



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





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

Quickly delivering high-performing, custom fluidic systems that meet today's most challenging demands

Creating custom fluidic systems for clinical diagnostic instruments isn't easy especially on tight deadlines. At Emerson, we know what you're up against. We'll help you create a custom fluid-handling system that meets the challenging demands of today's clinical diagnostic market—all in a matter of days. The design, engineering customization and procurement of essential fluidic systems are important components of total development time. Any delay can prevent you from meeting your aggressive time-to-market goals.

Advancements in the miniaturization of diagnostic testing methods are making it difficult to design and develop a complete fluidic system that is precise and reliable, reduces system complexity, and adds value to your manufacturing process. 1

It's rare to find suppliers of clinical diagnostic components that have a comprehensive product offering, including valves, fittings, manifolds, pressure regulators, and tubing.



Fast customization and technical expertise—all from a single supplier

Emerson has one of the broadest offerings of miniature fluidic products on the market; our engineers have deep technical knowledge and understand the requirements for today's in-vitro clinical diagnostic instruments. Not only will we work with your team to design a high-performing fluidic system that meets your most stringent technical requirements, but we'll deliver a fully-engineered, production-ready system quickly.



Take advantage of our rapid design and development

- Our Rapid Engineered Solutions program enables fast prototyping
- We can customize quickly—improving your time-to-market
- Our responsiveness to your changing needs avoids development delays

"Emerson was able to provide us with a fully functional valve manifold assembly in just a couple weeks, and it was exactly what I needed." – Mechanical Fluidics Engineer, Global IVD Company



Take advantage of our technical expertise

- Our engineers have extensive experience within the clinical diagnostic field
- Our fluidic systems reduce system complexity for improved manufacturability
- We prioritize the fluidic path in our designs—improving instrument efficiency

"I was pleasantly surprised when product development engineers requested to visit our R&D facility to discuss our new instrument design and capability requirements." – Director of New Product Development, Hematology OEM

Take advantage of our extensive product portfolio

- Choose from a wide variety of valves, assemblies, tubing—and more
- Our extensive portfolio means component availability is never an issue
- Receive a total solution that meets your rigorous design constraints

Having a broad portfolio of miniature fluidic products available, an analytical instrument manufacturer no longer needed three independent component suppliers, significantly streamlining their procurement processes.

With Emerson, you can overcome your flow challenges

Clinical Chemistry Analyzers

- Product testing to over 100 million cycles for enhanced reliability
- Minimal pumping effects to reduce waste

Sample Preparation and Liquid Handling Equipment

- Chemical compatibility with harsh chemicals
- ISO Class 8 cleanroom manufacturing to minimize contamination

Immunoassay Analyzers

- Close to zero dead volume to reduce consumption of costly detection reagents
- Reduced footprint for smaller Point-of-Care instruments

Hematology Analyzers

- Minimal heat transfer to thermally-sensitive media
- Power-saving circuits to reduce power drain for battery-powered instruments



Breadth of Fluid Control Products

Thanks to our extensive offering of valves, manifolds, pressure regulators, and more, we can quickly customize and combine our products into high-performing fluidic systems.

Rapid Engineered Solutions

By responding quickly to your customization requests, we can provide you with production-ready systems in as little as 10 days.

Your One-Stop Design & Development Partner

Our deep understanding of the clinical diagnostic market allows us to better assist you in streamlining fluidic system and total instrumentation cost.

Fluidic Design Technical Expertise

Our engineers have comprehensive expertise of the fluidic requirements for today's in-vitro clinical diagnostic applications and instruments.

Breadth of Fluid Control Products

Emerson is your single source for a wide variety of ASCO[™] fluid-handling components; including miniature pinch, liquid isolation, proportional and general service valves, as well as fittings, manifolds, tubing and pressure regulators. Not only do our products accommodate unlimited configurations, but they achieve the highest levels of precision, functionality, safety, and efficiency required by clinical diagnostic applications—all while featuring the lowest power consumption in the industry.



Rapid Engineered Solutions

Our Rapid Engineered Solutions program focuses on the unique needs of analytical and medical instrument manufacturers. The program creates miniature valves and fluidic assemblies customized to your exact needs, and delivers them at unprecedented speeds.

From concept to production, we'll deliver your complete solution, including valves, electrical terminations, pins and housings, in as little as 10 days.



Your One-Stop Design and Development Partner With our broad range of products and engineering capabilities, we specialize in

customized designs. Our capabilities include additive manufacturing, diffusionbonded manifolds, customized fittings, electrical connections and wire harnesses for plug-and-play installation. We seek to be an engineering and development partner to OEM device manufacturers, and remove the burden of fluidic path design.



Fluidic Design Technical Expertise

Our local technical support and engineering teams will work with you to develop, design, and build a high-functioning fluidic solution that reduces system complexity while simultaneously adding value to your manufacturing process. We'll help you select the right products and develop a fully optimized system that addresses the unique challenges of your application to include the variables that often get overlooked, such as flow through the instrument, component heat transfer, and material compatibility.

ASCO™ Pinch Valves

ASCO™ Isolation Valves

Series 045



These 2-Way and 3-Way normally closed and normally open solenoidoperated pinch valves are designed for use with highly aggressive or high-purity liquids in analytical and medical instrumentation.

 Available in a wide range of body sizes to accommodate a variety of tubing diameters required for any sized instrument

Series 284/384



These aluminum body 2-Way and 3-Way normally closed and normally open solenoid-operated pinch valves designed for use with highly aggressive or high-purity liquids in analytical instrumentation.

- Removable and rotatable electrical coils allow for easy installation and worry-free maintenance
- Hermetic separation of control mechanism and the fluid within the tubing prevents particulate contamination caused by friction of moving parts

Series 458



These patented rocker isolation valves are designed for use with neutral or highly aggressive liquids in analytical instrumentation.

- Special rocker mechanism prevents heat transfer to the fluid and eliminates the sticking effect of the valve seat
- Hermetic separation of control mechanism prevents particulate contamination caused by friction of moving parts

ASCO™ Isolation Valves

Series 055



These PTFE isolation valves are designed for use with highly aggressive liquids.

- Excellent self-draining capability and easy-toflush low-volume internal cavity
- Compact architecture make them ideal for analytical bench-top instrumentation





These rocker isolation valves are designed for use with neutral or highly aggressive liquids in analytical instrumentation.

- Rocker mechanism, combined with a separating diaphragm, prevents heat transfer to the fluid and eliminates the sticking effect of the valve seat
- Hermetic separation of control mechanism prevents particulate contamination, assuring maximum purity of liquid samples

Series 068 & 068 Proportional



These flapper isolation valves are designed for use with neutral or highly aggressive liquids in analytical systems. Proportional constructions proportionally control the flow of neutral and aggressive liquids and gases by varying the electrical input signal to the coil.

- No pumping or sticking effects
- Reduced heat transfer makes them ideal for use with heat-sensitive reagents and biological samples

Series 385



These rocker isolation valves are designed for use with neutral or highly aggressive liquids in analytical instrumentation.

- Rocker mechanism, combined with a separating diaphragm, prevents heat transfer to the fluid and eliminates the sticking effect of the valve seat
- Excellent self-draining capability and easy-toflush low-volume internal cavity

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Get started



Emerson delivers time-tested and innovative fluid-handling and control solutions designed to help you improve your operation's overall time-to-market while reducing system complexity and increasing efficiency. Contact us for world-class technologies and services that can maximize your ability to control the flow of aggressive fluids in a variety of clinical diagnostic technologies and bioinstrumentation. Getting started is easy. Visit: ASCO.com

Emerson Automation Solutions ASCO L.P. – United States 46280 Dylan Drive Novi, MI USA 48377-4906 T. 248-596-3200 E. info-valve@asco.com Emerson Automation Solutions ASCO Numatics GmbH – Germany ASCO Numatics GmbH Otto-Hahn-Str. 7-11 75248 Ölbronn-Dürrn T. +49 7237 996 0 E. asconumatics-de@emerson.com

Emerson Automation Solutions ASCO Valve (Shanghai) Co., Ltd. – China 4th Floor, Emerson Building 1582 Gu Mei Road, Xu Hui District Shanghai 200233, P.R. China T. +65 6556 1100 E. shanghai.asco@emerson.com

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