

SMC Life Science



Automation Solutions
for the Pharmaceutical / Biotechnology Industries



SMC Life Science

SMC is pursuing customer satisfaction and supporting automation worldwide through the design and production of the world's most advanced pneumatic and fluidic control products.

The 21st century - With the revolution in global information technology, business methods are undergoing great changes. In these ever changing times, customer satisfaction can only be achieved by a clear understanding of our customers' goals and objectives. Therefore, SMC has built an organization that listens carefully to our customers, then responds quickly and specifically to their needs. SMC has established a widespread global network of locations in all major countries of the Americas, Europe and Asia showing our active commitment to the world market. SMC supports this global network with a stable supply chain of products, a high level of technical service and a solid communications network to meet our customers' needs and expectations.

Technical Development

Our engineering staff now exceeds 1,000 - located in Technical Centers in Japan, the United States and Europe.

Quick, clear and detailed responses to customer requests are communicated through our sales group, and our engineers are constantly on the alert for trends that lead to world-class new products.

Production and Supply

Our product line offers 11,000 basic models with over 600,000 variations. Global production facilities provide a stable supply of products to customers in all markets.

The vast array of products satisfies nearly every application. Fast delivery of these high-quality products at competitive costs is accomplished through our unique production system, and by maximizing our local production capabilities, a stable supply of product is guaranteed.

Sales and Communication Network

Local subsidiaries have been established in 50 countries worldwide, with over 230 sales offices. Our sales force of over 4,000 maintains close communication with customers.

By establishing a strong base in each country and region with a large experienced sales force, SMC provides the best possible service in the industry. Maintaining close communication with our customers throughout the world keeps our engineering teams and our products at the leading edge of industry.



SMC focuses on process safety, control, and reliability, helping customers achieve optimal fermentation and purification results.

SMC is on the Move. Pneumatics has advanced into numerous industrial applications over the last twenty years.

Today, customers' needs are in a state of transition, from standardization to diversification. As a general supplier of pneumatic components, SMC provides the ideal products for multiple applications and complete systems. Therefore, a broad range of pneumatic variations is offered for each system component. This complete array of products results in SMC pneumatic systems that are capable of specifically meeting infinitely diverse requirements.

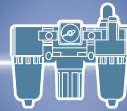
SMC's Quality Control System



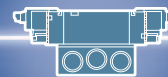
Compressor



Air Preparation Equipment
Air Dryers, Mist Separators



Air Line Equipment
Air Filters, Regulators and Lubricators



Directional Control Components
Solenoid Valves



Actuators
Cylinders, Rotary Actuators

SMC offers a complete line of pneumatic control systems. With 11,000 basic models and 600,000 variations, we have a wide range of product solutions to accommodate diverse applications.

Our products are not confined to the limits of conventional pneumatic control components, but are employed in every aspect of modern manufacturing. SMC products are developed to satisfy unique requirements, and we are committed to developing products for new markets to satisfy all of our customers.

Close relationships with our customers have allowed us to engineer products to fit the specific needs of the Pharmaceutical Industry.

In order to maximize performance for sustainable operation, we focus on the following areas:

- Reduced footprint
- Compact Size
- Repeatability
- Energy efficiency
- Wash down
- Reliability

The Pharmaceutical and Biotechnology Industries demand innovative and reliable production processes for the manufacture of drugs and active substances. Product purity is essential and demands a high standard of production quality.

SMC products are designed to meet the many challenges unique to the pharmaceutical manufacturing environment.



*SMC offers a full line
known throughout in*

Tight quality control standards drive the demand for clean dry compressed air.

SMC mainline dryers and filters as well as point of use air preparation equipment ensure operational quality, efficiency, and reliability.



Process control valves, used extensively throughout the manufacturing process, require pilot valves for proper operation.

Usually located in control cabinets, the pilot valves need to be reliable, compact, and easy to control. SMC offers a variety of valves and network nodes which are compatible with the industry's most common control networks.





*of pneumatic products
industry as the benchmark to meet.*

The intense focus on quality during production is matched with equally stringent requirements for the packaging phase of the manufactured product.

The Pharmaceutical and Biotechnology Industries require a wide range of automated processes in a heavily regulated environment. SMC is able to help meet these regulatory demands with our extensive portfolio of automation solutions.

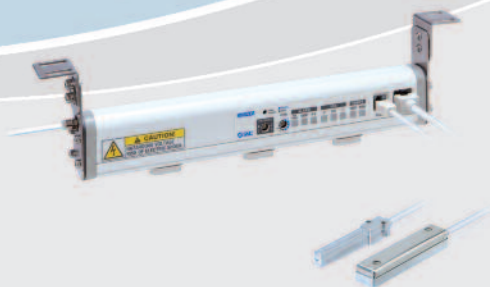
SMC's commitment to customer satisfaction is all encompassing, from product selection and procurement to application training and energy conservation.

The training division of SMC Corporation has made a clear commitment to offer pneumatic training adapted to the needs of the pharmaceutical industry. The experience of the SMC International Training team in both the industrial and the educational fields, has allowed the development of a wide range of training systems, adapted to all kind of needs and budget.

To address the need for maximum pneumatic efficiency SMC offers manufacturers an "Energy Savings Program." This program has been proven immensely successful for our customers, providing substantial savings both in operational costs as well as equipment needs.



SMC offers a range of liquid valves and transfer pumps used in the finish and fill stages of production and packaging processes.



The handling of the finished product, as well as the packaging method and material, can lead to product contamination and packaging inconsistency due to static electricity. To combat this problem, SMC offers a series of active anti-static products. These products not only aid in the proper packaging of the drugs but also make for a safer working environment for employees.



Refrigerated Air Dryers

Energy efficient design with high flow capacity. For use with compressors of up to 370kW.



Modular Air Prep Units

Filters, regulators, coalescing filters etc. are designed for optimum flow efficiency. Standardized flange/bracket design allows for quick installation.



Fittings and Tubing

Wide variety of product simplifies design and reduces installation time.



Process Valves

Wide variety of material options and configurations. For use in air, gas, vacuum, water, steam and oil type applications.



Compact Direct Operated 2/3 Port Solenoid Valve for Water and Air

Orifice diameters up to 4mm; can be used as a stand alone valve or manifold mounted. Stainless steel and brass manifolds are available.



Process Pumps

Compact, large capacity diaphragm pumps. Suitable for the transfer and recovery of a wide array of fluids. Pumps are available in a variety of materials with discharge rates of up to 45 l/min.



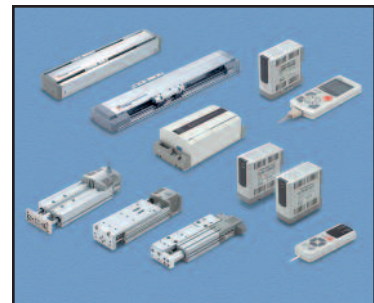
Pneumatic Cylinders / Actuators

Wide variety of pneumatic actuators such as standard piston rod, grippers, slide tables, guided, rodless and rotary types. Stainless steel actuators are available for more challenging operating environments.



Pneumatic Solenoid Valves

Available in many configurations to meet the toughest application requirements. Advanced design offers large flow in a compact package, quick response times, low power consumption and long service life.



Electric Actuators

Available in various form factors, such as piston rod, grippers and slide tables. State of the art technology simplifies installation, setup and programming.



Compact 2/3 Port Solenoid Valves for Chemicals

Lightweight, long life, low power, direct operated chemical valves designed to minimize internal dead volume. Available in different orifice sizes and mounting configurations.



Composite Valve Manifolds

Custom engineered to save space, reduce weight and installation time and eliminate assembly errors. Available in various materials.



High Purity Chemical Valve

Outstanding corrosion resistance and low particle generation. Designed for minimum internal dead space. Integral fittings eliminate the possibility of liquid pooling in pipe threads.



Fluoropolymer Fittings

Excellent flow characteristics, simple installation and high heat resistance. Fittings offer tube support and are designed to prevent overtightening.



Temperature Control Equipment

Variety of products available. All are designed for space efficiency, low power consumption and high temperature stability.



E/P Regulator

Precise control of pressure. Available in different sizes to meet various flow requirements. Controlled via a Voltage/Current signal and compatible with common industrial networks (DeviceNet, etc.)



Pressure Switches

Solid state and mechanical designs available in various form factors. The solid state sensors have features such as dual color LED readouts and PNP/NPN and analog outputs. Simple pushbutton setup eliminates the need for tools.



Flow Switches

Solid state as well as mechanical versions; switches available for use in liquid as well as gas flow applications. Solid state designs simplify installation and operation.



Anti-static Equipment

Advanced Ionizer bars with built in power supply and diagnostic features. Ancillary equipment such as static meters and sensors are also available.

Global Manufacturing, Distribution and Service Network

Worldwide Subsidiaries

EUROPE

AUSTRIA
SMC Pneumatik GmbH (Austria)

BELGIUM
SMC Pneumatics N.V./S.A.

BULGARIA
SMC Industrial Automation Bulgaria EOOD

CROATIA
SMC Industrijska Automatika d.o.o.

CZECH
SMC Industrial Automation CZ s.r.o.

DENMARK
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SMC Pneumatique S.A.

GERMANY
SMC Pneumatik GmbH

GREEK
SMC Hellas EPE

HUNGARY
SMC Hungary Ipari Automatizálási Kft.

IRELAND
SMC Pneumatics (Ireland) Ltd.

ITALY
SMC Italia S.p.A.

LATVIA
SMC Pneumatics Latvia SIA

LITHUANIA
SMC Pneumatics Lietuva, UAB

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SMC Pneumatics Norway A/S

POLAND
SMC Industrial Automation Polska Sp.z.o.o.

ROMANIA
SMC Romania S.r.l.

RUSSIA
SMC Pneumatik LLC.

SLOVAKIA
SMC Priemyselna Automatizacia, s.r.o.

SLOVENIA
SMC Industrijska Avtomatika d.o.o.

SPAIN/PORTUGAL
SMC España, S.A.

SWEDEN
SMC Pneumatics Sweden AB

SWITZERLAND
SMC Pneumatik AG

UK
SMC Pneumatics (U.K.) Ltd.

ASIA

CHINA
SMC (China) Co., Ltd.

HONG KONG
SMC Pneumatics (Hong kong) Ltd.

INDIA
SMC Pneumatics (India) Pvt. Ltd.

JAPAN
SMC Corporation

MALAYSIA
SMC Pneumatics (S.E.A.) Sdn. Bhd.

PHILIPPINES
SMC Pneumatics (Philippines), Inc.

SINGAPORE
SMC Pneumatics (S.E.A.) Pte. Ltd.

SOUTH KOREA
SMC Pneumatics Korea Co., Ltd.

TAIWAN
SMC Pneumatics (Taiwan) Co., Ltd.

THAILAND
SMC Thailand Ltd.

NORTH AMERICA

CANADA
SMC Pneumatics (Canada) Ltd.

MEXICO
SMC Corporation (Mexico) S.A. DE C.V.

USA
SMC Corporation of America

SOUTH AMERICA

ARGENTINA
SMC Argentina S.A.

BOLIVIA
SMC Pneumatics Bolivia S.R.L.

BRAZIL
SMC Pneumaticos do Brazil Ltda.

CHILE
SMC Pneumatics (Chile) S.A.

VENEZUELA
SMC Neumatica Venezuela S.A.

OCEANIA

AUSTRALIA
SMC Pneumatics (Australia) Pty. Ltd.

NEW ZEALAND
SMC Pneumatics (N.Z.) Ltd.

U.S. & Canadian Sales Offices

WEST

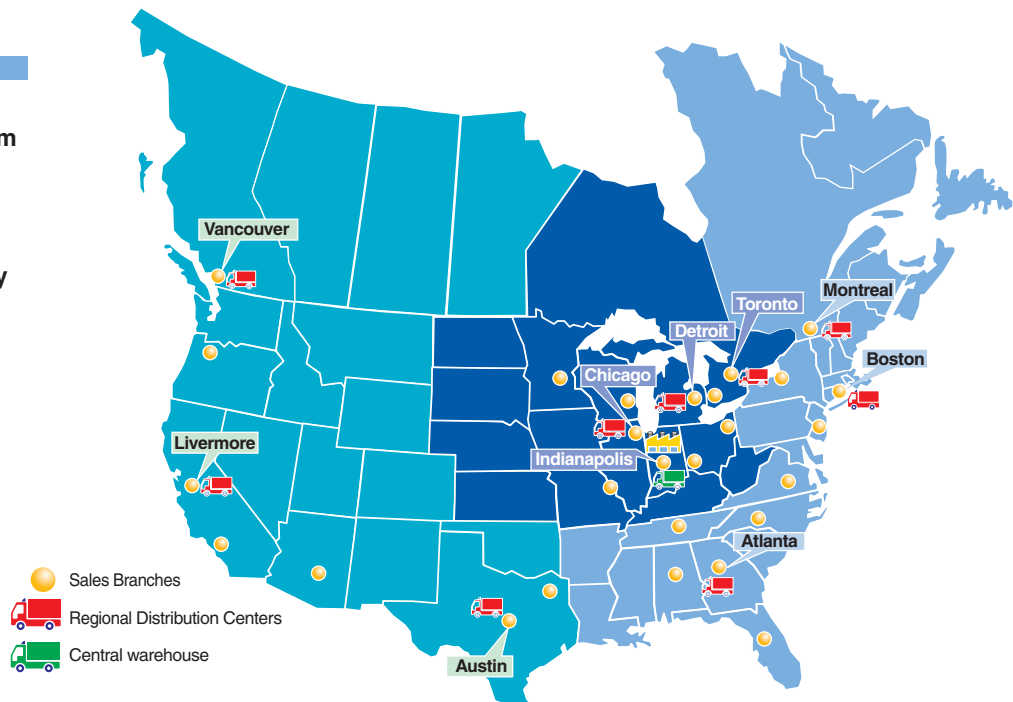
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