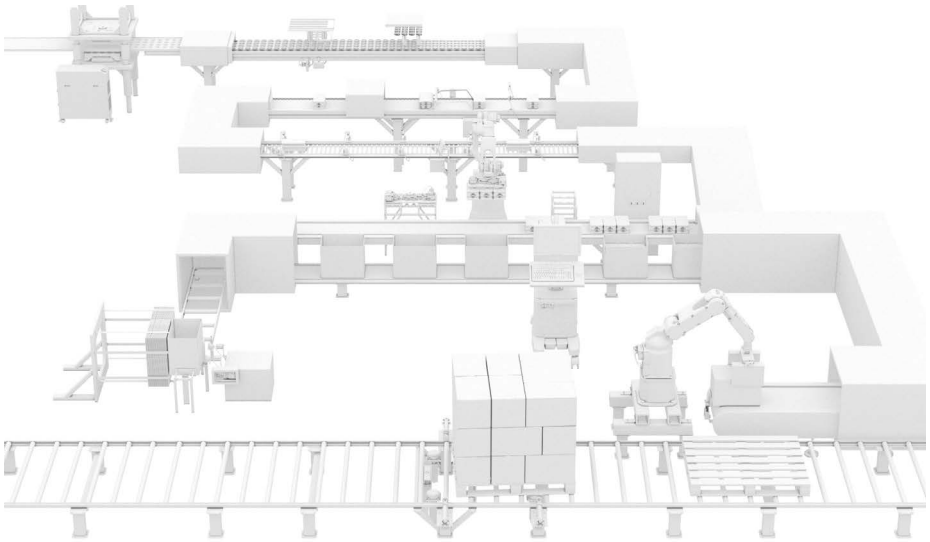
SMC

SMC'S SOLUTIONS FOR PACKAGING INDUSTRY

Filled with solutions for you

Expertise
Passion
Automation

Packaging: evolving processes for a smarter future



Packaging has transformed from a simple delivery mechanism into a sophisticated industrial process. Today, it's not just about protecting goods for delivery to the customer, it's **about optimising production, integrating smart technologies and meeting evolving market demands**, all without loosing the focus on sustainability.

At SMC, we embrace the complexity of today's packaging industry with a clear commitment to **innovation, efficiency and sustainability**. We understand the pressures manufacturers face: from rising energy costs to the need for faster, more flexible production lines. That's why our solutions are designed to meet these demands head-on. Through **advanced automation solutions and digitally integrated components**, we help streamline packaging operations while enhancing reliability and traceability.

Whether it's adapting to high-speed environments, ensuring compliance or supporting sustainable practices, SMC stands as a trusted partner in driving performance across every stage of the packaging process.

Present at every stage of your process

Thermoforming

Modern thermoforming lines demand **precise and efficient automation**. From **accurate temperature and motion control to synchronised forming, cutting, and stacking**, consistent quality and high productivity must be ensured. Integrated handling, inspection and connectivity systems support clean operation and traceability, delivering reliable performance and reduced downtime across every stage of the process.

CS2 Series +

Air cylinder

Ensure reliable operation of the forming matrix with large bore actuators.

HRSC Series +

Non F-gas (CO_2 refrigerant), standard type circulating fluid temperature controller

Maintains consistent cooling of the tray sealer's thermal components using CO_2 refrigerant for reliable, energy-efficient operation.

ALIP1000/1100 Series +

Impulse lubricator

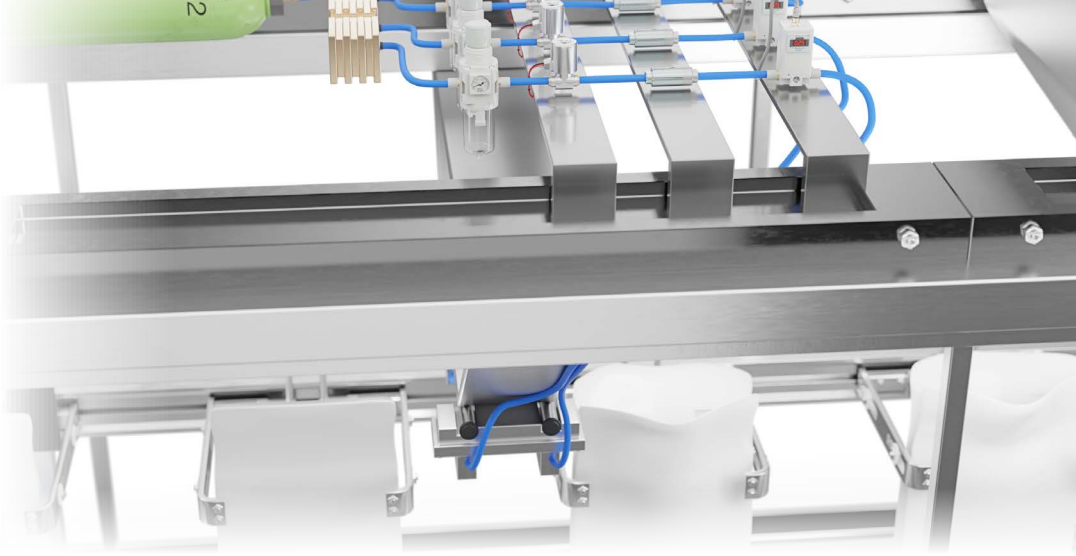
Keeps the chains that drive conveyor systems lubricated for a smooth, continuous flow.

PF3W Series +

Digital flow switch for water

For water distribution in the cooling circuit and monitoring of the water temperature.

Filling



Designed to handle a wide range of products and formats, filling machines must deliver precision, repeatability and reliability under demanding production conditions.

As automation levels increase, manufacturers face growing challenges such as **maintaining consistent fill accuracy, adapting to frequent format changes and minimising downtime**. Addressing these challenges requires intelligent automation solutions that combine robust mechanical design with advanced control, sensing and integration capabilities.

PFCA7 Series +

Flow controller for air

Precisely controls package handling and the product feed.

ZP3P Series +

Vacuum pad with groove

Manages flexible packages, bags and film gently with its soft, adaptable cup.

IDG-D Series +

Modular connection type membrane air dryer

Removes moisture from air to prevent humidity and flaws in packaging and final products.

JSY5000-H Series +

Clean design manifold valve

Ensures operational integrity during washdown processes thanks to its elevated ingress protection rating.

Facts over words

When developing an advanced R&D machine for vertical filling, the customer needed all components installed on the machine to be **able to withstand frequent washdown with caustic cleaning agents**. Conventional components were unsuitable for this demanding environment.

To meet these requirements, SMC equipped the machine with JSY5000-H Series valve manifolds. As a result, the customer achieved a **robust and hygienic machine design** capable of enduring harsh cleaning conditions without compromising performance. Its successful implementation strengthened the machine's reliability and made this innovative R&D platform highly sought after, supporting the customer's leadership in developing next-generation food packaging solutions.

Sealing and shrink wrapping

Automated sealing and wrapping systems must ensure **reliable and repeatable** pack closure while maintaining **demanding safety** standards throughout the process. Precise temperature, pressure and flow control deliver strong, consistent packaging; and coordinated film handling supports stable, high-speed operation. Integrated inspection and leak detection help protect product integrity and ensure compliance with demanding packaging requirements.

VPX400 Series

Safe exhaust valve modular connection type

Safely vents compressed air during stop or emergency conditions to protect operators and equipment.

Facts over words

A cosmetics manufacturer operating a shrink-wrapping process experienced **quality issues due to static electricity** at plastic forming. Traditional methods using compressed air not only failed to solve the problem, but introduced contamination, leading to a significant increase in scrap. To overcome this challenge, SMC implemented its **IZT44 bar ionizer**, a solution designed to neutralise static electricity without compressed air. This innovation eliminated contamination risks, reduced waste rates and improved production quality, while delivering energy efficiency and long-term reliability across all affected machines.

PFES Series

Remote control valve (electric speed controller)

Precisely regulates the air flow supplied to the tray sealer to ensure stable, repeatable sealing performance.

VBAE Series

Energy saving, exhaust-recovery pressure booster

Reduces line pressure by increasing machine operating pressure only where needed.

IZT44/45 Series

Slim bar type ionizer, separate controller

Facilitates release of thermoformed pieces without using compressed air.

Labelling and coding

Automated labelling and coding solutions must ensure **accurate label placement, consistent print quality and reliable traceability**. Precise product handling, synchronised motion and controlled print parameters, like air quality, minimise misalignment, smudging and unreadable codes. Energy-efficient air blowing and suction and optimised utility usage reduce operating costs while maintaining **low reject rates, high line efficiency and strong product presentation**.

IDFA Series +

Refrigerated air dryer

Delivers clean, dry compressed air to prevent moisture-related defects in sealing and film application.

IZSW10 Series +

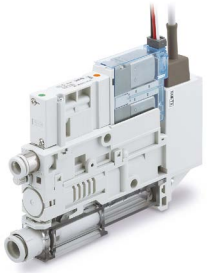
Dustproof and water-resistant Ionizer

Neutralises static on film surfaces and labels even in dusty or wet environments to ensure smooth handling.

AS-Q Series +

Air saving speed controller with push-lock

Optimises actuator speed with reduced air consumption to provide consistent, efficient motion in the labelling process.



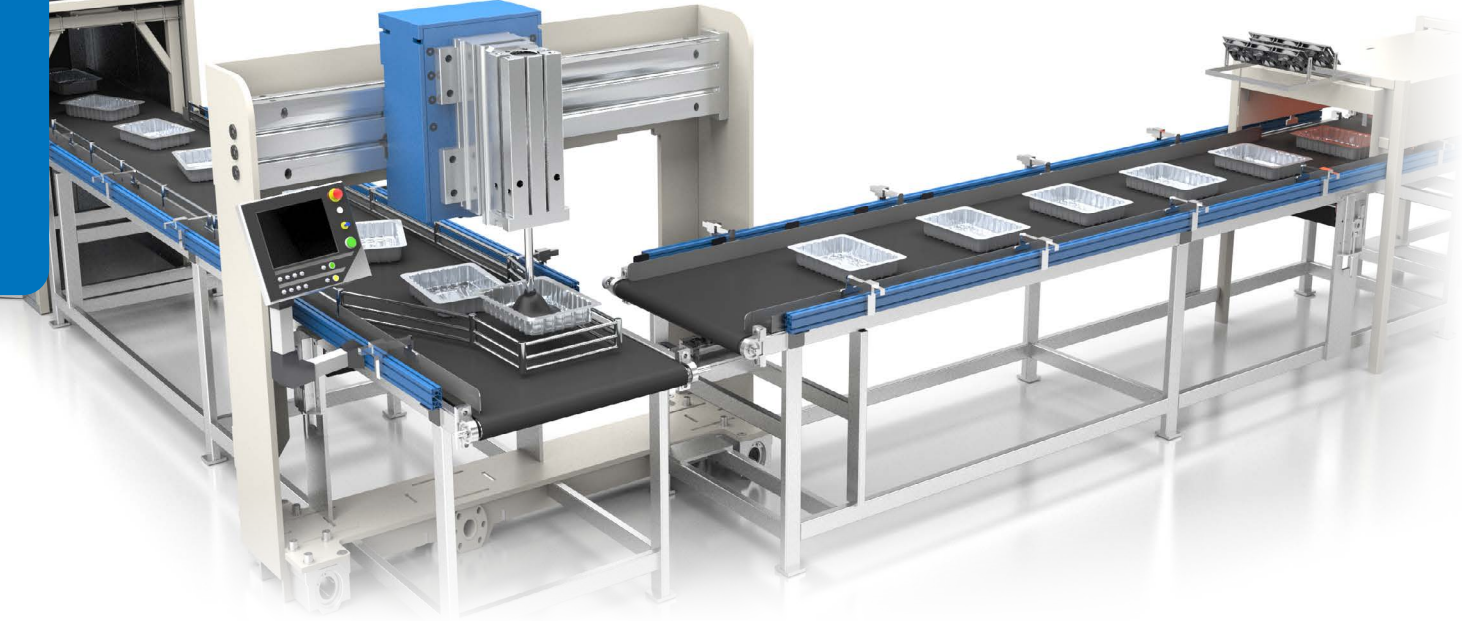
ZK2□A Series +

Vacuum unit. Ejector system/vacuum pump system

Generates vacuum for grabbing plastic film with an energy-efficient solution.

Conveying

Efficient conveying automation links every stage of the packaging line. **Intelligent, sensor-based transport systems** ensure smooth product flow, optimised spacing, and reliable accumulation. Designs that support flexibility and integration with smart control architectures.



LER Series +

Electric rotary actuator

Precisely rotates products or pallets on the conveyor for indexing, orientation or downstream handling.

MGP Series +

Compact guide cylinder

Provides stable, guided linear motion to move, lift or position items along the conveying path.

LEB Series +

Electric stopper actuator

Achieves the stable, precise stop of loads travelling down a conveyor with energy-efficient performance.

MACM Series +

Centring unit

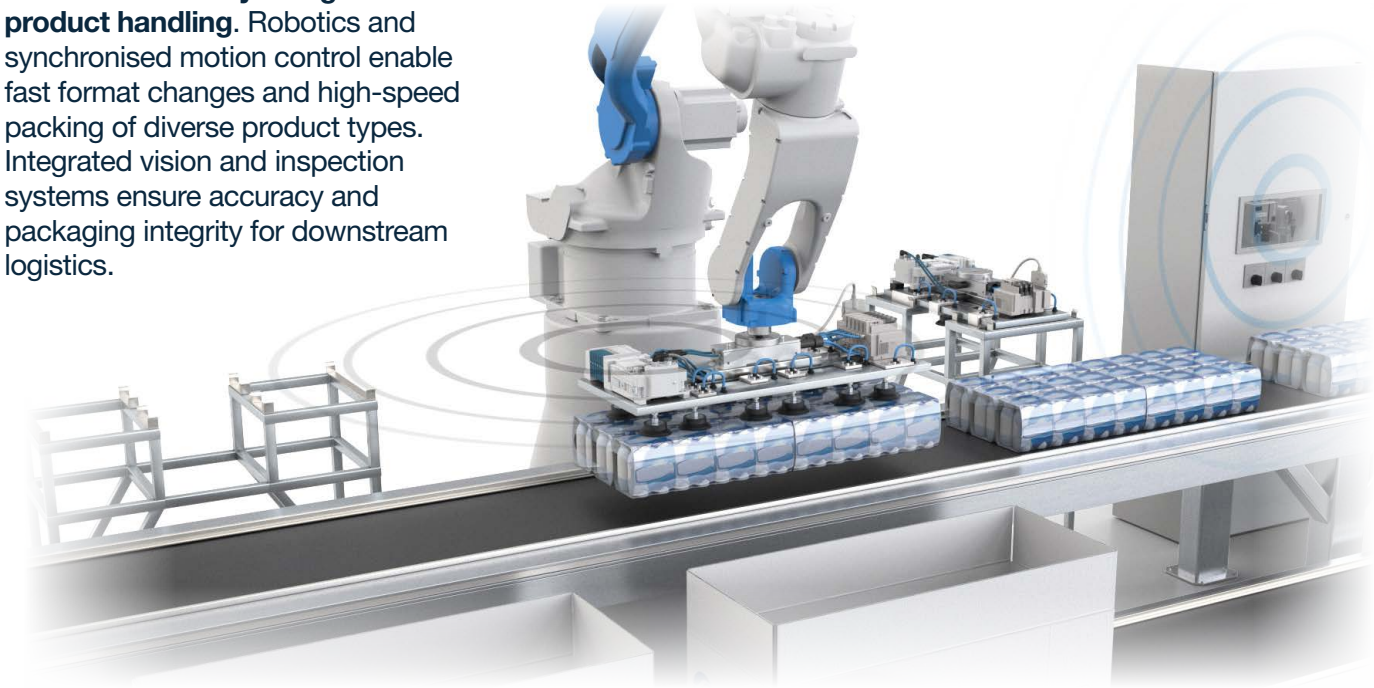
Automatically aligns and positions items on the conveyor to ensure accurate transfer to the next process.

Facts over words

To construct a large-scale conveyor system for handling pre-packaged food and vegetables, the customer required a reliable solution to **maintain chain tension across 197 conveyors**. Following successful performance and durability testing, SMC supplied **MGP Series guided cylinders** that maintain constant pressure to ensure optimal chain tension. These cylinders provided **strong technical performance, flexible mounting options, and short delivery times**, resulting in a robust and efficient conveyor system supported by close project collaboration.

Case erecting and packing

Automated case packing combines **flexibility and gentle product handling**. Robotics and synchronised motion control enable fast format changes and high-speed packing of diverse product types. Integrated vision and inspection systems ensure accuracy and packaging integrity for downstream logistics.



EXW1-RD□M5 Series +

Compact type, wireless system, remote unit, valve manifold

Implements flexible, cable-free control of valves for easy reconfiguration and cost saving.

ZFD Series +

In-line air filter (bidirectional type)

Ensures clean, dry air supply for actuators and vacuum components.

ZP3M□WB Series +

Vacuum pad, oval bellows shape with non-slip feature, with adapter

Guarantees a long-life operation and reliable handling of coarse materials such as cardboard.

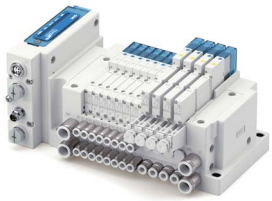
EXW1 Series +

Compact wireless base unit

Centralises fieldbus communication for remote devices such as valves, sensors and switches.

Palletising

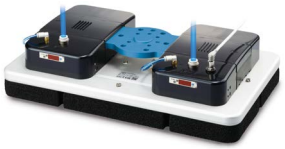
Automated palletising systems enhance end-of-line **flexibility, accuracy and autonomy**. Robotics, servo-driven lifts and coordinated motion create stable, consistent loads ready for shipment. Customisable layouts, easy programming and safe operation deliver reliable performance in high-throughput environments.



JSY1000-E Series +

Valve manifold integrated with ejector system

Generates reliable vacuum and controls multiple pick points to handle cases efficiently in a compact assembly.



ZGS Series +

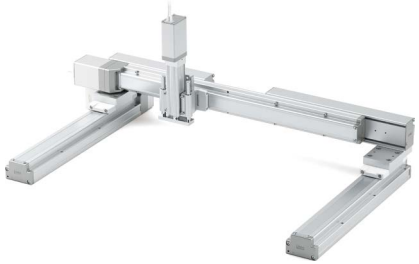
Vacuum gripper system

Achieves secure, adaptable gripping of boxes or bags for reliable lifting and placement during palletising.

AMS20/30/40/60 Series +

Air Management System

Monitors and optimises air pressure and flow to maintain consistent performance and energy efficiency.



LEA Series +

Multi-axis system mounting kit, gantries (X, Y, Z axes with support guides)

Helps to ensure precise, coordinated multi-axis motion for moving and stacking products onto pallets.

Facts over words

On a **palletising line for bottled water**, the customer lacked any system to monitor compressed air consumption, making it **impossible to optimise usage or manage machine downtime**. To address this, SMC introduced its **Air Management System**, enabling real-time monitoring and data collection via OPC UA. By installing AMS units on two lines, the customer gained instant visibility of air consumption and began reducing operating pressure during downtime, achieving over **20 % savings**. Encouraged by these results, they expanded the solution to four additional lines, ensuring greater efficiency and cost control across the entire palletising department.

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

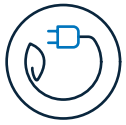
Analysing our energy bills with a critical view. Is our total consumption justified?

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.

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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