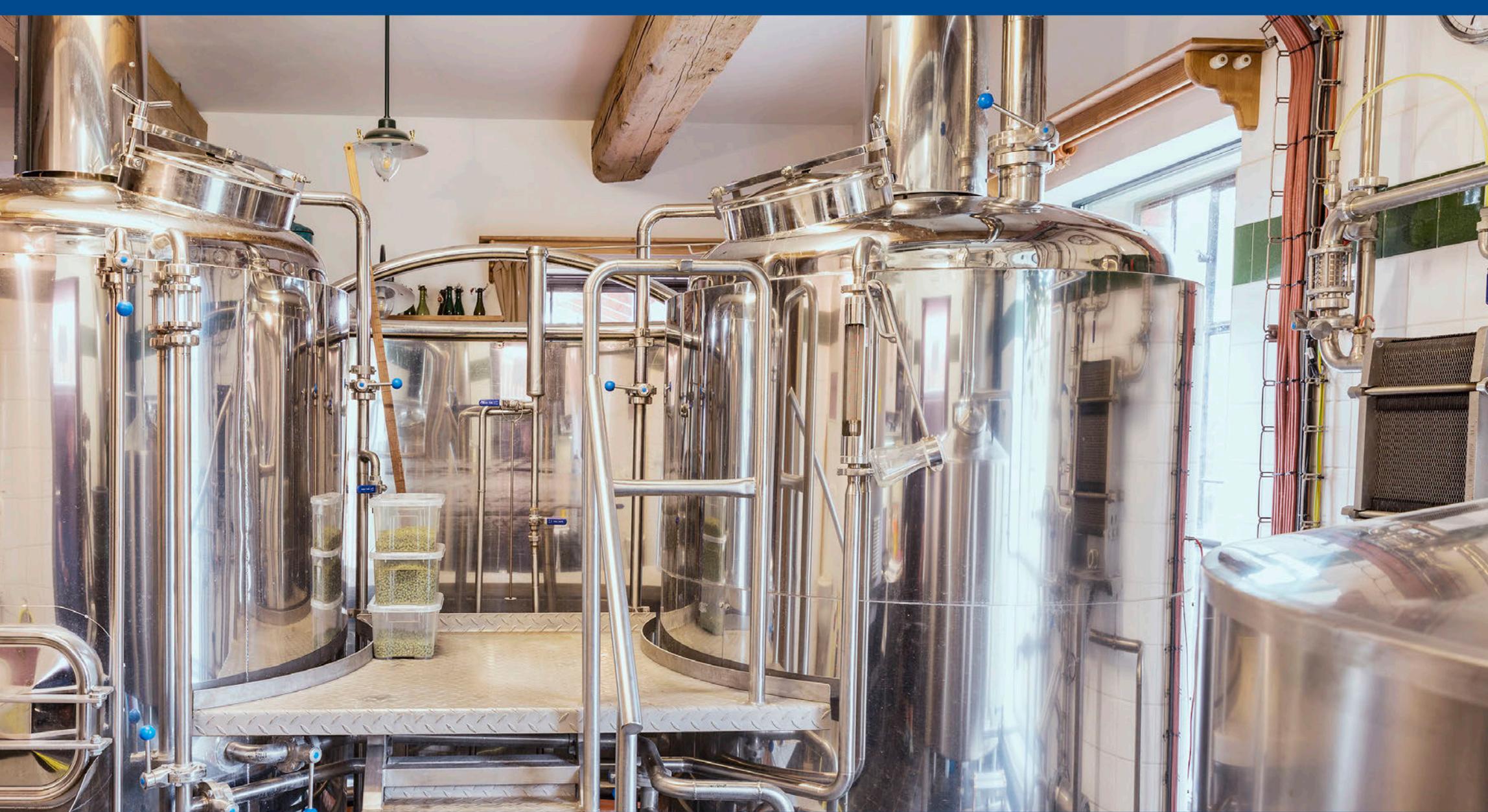


U.S. craft beer sales reached \$23.5 billion – achieving 10% growth over 2015



Craft beer volume grew 6.2% – and continues to rise





“With our technical application expertise and locations worldwide, we’re always nearby to help solve your brewing challenges. Contact us today.”

From Milling to Packaging: Superior fluid and motion control solutions across the brewing process

As a long-time world leader in solenoid and pneumatics technologies, Emerson is a single source of superior solutions for the brewing industry.



Grain Handling

Pneumatic conveyor systems are commonly used to handle the transfer of grains from silos to milling stations. Proper valve selection for your application can help automate the process therefore optimizing raw material consumption and reduce labor. Our industry leading valves such as our **ASCO air-operated pilot valves** to **ASCO Numatics Valve Island with G3 Fieldbus Electronics** are robust and reliable. They are ideal for both indoor conveyor systems and outdoor silos to pilot large actuators. Mounted on top of any pneumatic actuator, **TopWorx Switchboxes** offer position indication and control for on/off valves.

Mashing

Brewers must monitor mash temperatures extremely closely to ensure product quality and taste. **ASCO general purpose solenoid valves, ASCO Numatics air preparation equipment** and state-of-the-art **ASCO Numatics directional control valves with G3 electronic modules** provide the necessary quality of air and intelligent solutions to ensure precise temperature control.

Lautering

Water is added during lautering to extract more of the fermentable sugars from the grain. This must be done carefully to not disrupt the grain bed that serves as a natural filter. The wide range of **ASCO general purpose** and **ASCO pilot valves** for fluid automation can provide the precise flow control in order to optimize sugar extraction from the grain.

Boiling

When boiling to sterilize the beer and release hop flavors, timing is critical. Adding hops requires a systematic process to assure the proper aroma and flavor. For precise automation of process and **ASCO air operated valves** the **ASCO Numatics directional control valve with G3 electronics** incorporates an innovative graphic display used for easy commissioning, visual status & diagnostics.



Whirlpooling

This process employs centripetal force to separate unwanted solids from the wort. **ASCO Angle Body valves** have high reliability and flow capability to transfer the higher viscous and unwanted particulate media.

Cooling

Beer will begin to oxidize and produce flavors almost immediately during the cooling process. **ASCO Angle Body valves** and **ASCO general purpose solenoid valves** can control flow of steam, water, and even high viscous media such as glycol – providing an array of choices for high precision temperature control.

Fermentation & Maturation

Whether lager or ale, Emerson has a variety of solutions for regulating fermentation and maturation process temperatures. **ASCO temperature control valves** can eliminate multiple valves for double and single-jacketed tanks, enabling the use of a single body valve in a tank or vessel. An **ASCO Positioner^D** valve can be used to proportionally add glycol to conserve cooling fluid. Additionally, our **TopWorx switchbox** solutions can be used for indication and sensing in critical steps. For reduction in wiring complexity and installation, ASCO temperature control valves can be combined with the **ASCO Numatics G3 electronics** and **ASCO Numatics air preparation equipment** for piloting and temperature sensing.

Bottling and Packaging

ASCO and ASCO Numatics fluid and motion control products are found throughout the brewery's bottling and packaging processes. Our solutions ensure high-speed throughput, reliability, and accuracy in pilot filling, labeling, packaging, and palletizing operations - from quick-turnaround lines to high-volume production.

Clean in Place (CIP) / Wash-down

Effective sterilization of a facility's lines and vessels depends on CIP processes that maintain specific temperatures. Deviations or inaccurate readings from faulty equipment diminish process efficacy and cause contamination that spoils product. **ASCO and ASCO Numatics fluid and motion control products** are designed to meet a variety of harsh wash-down environments.

Air Operated Valves

ASCO Angle Body Valves



The ASCO 290 stainless steel angle body valve for fluid control is a rugged, high-flow, on/off valve providing up to 60% higher flow than competing designs and up to 5 times longer life than conventional ball valves. Offered as either pilot-operated or motorized versions gives a facility to choose between compressed air or electricity. The 290 FB meets the FDA CFR21 & (EC) 1935-2004 certifications, making it an ideal choice for CIP or tank / vessel systems.

ASCO Angle Body Proportional Valves



The ASCO 290 Series proportional valve permits controlled introduction of glycol into the cooling system. This allows for the gradual addition of glycol depending on the cooling needs and size of the batch. Offered in either pilot-operated or motorized models, the ASCO 290 Series enables the use of compressed air or electricity and is available in stainless steel for protection from caustic wash-down procedures.

ASCO Temperature Control Valves



These direct-acting valves achieve precise temperature control in fermentation tanks. Each body is comprised of two valves with six ports to allow both the feed and return of media – allowing one component to control both hot and cold glycol flows.

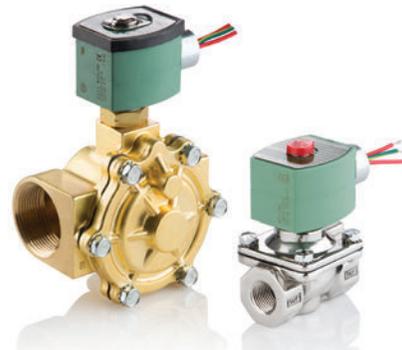
Solenoid Operated Valves

ASCO General Purpose Valves



ASCO solenoid valves control the flow of glycol into the cooling system. Their high flow rates and rugged stainless steel constructions provide customers with more cycles and greater throughput

ASCO Hot Water Valves



Using the industry accepted ASCO Red Hat II solenoid technology these highly versatile and reliable valves can be used across many high-temperature brewing & utility applications using water up to 210F (98C) or steam. Designed to also withstand caustic wash-down procedures with solenoid enclosures rated up to NEMA 4x and a stainless steel body construction our select range of valves are also EC 1935-2004 and NSF-approved.

ASCO Solenoid Pilot Valves



Dependable ASCO solenoid valves are found in almost every brewery. These renowned products offer piloting control of process valves and cylinders in liquid transfer for water supply, washout, bottling and packaging lines, mashing, steam or cooling water in outdoor tanks.

Motion and Control Solutions

ASCO Numatics Directional Control Valve Island with G3 Electronics



ASCO Numatics valve islands pilot air operated valves, cylinders, and actuators for brewing, bottling, and packaging. Their embedded fieldbus and I/O capability simplify installation and commissioning by eliminating individual wiring and piping. The ASCO Numatics G3 RTD Temperature Module can be integrated for temperature sensing in fermentation and conditioning. The LED display allows for easy monitoring, diagnostics and configuration, plus an auto recovery module reloads configuration data to ensure fast change-out.

Integrated Enclosure Solutions



Emerson offers turnkey solutions of best-in-class ASCO and ASCO Numatics products mounted in stainless steel integrated enclosures. Components can include directional and fluid control valves, G3 fieldbus electronics, and FRLs. These NEMA wash-down-rated solutions eliminate contamination and protect components from corrosion that may cause downtime. They also eliminate complex tubing routing and bulkhead fittings.

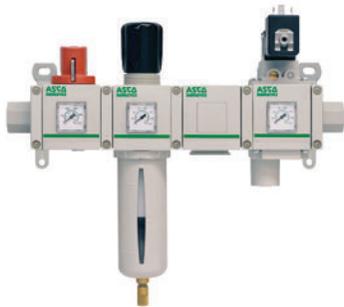
ASCO Numatics Cylinders



ASCO Numatics motion control devices automate the brewery's conveying, mashing, milling, and bottling processes. Cylinders have stainless steel constructions to withstand caustic wash-down procedures in a sanitary production environment.

Air Preparation and Position Indication

ASCO Numatics Filters, Regulators, and Lubricators (FRL)



Easy-to-install ASCO Numatics FRLs improve pneumatic air quality and avoid failures. Mount these products discretely or modularly in stainless steel control cabinets as part of an integrated automation solution that eliminates contamination risk and protects against corrosion.

TopWorx T-Series Switchboxes



Breweries use a variety of pneumatically actuated ball and butterfly valves across their processes. Mounted on top of any pneumatic actuator, TopWorx switchboxes offer position indication and control for on/off valves. They have a variety of communication options such as ASi, Device Net, or Profibus, or can incorporate a proximity sensor such as the TopWorx GO Switch.

Emerson is the supplier of choice to simplify and scale your Brewery Operations, with the most extensive automation expertise and suite of solutions for the industry.

To find out more about these technologies and our entire Automation Solutions portfolio and services, please visit

Emerson.com/en-us/industries/automation/food-beverage/beer



For more information, visit www.asco.com/beer

Reliable Brewing Automation Products: Delivered and Supported with Speed and Responsiveness

Emerson offers breweries and OEMs a vast selection of readily available, ultra-reliable products supported by knowledgeable application specialists. The benefits include immediate availability and quick delivery; unmatched expertise; and responsive technical support.



Recognized expertise and Support

Emerson fields the industry's most knowledgeable, experienced sales and product specialists. Our seasoned veterans have the technical and application expertise that solves problems and improves processes. We listen to our customers to deliver the right products and customized engineered solutions to the right place in the brewing process.



Commitment to quality

Brewers work tirelessly to minimize batch-to-batch variability to ensure taste and freshness. ASCO and ASCO Numatics products have demonstrated repeatable and precise performance across millions of cycles. Our ASCO Numatics G3 diagnostic capability allows brewers to collect process data to optimize the quality of their production systems.



Acknowledged reliability and safety

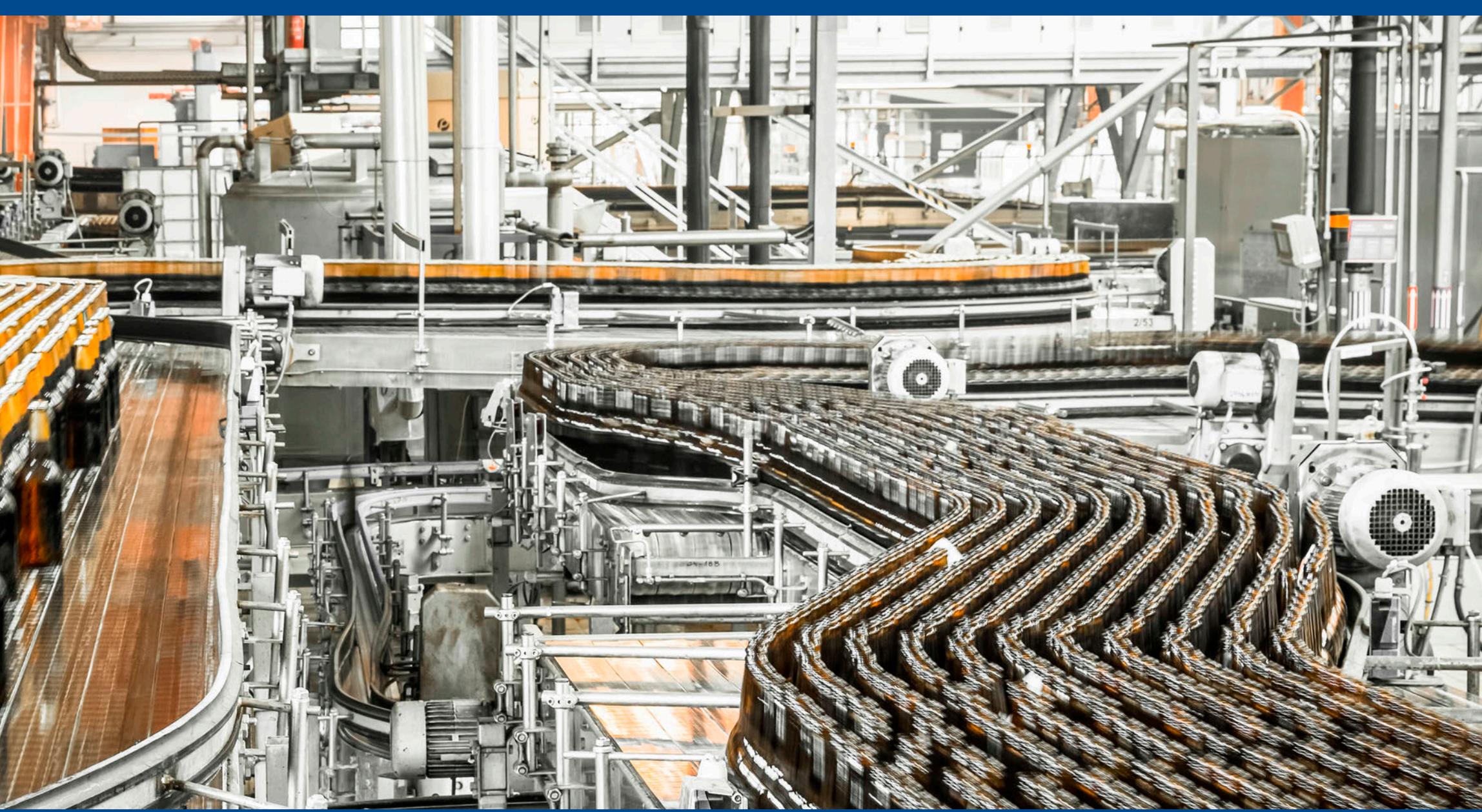
Emerson's products are renowned for quality, reliability, and safety. They're designed to withstand challenging brewing environments, capable of meeting harsh clean-in-place/wash-down procedures and delivering long service life for ultra-dependable uptime.



Immediate availability and support

Through Emerson's shipping program, most products are available to ship within hours. We won't let the lack of a single part limit your productivity, or stop production. And when technical support is needed, Emerson offers the industry's highest level of customer service. We promise immediate online help, phone callbacks within 4 hours, and onsite technical response within 24 hours.





“Emerson is a single source of superior solutions for the brewing industry. Contact us to optimize your brewing operation today.”

Optimize your brewing operation



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ASCO™ ASCO NUMATICS™ TOPWORX™

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



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