



Expertise – Passion – Automation

**Achieve higher productivity  
& lower TCO**

SMC in the beverage industry

# Opportunities and complexities in a globally changing beverage market

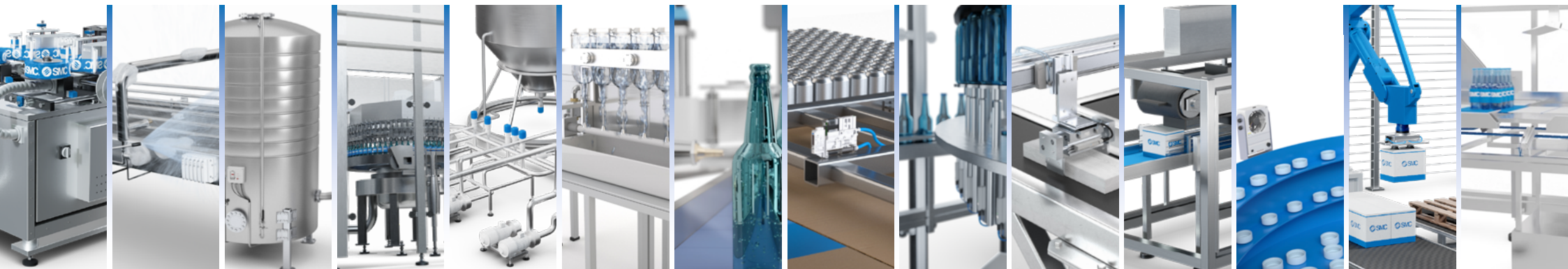
An ever-changing world, and its consumers' demands, has meant that the Beverage industry has had to adapt its approach to investments at both greenfield and brownfield sites to meet and surpass new requirements and trends.

Beverage companies are focusing on emerging markets to increase their global market share, and their investment targets, whilst aligning procedures with the United Nations' global SDGs (Sustainable Development Goals). **Sustainability, safety, standardisation, cost-efficiency and time to market** are key to gaining market share.

**Diversification** in more established markets is a trend, which is partly a consequence of the growing demand for healthier and low sugar drinks, alcoholic options, and diversification into coffee and tea Ready to Drink (RTD) product ranges. It increases the complexity of supply chains, production and process flexibility, particularly at existing beverage sites.


## What can SMC do to help you achieve your targets?

The SMC global & local beverage teams bring **industry knowledge and expertise** to help achieve your targets and demands with our supported approach, such as our 12-Point Strategic Partnership Programme, Incentive Selection Programme, Condition-Based Maintenance solutions and proven solution portfolio to assist on greenfield and brownfield beverage projects.



Our local teams of highly trained experts are on hand to help you achieve your goals

 **Your safety in our focus**

 **Energise your efficiency**

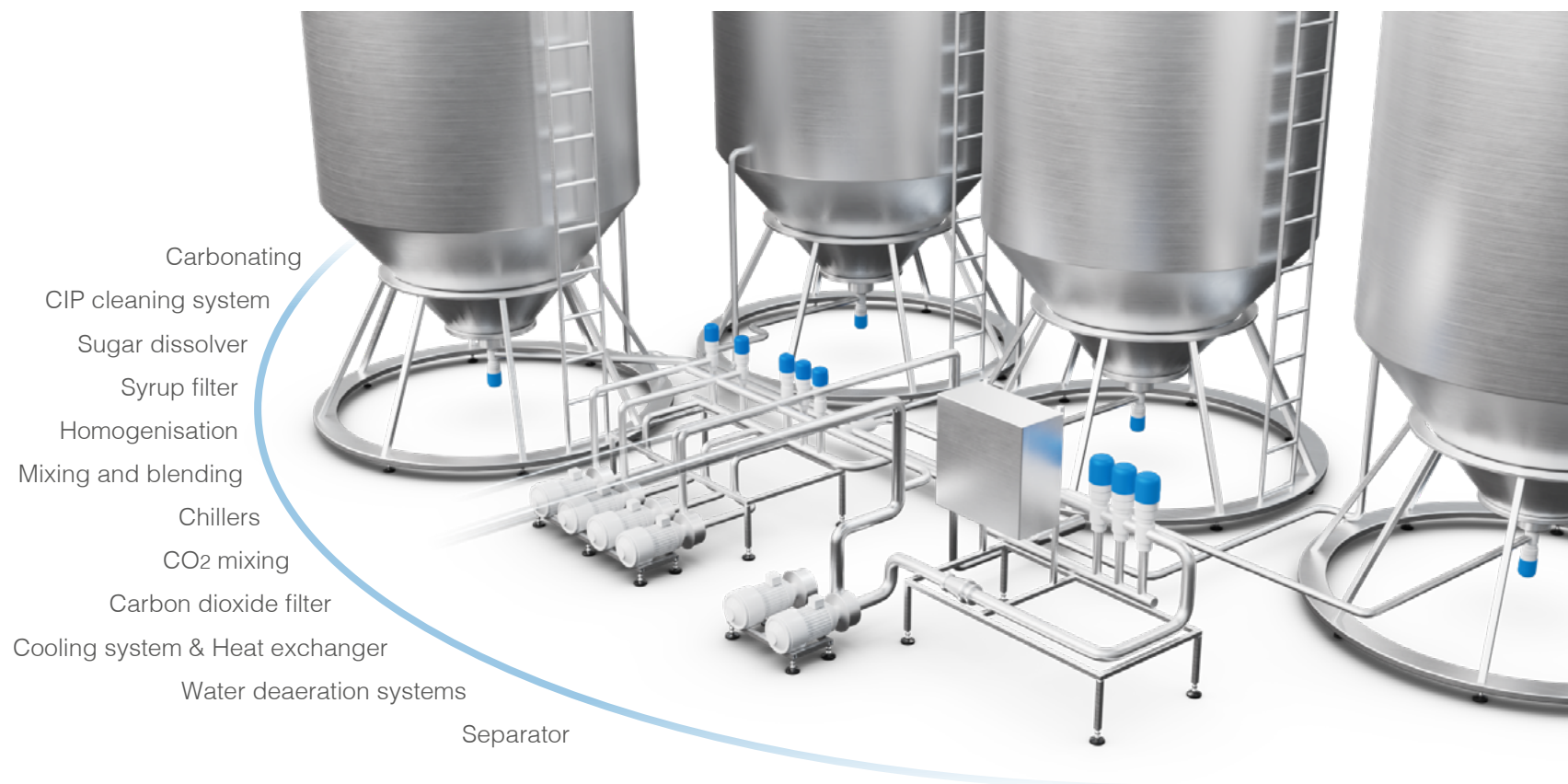
 **Size & weight optimisation**

 **Smart Flexibility**

 **Industrial maintenance**

## Beverage process

Find the perfect solution for each requirement in the production process, whether it's hygienic design, high temperature and corrosion resistance or fluid handling.



Air treatment ✨



Clean & hygienic design ✨



Process monitoring & control ✨



Wash down and CIP ✨



Energy efficiency ✨



Fluid handling ✨



## PET packaging process

Ensure the optimum performance of the equipment with our variety of solutions for the packaging stage. Achieve reliable, high-speed operation, as well as sustainable solutions and cost reduction improvements.



Air treatment ✦



Energy efficiency ✦



Process monitoring & control ✦



Fluid handling ✦



High pressure ✦

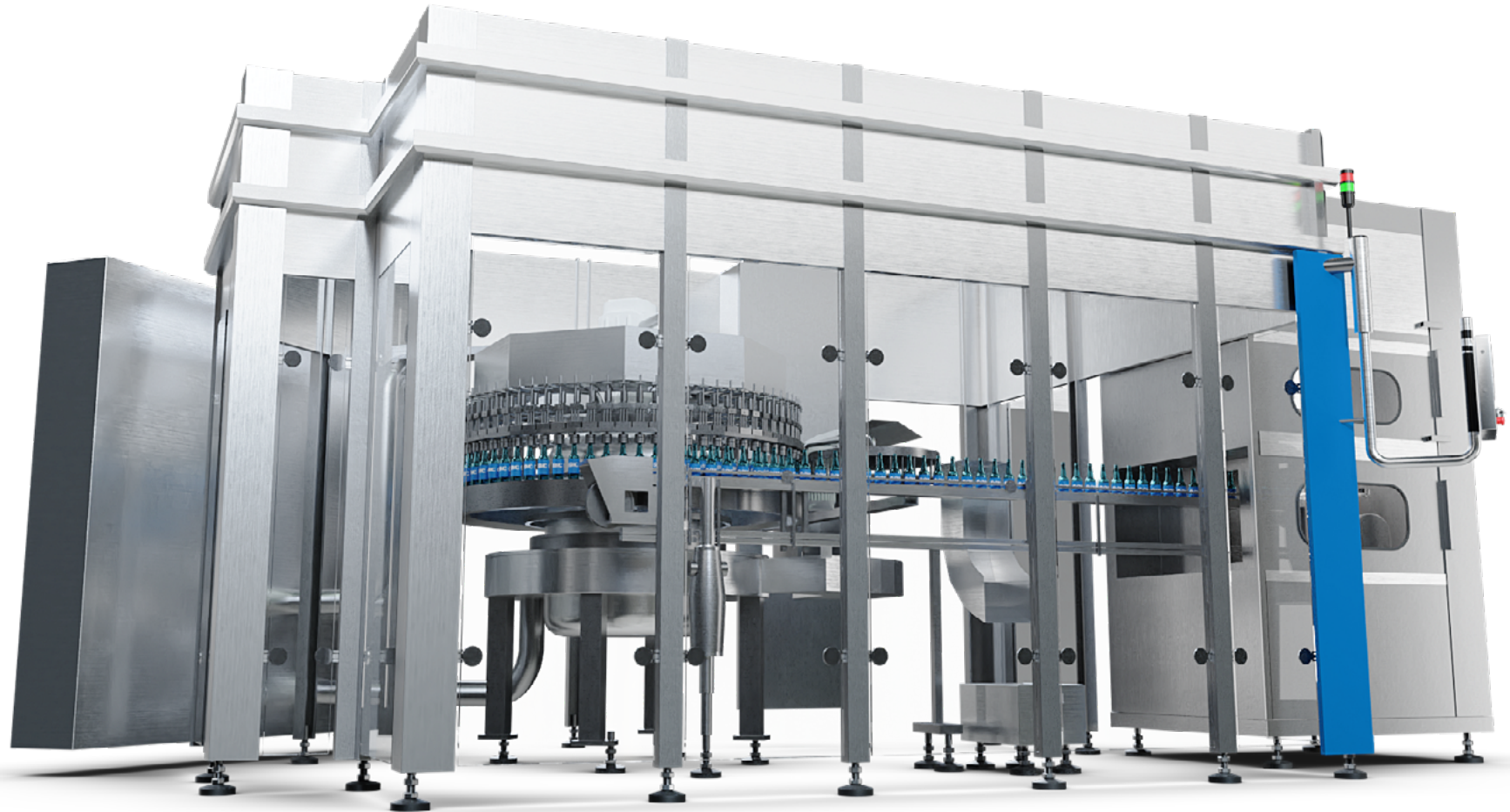


Static control ✦



General solutions ✦

## Bottle and can filling



Air treatment ✨



Wash down and CIP ✨



Clean & hygienic design ✨



Energy efficiency ✨



Process monitoring & control ✨



Fluid handling ✨



Air blowing ✨

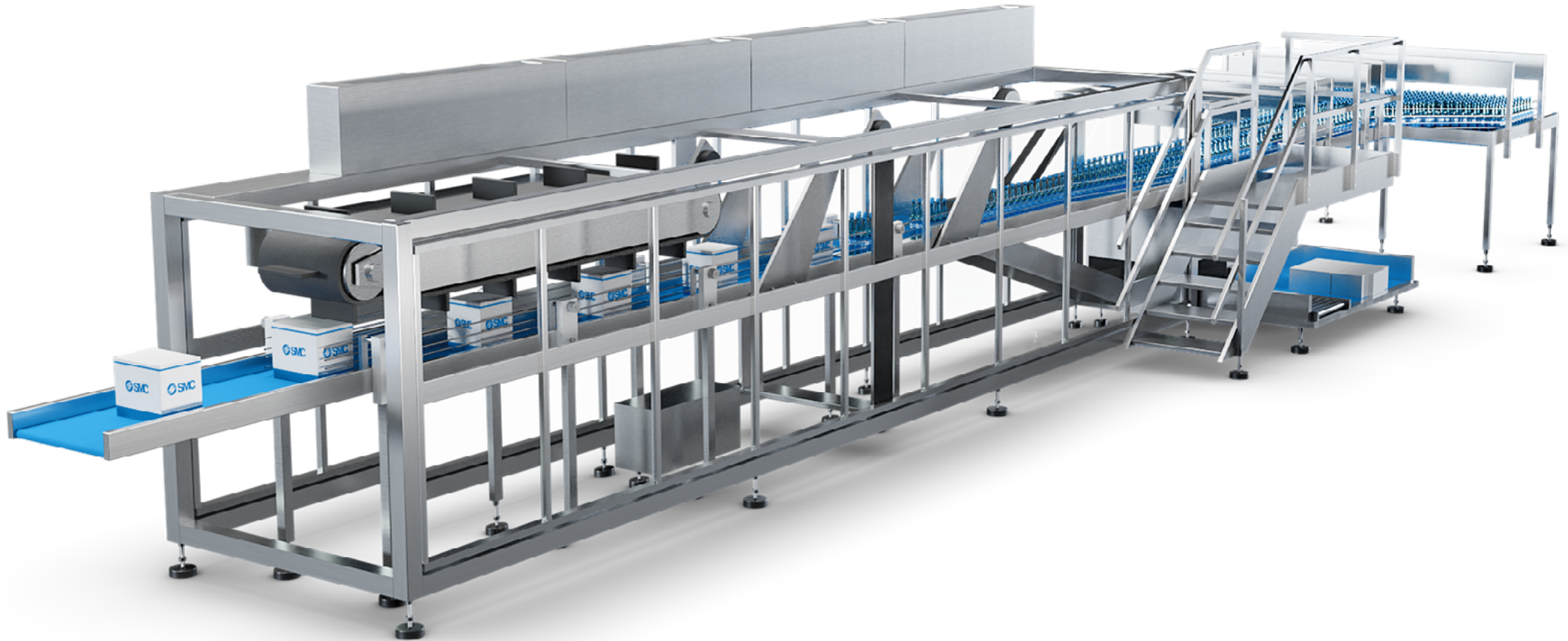


Safety ✨



Electrical motion ✨

## Case packing



Air treatment ✦



Energy efficiency ✦



Process monitoring & control ✦



Vacuum ✦



Safety ✦



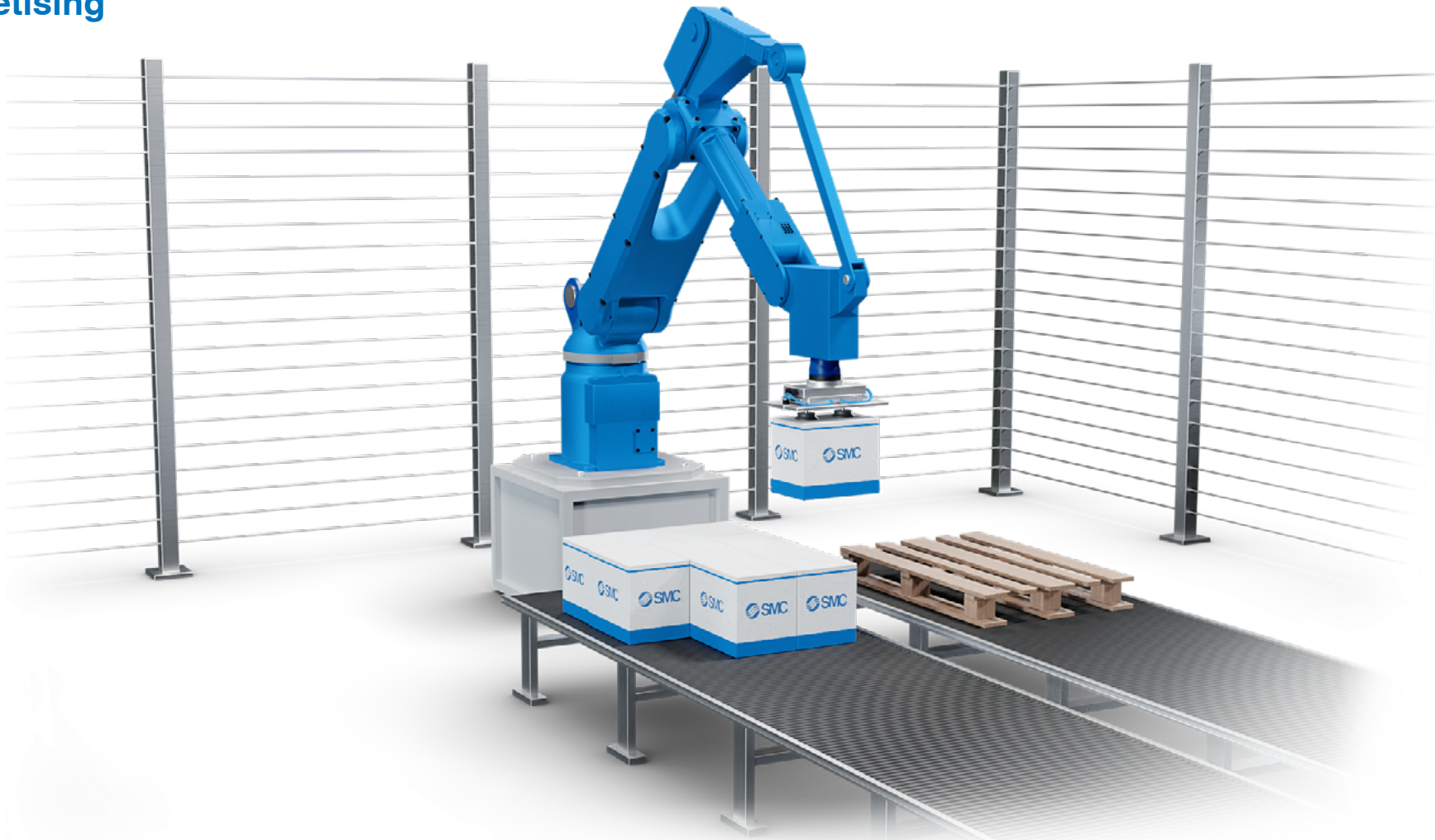
Static control ✦



General solutions ✦



## Palletising



Air treatment ✦



Energy efficiency ✦



Process monitoring & control ✦



Vacuum ✦



Safety ✦



Static control ✦

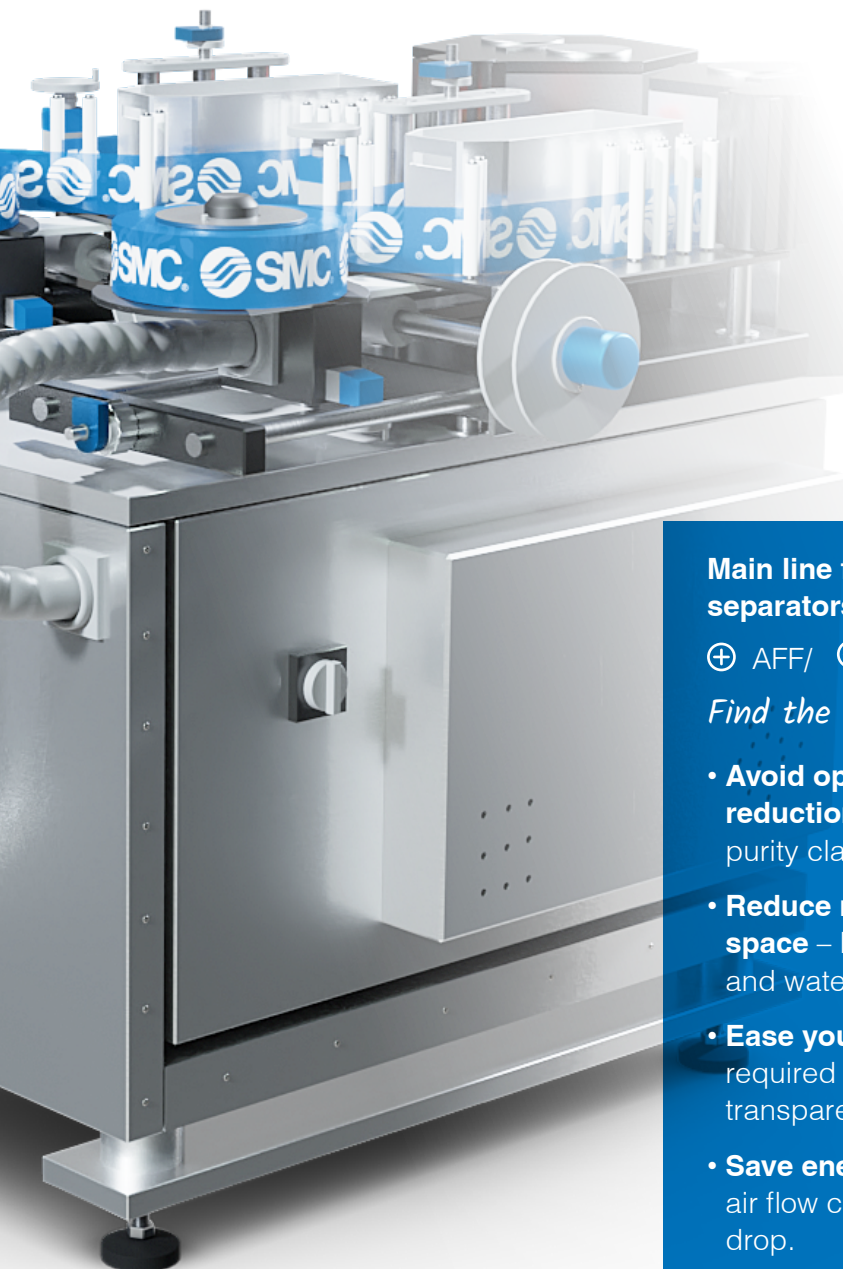


Wireless communications ✦



General solutions ✦





## Main line filters, mist separators, micro mist separators and odour removal filters

⊕ AFF/ ⊕ AM/ ⊕ AMD/ ⊕ AMK Series

*Find the right filtration*

- **Avoid operational failure and service life reduction with the right air quality** – Air purity class compliant with ISO 8573
- **Reduce number of components and save space** – Modular connection and optional filter and water separator all-in-one
- **Ease your maintenance tasks** – No tools required for maintenance and optional transparent bowl
- **Save energy and reduce costs** – Increased air flow capacity due to reduced pressure drop.



## Bacteria removal combination units and filters

⊕ HF2-BAC Series

- FDA and HACCP compliant
- NSF-H1 grade grease
- Anti-bacterial coating.



## Membrane air dryer

⊕ IDG Series

- Energy saving
- Compatible with low dew point (-60 °C)
- Port sizes: 1/4" to 1/2".



## Refrigerated air dryers

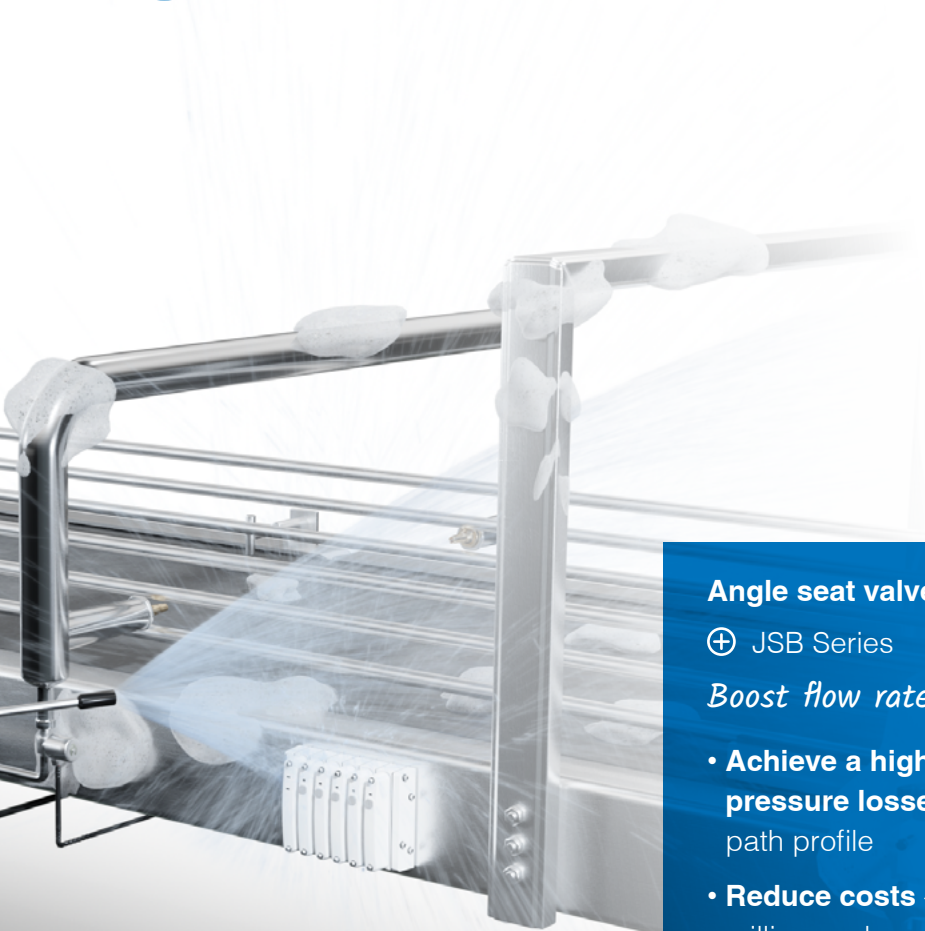
⊕ IDFA Series

- Longer lifetime of the air system
- High corrosion resistance with the use of a stainless-steel heat exchanger
- Efficient drying with low pressure drop.



# Wash-down & Cleaning in place

SMC in the beverage industry

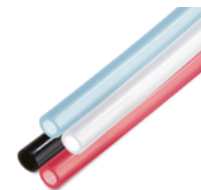


## Angle seat valve

⊕ JSB Series

*Boost flow rate and minimise losses*

- **Achieve a high flow rate while minimising pressure losses** – Optimised valve body flow path profile
- **Reduce costs** – Long service life up to 10 million cycles
- **Save space** – As small as 121.3 mm in height.



## Chemical and heat resistant tubing

⊕ TH/ ⊕ TLM Series

- Fluoropolymer and PFA tubing
- FDA compliant
- Suitable for high temperatures.



## Corrosion resistant process pump

⊕ PAF Series

- High corrosion resistance due to PFA material construction
- Service life of 50 million cycles or more
- No metallic parts are used.



## NAMUR interface 3/5 port solenoid valve, clean design type

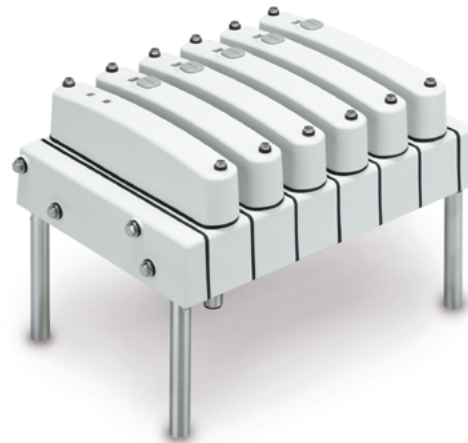
⊕ VFN2120N-X23/36 Series

- Resin body with clean design
- IP67 enclosure
- Low power consumption.



## Clean & Hygienic design

SMC in the beverage industry



### Clean design manifold valve

⊕ JSY5000-H Series

*Control your food production needs*

- **Withstand adverse environments** – IP67K compliant
- **Use it safely in food & Beverage applications** – Easy to clean and FDA compliant
- **Get ready for IIoT with IO-Link** – Exchange data and parameters remotely via network.



### Hygienic design fittings

⊕ KFG2H Series

- IP69K rating
- 316 Stainless steel body
- EHEDG and FDA compliant.



### Hygienic design stainless steel actuator

⊕ CG5-X2977 Series

- Laser marking
- 304 stainless-steel external parts
- FDA compliant seals.



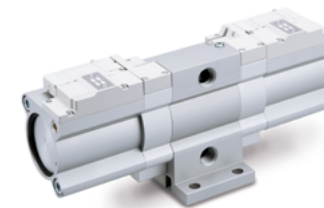


## Air Management System

⊕ AMS20/30/40/60 Series

*Level up your compressed air management*

- **Save energy and improve sustainability** – Programmable automatic pressure reduction and shut-off times
- **Enhance your maintenance capabilities** – Measurement and follow-up of flow, pressure and temperature
- **Digitalise your compressed air installation** – Virtual control of parameters with fieldbus or OPC UA data collection
- **Reduce labour and wiring time** – Wireless connection up to 100-metre range and 10 remote units.



## Energy saving, exhaust-recovery booster regulator

⊕ VBAE Series

- Provide high pressure only where it is needed
- Reduced air consumption and charging time
- Vertical and horizontal installation possible.



## Air-saving speed controllers

⊕ AS-R/AS-Q Series

- Provide reduced pressure on the return stroke and keep a rapid supply and exhaust
- Push-lock adjustment
- Instant tubing connection.





## Electro-pneumatic smart positioner

⊕ IP8001 Series

*Keep your valves & cylinders positioned*

- **Control it remotely and change settings** – HART transmission function
- **Make your installation easier and save time** – Calibration function integrated
- **Visually verify the state of the control** – Positioning, deviation and input numerical values displayed.



## High-precision digital pressure switch

⊕ ISE7□ Series

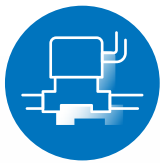
- High pressure operation
- IO-Link compatible
- IP67 enclosure.



## Digital flow switch for large flow

⊕ PF3A□H Series

- Three colour display
- IO-Link compatible
- IP65 enclosure.



### 2-port solenoid valve

⊕ JSX/JSXD Series

*Designed to resist*

- **Withstand your most adverse environmental conditions** – Stainless steel construction and IP67 enclosure
- **Save energy** – Power consumption reduced by 14 %
- **Ease your installation** – Coil can be rotated 360 degrees.



### Hyper fittings

⊕ LQ3 Series

- High purity fluoropolymer
- Flare type collet construction
- Triple-seal.



### Digital flow switch for water

⊕ PF3W Series

- 3-colour/2-screen display
- IO-Link
- Temperature sensor built in.



## Blowing nozzles

⊕ KN Series

### *Efficient air blowing*

- **Save energy in your blowing applications** – Minimal pressure loss
- **Reduce noise level** – Small-diameter multi-hole structure option to reduce noise
- **Increase the impact pressure** – High efficiency nozzle provides higher blowing force due to the entrainment of the surrounding air.



## Pulse blow valve

⊕ AXTS-X2 Series

- High-peak pressure and low air consumption
- Long service life
- Control for pulse generation is not required.

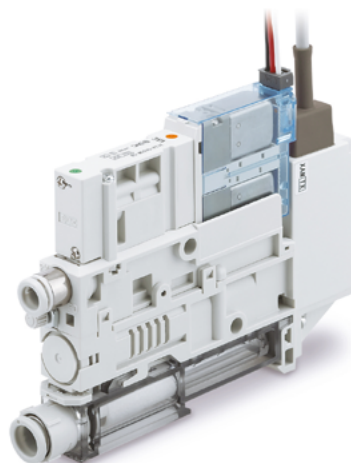
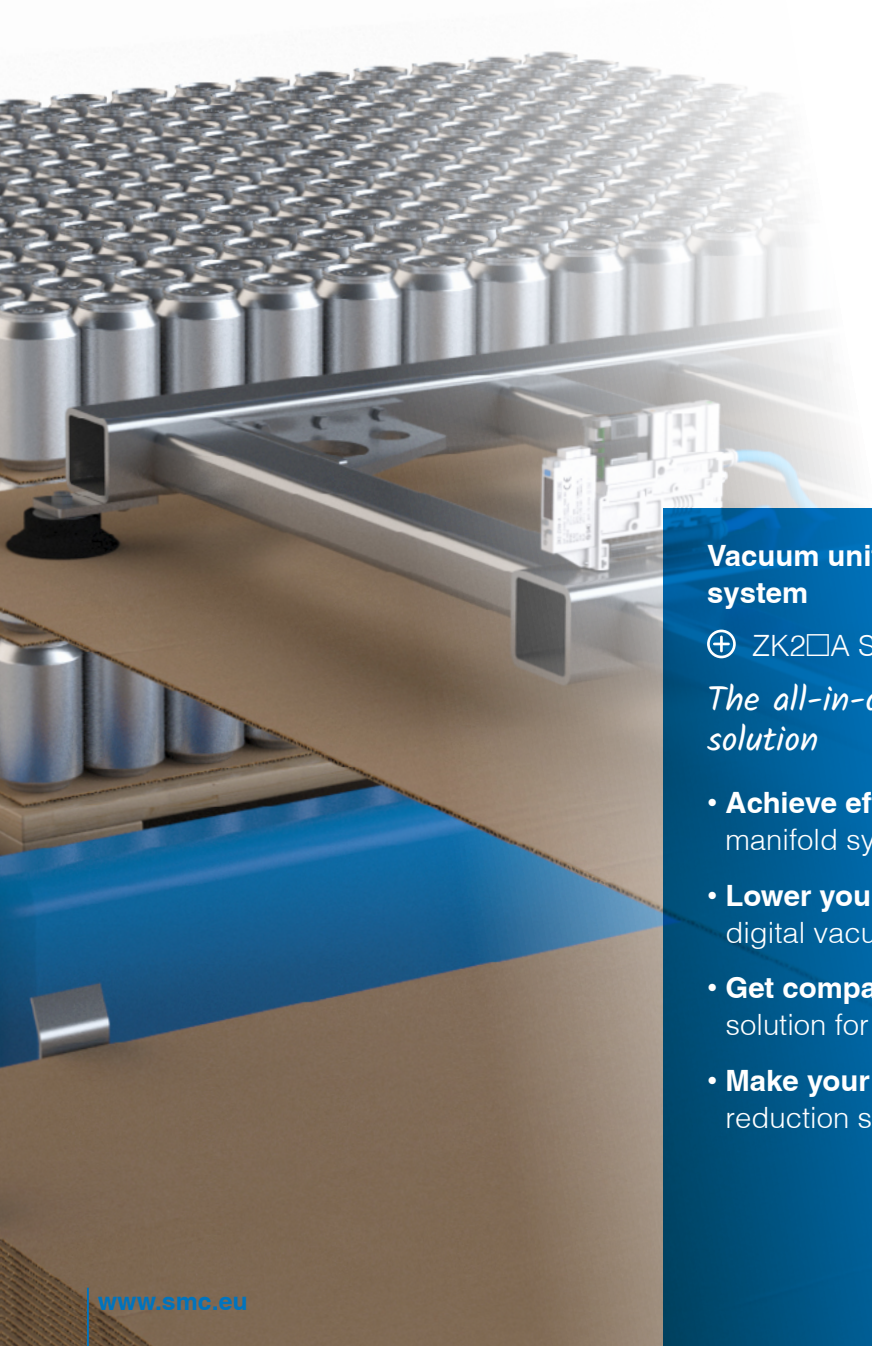


## Air amplifier

⊕ ZHV Series

- Multiplies air supply for blowing and suction by 4 and 3 respectively
- Maintenance free
- Suction and discharge solution.





## Vacuum unit. Ejector system/Vacuum pump system

⊕ ZK2□A Series

*The all-in-one silent energy saving solution*

- **Achieve efficiency** – Ejector, pump and manifold system in a single unit
- **Lower your air consumption** – Energy saving digital vacuum switch and a 2-stage ejector
- **Get compactness and lightness** – Ideal solution for moving tools
- **Make your workplace quieter** – High-noise reduction silencer.



## Vacuum pad with ejector

⊕ ZHP Series

- Efficiency increase with two-stage ejector
- Space saving and lightweight
- Easy replacement.

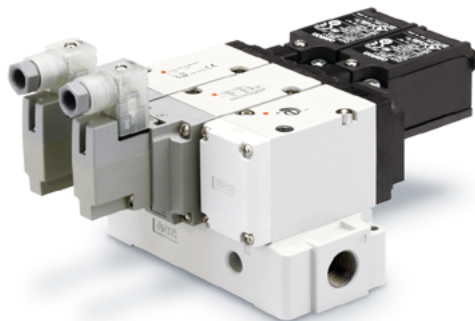


## Vacuum saving valve

⊕ ZP2V Series

- Vacuum restriction when working piece not available
- One-touch fitting option
- Energy saving.





## Dual residual pressure release valve with soft start-up function, ISO 13849-1

⊕ VP-X555/585 Series

*Smoothly safe*

- **High security in design and integration of machines** – Designed according to Safety Standard ISO 13849-1 for Category 3, 4
- **Smooth start-up** – Integrated soft start-up function
- **Improved productivity with faster re-start of machines** – No boot sequences and/or self test of the valve.



## Integrated pilot check valve with residual pressure release valve

⊕ ASP-X352 Series

- Manual button
- Integral pilot operated valve
- 360° piping installation.



## Pressure relief 3 port valve with locking holes

⊕ VHS-D Series

- Relieves system air pressure for safe intervention
- Zero air bleeding when switching the handle
- OSHA standard compliant.



## Battery-less dust/drip proof IP67 type electric actuator

⊕ LEY-X8 Series

*Your everyday pushing & pulling solution*

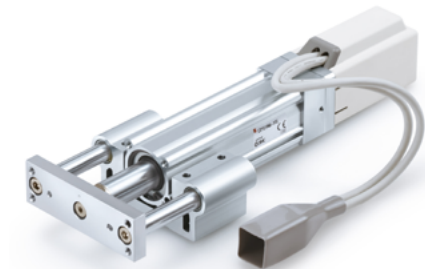
- **Meet any pushing or pulling challenge** – Rod design
- **Work it any way** – Selectable motor and mounting positions. High-precision type. Able to work horizontally or vertically. Many accessories for mounting variations
- **Ensure endurance to water and dust** – Up to IP67 enclosure protection.



## Electric actuators

⊕ LE Series

- Total control of positioning
- Digital I/O or fieldbus commands available
- Industry 4.0-friendly.



## Battery-less absolute encoder type electric actuator

⊕ LEYG Series

- Reduced maintenance
- Restart from the last stop position is possible
- Lateral load resistance and high non-rotating accuracy.



## 5.0 MPa 3-port valve

⊕ VCH410 Series

*Achieve long service life at high pressure*

- **Assure a safe food environment** – NSF-H1-certified grease
- **Ensure stable response** – Sliding parts with special fluoro-resin seal
- **Guarantee a long service life** – 10 million cycles.



## 5.0 MPa silencer

⊕ VCHN3/4 Series

- 35 dB noise reduction
- 30 % to 40 % reduction in freezing
- Integrated relief valve.



## 5.0 MPa check valve

⊕ VCH40/VCHC40 Series

- Response time variation within  $\pm 2$  ms
- Service life: 10 million cycles
- Collision-proof construction.



## 6.0 MPa direct operated regulator

⊕ VCHR30/40 Series

- NSF-H1-certified grease
- Stable response
- Metal-sealed relief valve improves durability.

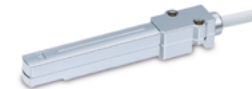




## Fan type ionizer

### ⊕ IZF21/31 Series

- Air flow adjustment function added
- Signal output for emitter contamination detection function added
- Rapid static neutralisation: 0.5 seconds.



## Electrostatic sensor

### ⊕ IZD10 Series

- Potential measurement:  $\pm 20$  kV (detected at a 50 mm distance),  $\pm 0.4$  kV (detected at a 25 mm distance)
- Analogue output, 1 to 5 V that can be used with the electrostatic monitor IZE11
- Small and easy to mount.



## Nozzle type ionizer

### ⊕ IZT43 Series

- Monitor and operate nozzles installed in an inaccessible location
- IZTC41 controller can control a maximum of 4 ionizers
- Multiple alarms & functions.

## Bar type ionizer, separate controller

### ⊕ IZT40/41/42 Series

*Fast & Efficient static removal wherever you want*

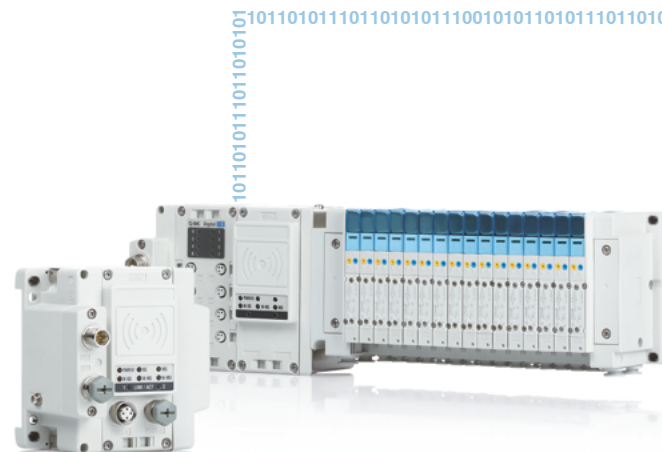
- **Benefit from its compact dimensions** – Bar and nozzle type ionizers adapted to work separately from the controller
- **Effortlessly control status and operation** – One controller can control up to 4 ionizers. Multiple alarms & functions
- **Enjoy IO-Link advantages with SMC** – Your one supplier for your automation needs
- **Monitor and adjust it with ease** – The separation of components enables excellent access to the controller.





# Wireless communications

SMC in the beverage industry



## Wireless system

### ⊕ EX600-W Series

*Less is definitely more*

- **Less cabling. Less installation time. Less downtime. Less hassle. Less** – Compact and modular wireless systems
- **Achieve totally secure, reliable and noise-resistant communication** – Frequency hopping and data encryption in the 2.4 GHz ISM band
- **Put it to work anywhere** – Suitable for any application, being ideal for tool changes in robot arms or rotary/indexing tables
- **Introduce flexibility in your machines** – Simple layout modification and quick connection & start-up.



## Compact wireless system

### ⊕ EXW1 Series

- Up to 880 inputs/880 outputs
- Communication distance: up to 100 m
- Supports external antennas.



## Air management hub

### ⊕ EXA1 Series

- Compatible with OPC UA, Ethernet/IP®, PROFINET and EtherCAT®
- Wireless base or remote function,
- Communication distance: up to 100 m.



### Pilot operated 4/5-port solenoid valves

⊕ New SY Series

*The most versatile all-purpose valve*

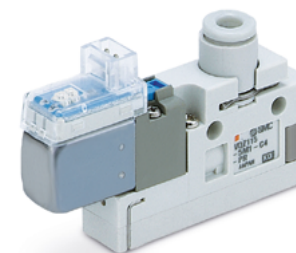
- **Improve your productivity** – Outstanding reliability and reduction in cycle time
- **Save on installation costs and assembly time** – Remarkable flexibility in design
- **Cut your costs** – Air savings by driving higher capacity cylinders and using mixed mounting valves
- **Simplify machine use and operation** – Unique and compact manifold: vacuum suction and release in a single unit.



### Speed controllers with push-lock & indicator

⊕ ASQFS Series

- Reduces setting times
- Indicator window for numerical flow rate visual confirmation by operator
- Accurate setting of standard operating procedures.



### Long life valve high repeatability

⊕ VQZ Series

- 200 million cycle metal spool valve
- Low power consumption
- IP65 compliant.

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.



# Condition Based Maintenance



Condition-Based Maintenance (CBM) is a maintenance strategy which, simply put, measures operational parameters in assets to determine a change in their condition, performing maintenance only when the need arises. It is a very important aspect to improve the productivity and sustainability of the brewing and packaging process, and SMC can help you with the right solutions.

**Discover more about  
our CBM solutions**



### Pressure monitoring

SMC pressure devices ensure accurate monitoring thanks to their extremely fast response times, as they send precise measured values to the controller in real time, via the IO-Link open standard technology.



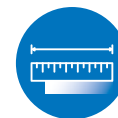
### Flow monitoring

While SMC intelligent and self-diagnostic flow instruments are essential to obtain repeatable and accurate results, the information obtained can also be used to achieve tighter process control.



### Communication systems

The communication protocols of SMC products can help you to improve your productivity and reduce your costs, guaranteeing dynamic production processes and leading to the Smart Flexibility that the beverage & brewery industry is looking for.



### Position sensing and monitoring

SMC sensors and positioners guarantee a high degree of positioning accuracy on the machine, meeting the most important requirements for sensors and positioners: precision, maximum process availability and a long service life.

Discover more on  
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 provide products that meet our customers' needs anywhere in the world.

### 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.

### Sales BCP

#### Consistent sales support

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

### Production BCP

#### Ensure customer order fulfilment

Reliable delivery for you thanks to our 9 global logistic centres and 38 production sites, 10 of which are located in Europe. Moreover, flexibility to rapidly respond to any sudden change in the manufacturing environment.

**Aiming to gain your trust  
Sustainability through  
reliability**

### Engineering BCP

#### Consistent technical support

2,100 engineers at our 5 technical centres around the globe (2 in Europe - Germany and UK).



Expertise – Passion – Automation