SMC

SMC'S SOLUTIONS FOR INTRALOGISTICS

Automate flow. Deliver results.

Expertise
Passion
Automation

The role of industrial automation in intralogistics

Intralogistics has become a strategic pillar for modern warehouses and distribution centres. As companies adopt Industry 4.0, automation enables **faster operations, higher accuracy and real-time visibility of material flows**. Automated transport systems, robotic handling and intelligent storage solutions are transforming how goods move inside facilities, reducing manual labour, improving safety and accelerating order fulfilment.

At SMC, we support this transition with a comprehensive portfolio **designed for flexible, safe, data-driven and energy-efficient intralogistics environments**. From compact pneumatic components to advanced electric actuators, wireless communication systems and vacuum technologies, we provide the reliability and performance required to optimise key intralogistics processes.

Autonomous mobile robots & AGVs

Collaborative robots in warehouses have to balance speed with safety, working alongside humans in confined areas. **Lightweight and flexible equipment is required** to maintain safe interaction while providing enough strength and precision for picking, placing or packaging tasks. Frequent product changes require cobots to deliver consistent performance despite limited payloads and continuous cycles.

SMC supports autonomous transport platforms with **compact and lightweight products, vacuum components and wireless communication systems** that reduce cabling and simplify integration. Our components ensure reliable gripping, lifting and load transfer in mobile systems that must remain agile and energy-efficient.

ZXPE5 Series +

Electric vacuum gripper for collaborative robots

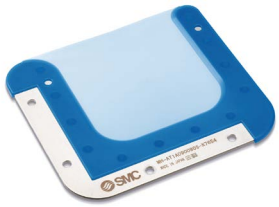
EXW1 Series +

Compact wireless base unit

CRP Series +

Compact compressor

Flexibility for end-of-arm tooling



MH-X7654 Series

Elastic finger for grippers

MHS3 Series

3 finger gripper, wedge cam style, standard

RMMA Series

Multi hand adapter

LEHR Series

Electric gripper for collaborative robots

Growing product diversification and **frequent changes in shape** are placing increasing pressure on automated handling processes. End-of-arm tooling has to be able to manage different forms, materials and surface conditions without compromising product integrity or production continuity. Inadequate tooling flexibility can lead to product damage, extended changeover times and reduced throughput.

SMC addresses these challenges **with versatile end-of-arm tooling solutions** designed to adapt to a wide range of product types and handling requirements.

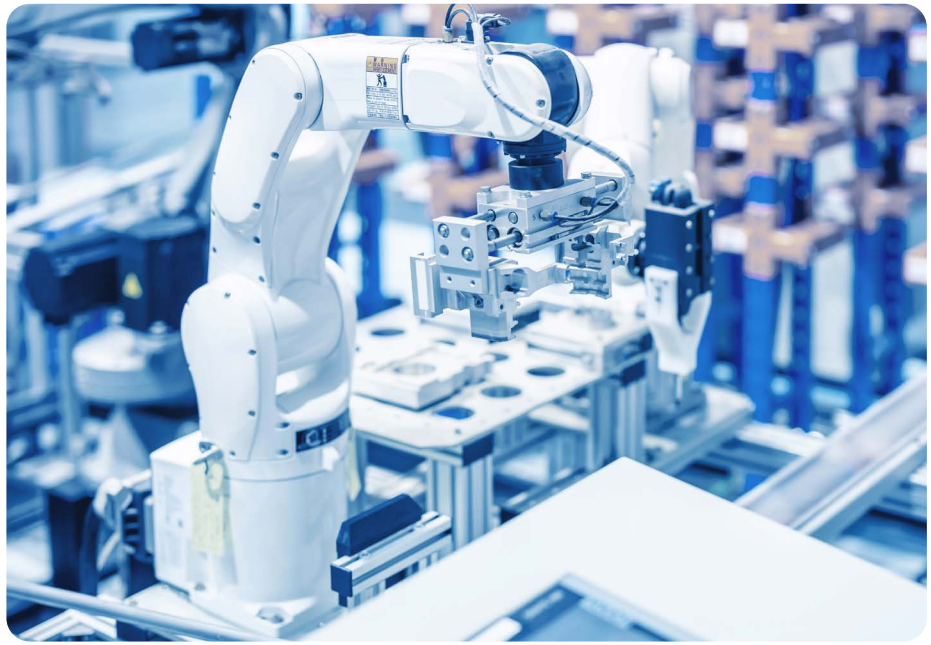
By combining flexible gripping technologies with a range of tool changers and multi-hand adaptors, SMC EOAT solutions enable safe and damage-free handling while maintaining fast and consistent cycle times. This versatility allows manufacturers to respond quickly to changing production needs, improve overall efficiency and future-proof their automation systems.

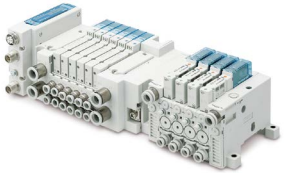
Discover our solutions for robotics

Robotic picking and handling

Automated picking and handling systems are up against demanding conditions due to the **infinite variation of products** found in modern warehouses. Systems must adapt to constant SKU changes while maintaining speed, precision and gentle handling to avoid damaging goods.

Space constraints, lighter equipment needs and continuous operation add further complexity, as robots must deliver **short cycle times** with high reliability. At the same time, **seamless communication and real-time feedback** are essential for integration into flexible, data-driven intralogistics workflows.





JSY & ZK2□A Series +

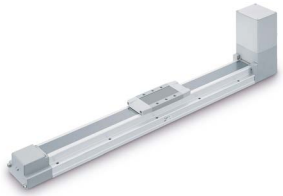
Valve and ejector combination manifold

ZP3C Series +

Abrasion resistant vacuum pad

ZGS Series +

Vacuum gripper system



LEFB, LEFG-BS Series +

Electric actuator, slider type, belt drive

Digitalisation for the warehouse of the future

Rapidly evolving market demands continue to challenge the industry to constantly update technologies and systems. Warehouses that are not digitalised fail to unlock the full potential of **data collection and data-driven decision-making**. Our range allows for support of not just our own solutions but also offers integration with existing standalone systems you may already have.

SMC actively develops and delivers innovative solutions that enable factory floors to achieve the expected levels of efficiency, while supporting system **flexibility and scalability**. This approach allows for easy layout modifications, seamless integration and full access to valuable operational data.

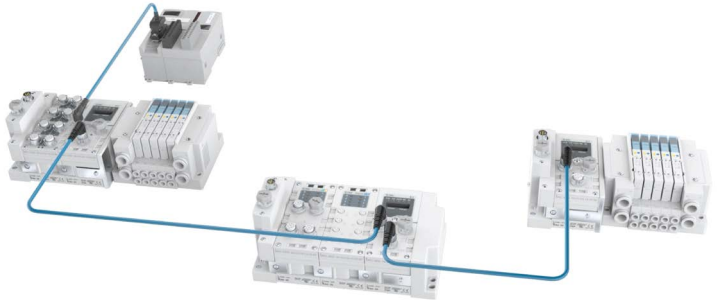
Discover more about SMC's digital architecture

EXW1-RDC Series

Compact wireless remote, digital input/output

AMS□X-X2044/X2045 Series

Air Management System, IO-Link compatible



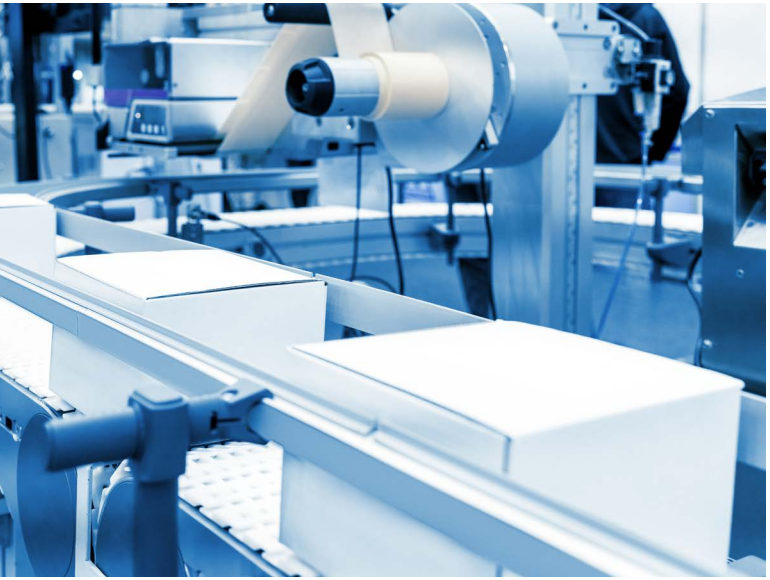
EX600 Series

Decentralised valve manifold system with fieldbus unit

Smart sorting, labelling & packing

Sorting and packing lines often operate at high speeds, **requiring components that can react instantly to size, weight and destination changes**. Systems must manage frequent start-stop cycles, eject items with precision and handle packaging materials that may be delicate or irregular. Consistent performance under continuous load, along with accurate sensing and controlled motion, is essential to avoid mis-sorts, product damage or bottlenecks in order processing.

SMC solutions such as high-response valves, ejectors, pressure sensors and electropneumatic regulators **ensure precise airflow control in high-speed sorting lines**. For labelling and packing, our compact actuators and vacuum technologies enable gentle but secure handling to avoid product damage.

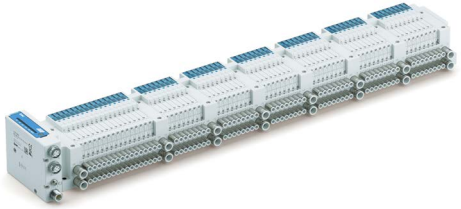


IZT43 Series +

Nozzle type ionizer, separate controller

CQ2-XB24 Series +

Longer life compact cylinder



JSY1000/3000-L Series +

64-station compatible manifold plug-in compact 5-port solenoid valve

IITV23 Series +

Electro-pneumatic regulator, manifold type

Energy efficiency solutions

Over the years, at SMC we have been fully committed to different energy-saving activities addressed at assisting our customers in reducing their bills and, why not? This is our modest contribution to global sustainability. We have accomplished different levels of energy-saving actions in our customers' factories, conducting energy audits, working towards green procurement, etc.

Let's go towards energy efficiency together, we have worldwide teams of specialists ready to support you.

Discover more about our Energy-efficient solutions

Generate
just what you need

Analysing our energy bills with a critical view. Is our total consumption justified?

Recover
what you generate

Different technologies to reuse energy (heat, released air, etc.)

Monitor
your consumption

Only when we know what's going on, can we enact effective energy-management policies.

Use
only the essential

How can we use energy more rationally in production processes? Plus, the necessary re-think on the way things have been done in the past.

Think
efficient

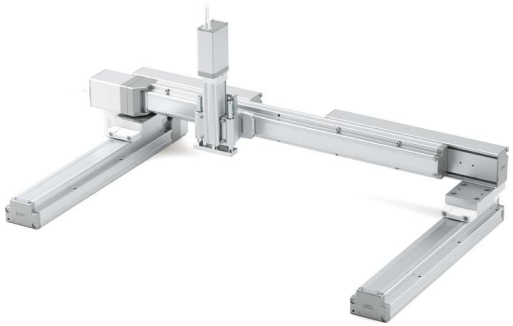
The concept that closes the loop and the most important one. Impregnate your day-to-day with energy efficiency.

AMS20/30/40/60 Series

Air Management System

Conveyor & Transfer systems

Conveyor systems must ensure **smooth and synchronised movement across long distances** while handling variable loads and product dimensions. They must remain reliable despite round-the-clock operation and exposure to dust, vibration or frequent speed changes. **Compact, durable components and precise control** are needed to maintain consistent transfer between zones and prevent jams or uneven product spacing.



LEA Series +

Electric actuator, multi-axis system, gantries (X, Y, Z axes with support guides)

EQFS□H Series +

Integrated controller slider type electric actuator

EQYG□H Series +

Integrated controller guide rod type

EQY□H Series +

Integrated controller rod type electric actuator

MACM Series +

Centring unit

RS2H Series +

Heavy duty stopper cylinder

LEB Series +

Electric stopper actuator

DAS Series +

Deceleration controller

Functional safety in material transfer systems

Human–machine interaction is an inherent part of material transfer processes, where goods move across multiple platforms, conveyors and sorting systems. Ensuring safe operation throughout these interactions is critical to maintaining both system reliability and operational continuity.

With a strong focus on **reducing any risk**, SMC is committed to the development of ISO 13849-compliant safety components that support **the safe design and operation of automated transfer systems**. These solutions help manufacturers protect personnel, safeguard equipment and maintain consistent performance across complex material handling environments.

Discover more about machinery safety

VPX400 Series

Safety exhaust valve, modular connection type

C96N-X3075 Series

Cylinder with lock unit

For more information please contact SMC.

EX260 Series

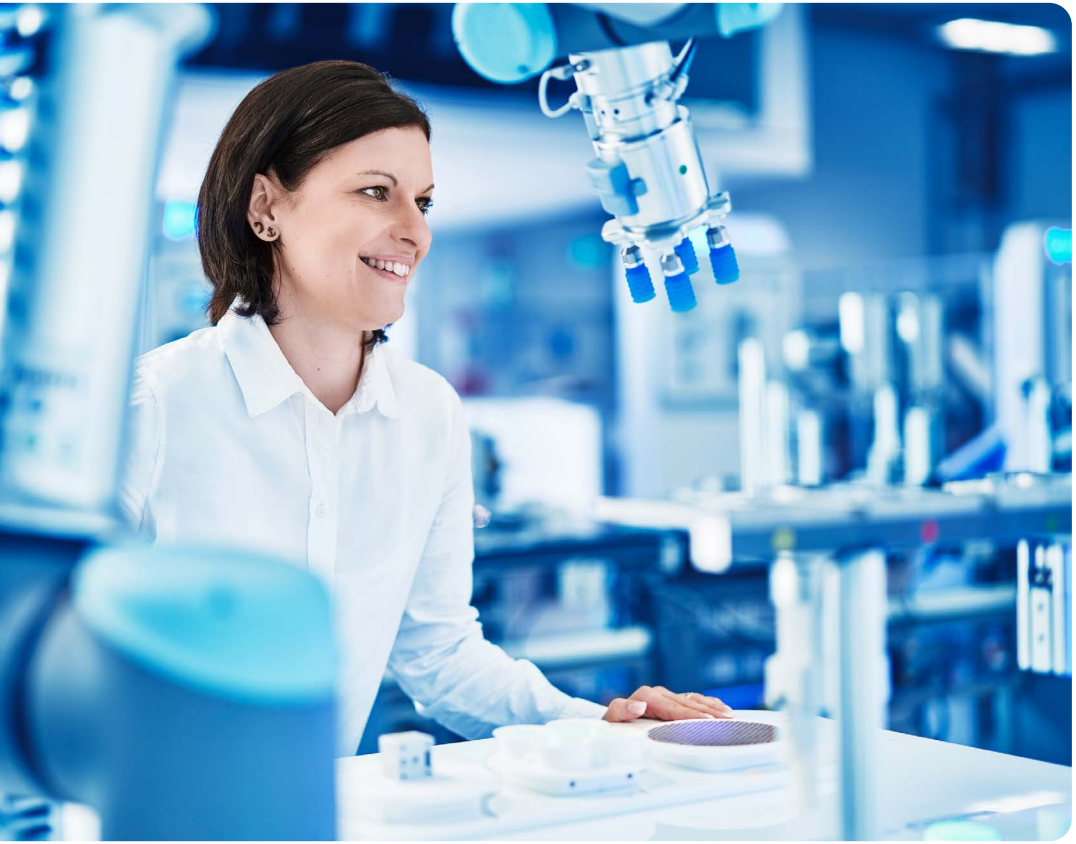
Compact fieldbus system for output with PROFIsafe and safety over EtherCAT®

LECSB-T Series

AC servo motor driver with STO pulse input type

Facts over words

See how SMC has helped customers to achieve successful implementation of automation solutions in their material handling flows.



Integrated vacuum solution for box packaging automation

The challenge

A supermarket warehouse was developing a packaged **box loading system using a collaborative robot** for their 24/7 warehouse operations. Each line of the packaging process consisted of three steps:

1 Adsorption for box erecting

2 Picking up the bagged product and placing it into the box

3 Conveying the filled box to a waiting conveyor.

SMC supported the design phase by providing a **unified solution for all vacuum functions, including valves, ejectors and sensors**. For the box-stretching application, a system with 32 **ZP3P-JT series** vacuum pads was implemented to ensure durability throughout the stretching and folding cycles. For box handling, a **ZGS series** vacuum pad unit was selected due to its versatility.

Results

With our expertise and technical support, the company successfully developed a **versatile and durable handling system, achieving maximum performance** in its packaging and handling process.

Improved versatility for conveyor format changes with electrical actuators

The challenge

A semiconductor cassette logistics facility was facing challenges in its conveyor systems due to **variability in product sizes across different models**.

The pneumatic stoppers used for product transfer limited system flexibility, requiring dedicated solutions for each product dimension. To address this issue, SMC proposed **replacing pneumatically controlled stoppers with electric actuators**, such as **LEB series**, which can accommodate multiple positions for differing model sizes and significantly reduce the person-hours associated with jig changes.

In addition, the facility required a **mechanism to adjust the conveyor width to support different product formats**. With support from our application experts, an **LER series** **electric rotary table** was implemented to reposition the conveyor bars accordingly.

Results

The integration of a fieldbus communication system using PROFINET enabled simple and reliable control from the PLC, allowing **flexible format changes with minimal human intervention**. Additionally, all speed and force movements could also be finely adjusted and controlled. Following the implementation of electric actuators, the facility achieved lower maintenance and changeover costs, resulting in **improved productivity and overall logistics efficiency**.

SMC Business Continuity Plan

Sustainable growth also means ensuring uninterrupted operations

We are committed to ensuring that SMC is prepared for any emergency and that our business activities will not stop in the event of such circumstances. SMC aims to fulfil our product supply responsibilities and maintain our customers' trust by contributing to both sustainable growth and the expansion of technological innovations.

SMC, as a comprehensive manufacturer of automatic control equipment that supports automation, is able to promptly provider products that meet our customers' needs anywhere in the world.

Production BCP
Ensure customer order fulfilment

Reliable delivery for you thanks to our 9 global logistic centres and 38 production sites worldwide. Moreover, flexibility to rapidly respond to any sudden change in the manufacturing environment.

Finance BCP
Safe & Solid financial base

In the event of an emergency, SMC can provide a safe and solid financial base (with cash, deposits, and equity capital) that will sufficiently cover the working capital and funds needed to rebuild buildings and the equipment required for business continuity. This is done to provide peace of mind to our customers and workers alike.

Information security BCP
Vital data kept safe

Strengthen information security for protection against computer viruses and cyberattacks, plus the installation of data centres to establish a disaster recovery system. Your information is safe with us.

Engineering BCP
Consistent technical support

2,000 engineers at our 5 technical centres around the globe.

Sales BCP
Consistent sales support

7,000 sales engineers worldwide ready to recommend the best solution for you. Over 80 global locations to make sure that wherever you are, we are there too.

Discover more

Expertise
Passion
Automation

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