



SMC IN THE BEVERAGE INDUSTRY

**Achieve higher  
production &  
lower TCO**

Expertise  
Passion  
Automation



# Opportunities and complexities in a globally changing beverage market

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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.

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

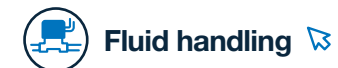
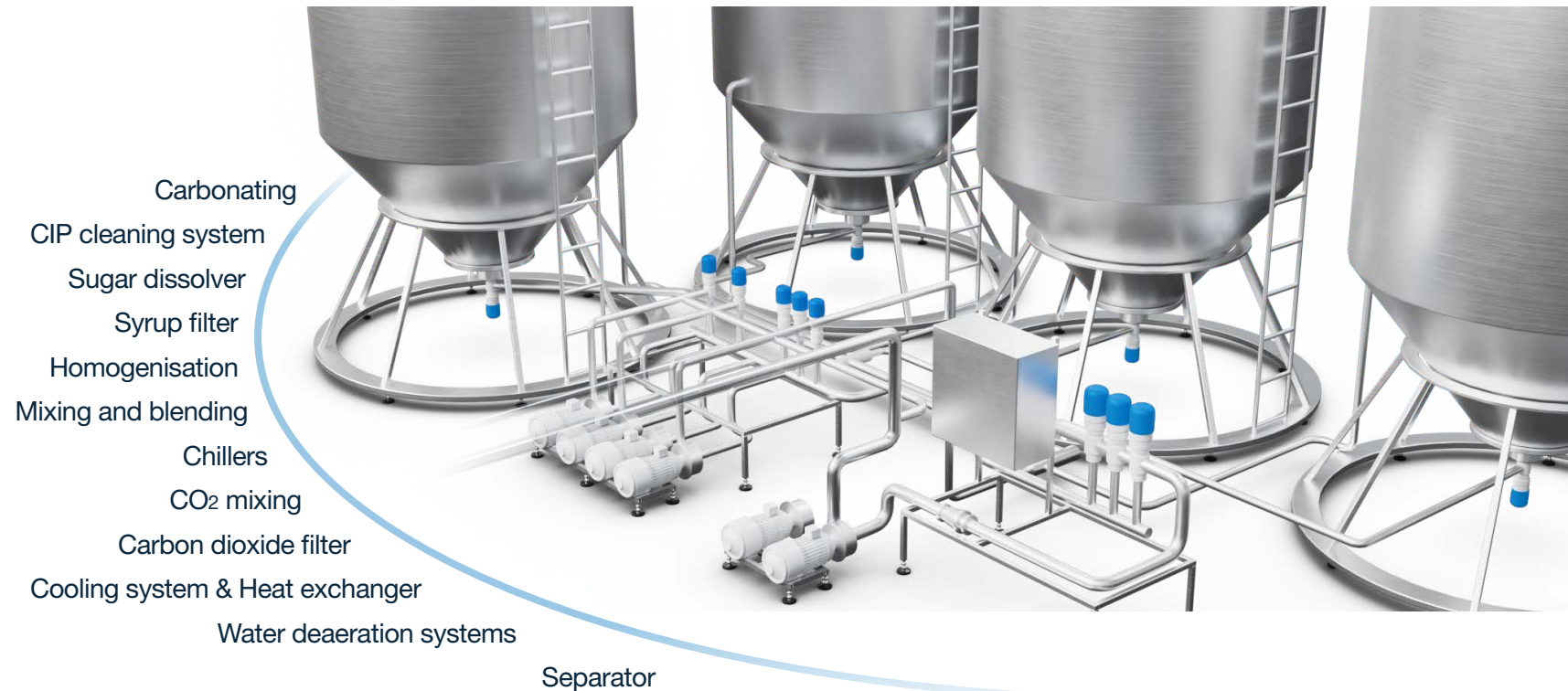
The SMC global & local beverage teams bring **industry knowledge and expertise** to help achieve your targets and demands with our supported approach, such as our 12-Point Strategic Partnership Programme, Incentive Selection Programme, Condition-Based Maintenance solutions and proven solution portfolio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

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# We understand your production process

## 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.



# 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 

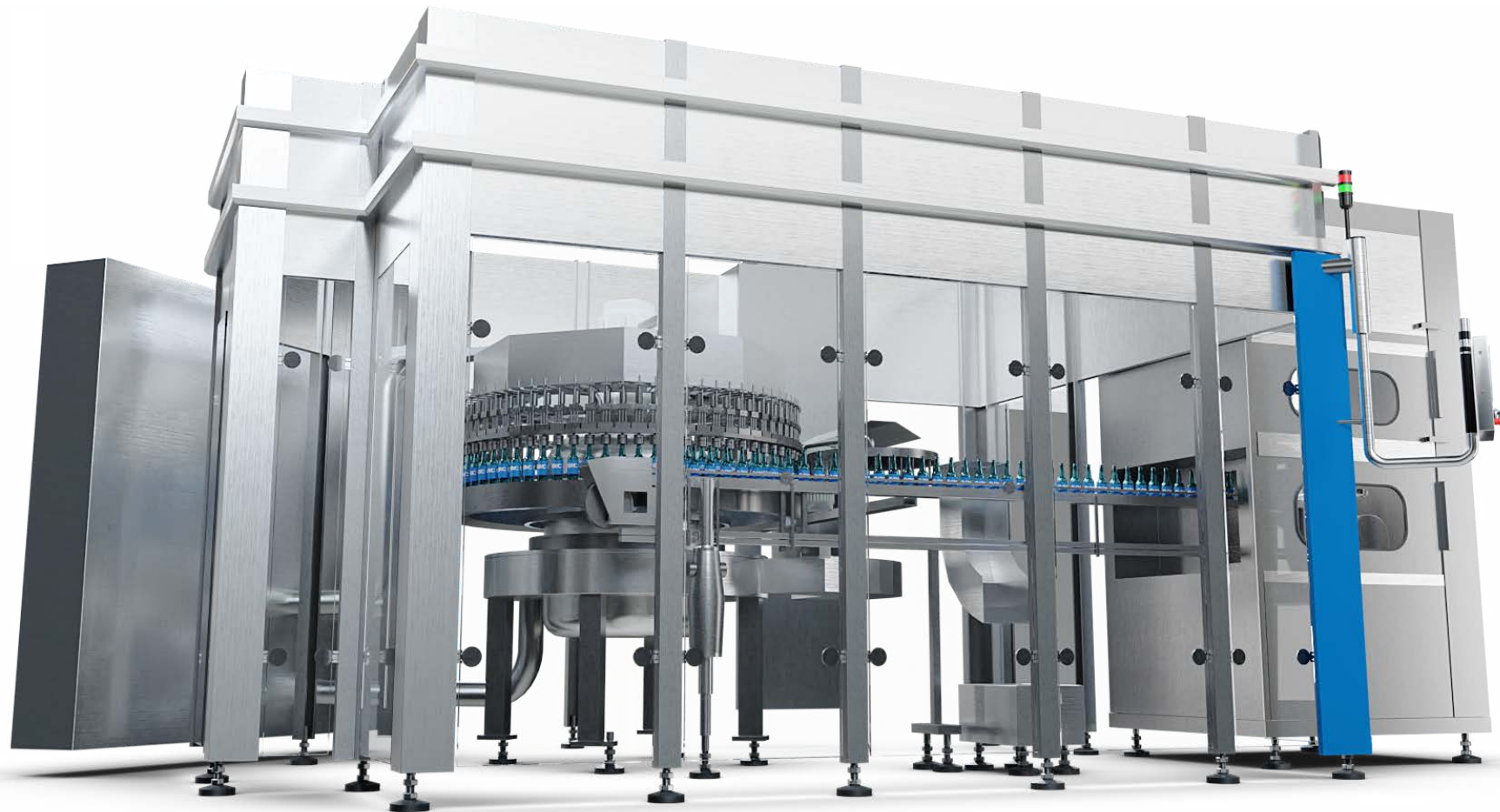
 Fluid handling 

 High pressure 

 Static control 

 General solutions 

# Bottle and can filling



 Air treatment 

 Wash down and CIP 

 Clean & hygienic design 

 Energy efficiency 

 Process monitoring & control 

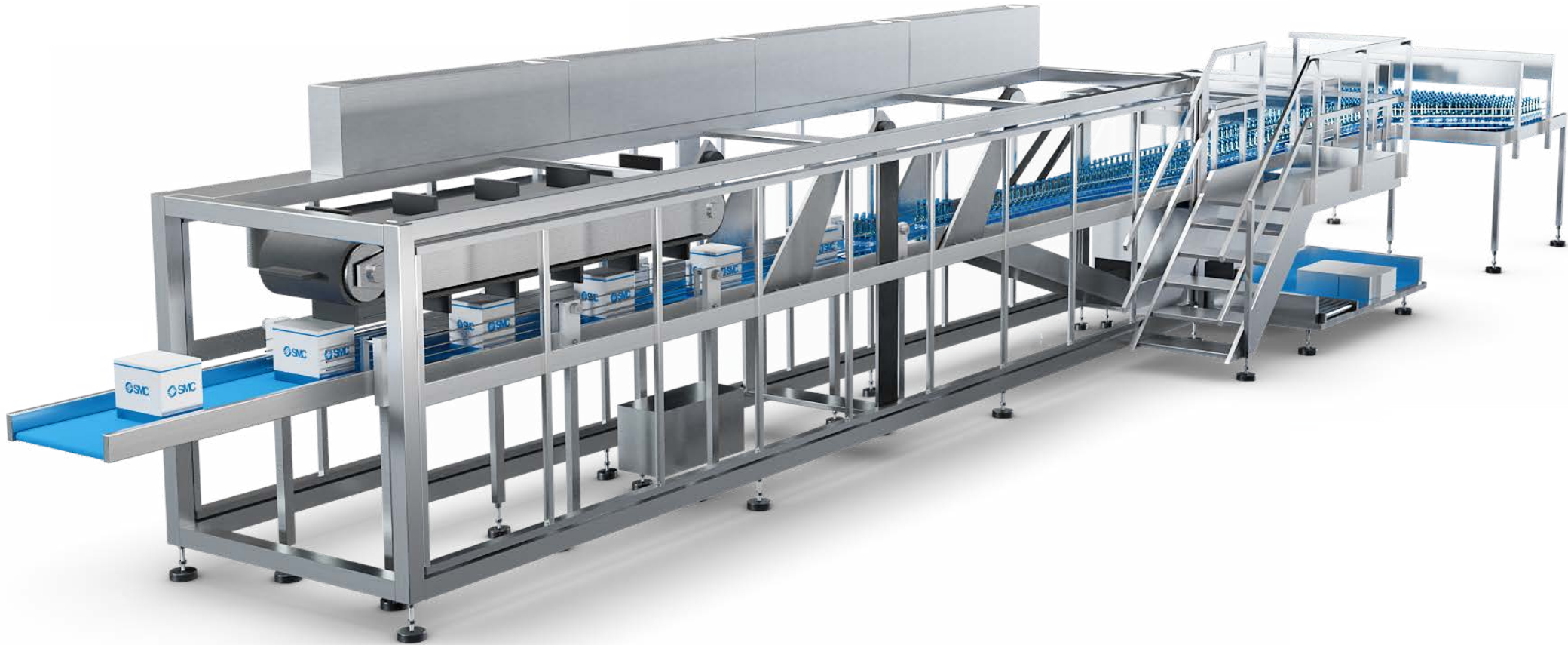
 Fluid handling 

 Air blowing 

 Safety 

 Electrical motion 

# Case packing



 Air treatment [↗](#)

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 Vacuum [↗](#)

 Safety [↗](#)

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# Palletising



Air treatment



Energy efficiency



Process monitoring & control



Vacuum



Safety



Static control



Wireless communications



General solutions

# Air treatment



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

- ⊕ HF1B-AFF, ⊕ HF1B-AM,
- ⊕ HF1B-AMD, ⊕ HF1B-AMK

### 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.



## Modular connection type membrane air dryer

- ⊕ IDG-D Series

- No tools required for maintenance
- Changeable purge air discharge direction
- Refrigerant free
- Port sizes: 1/8 to 1/2.

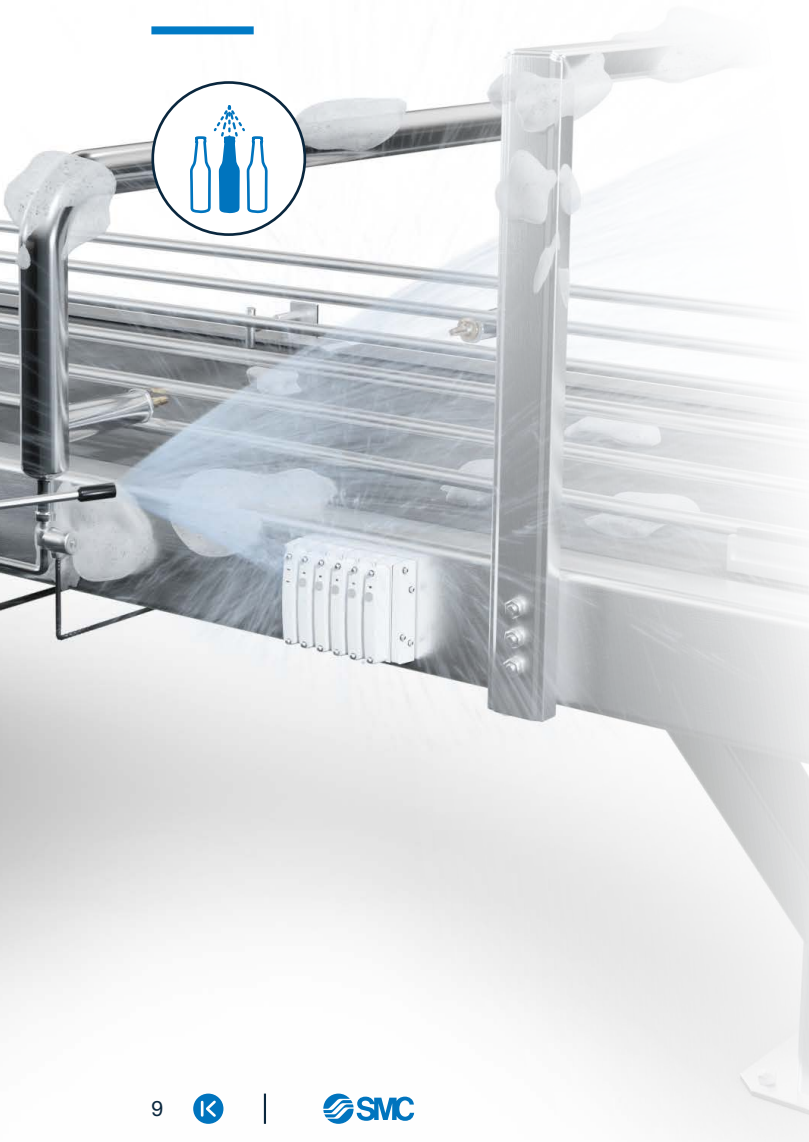


## Refrigerated air dryers

- ⊕ IDFA-F 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
- Low GWP refrigerant.

# Wash-down & Cleaning in place



## 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.

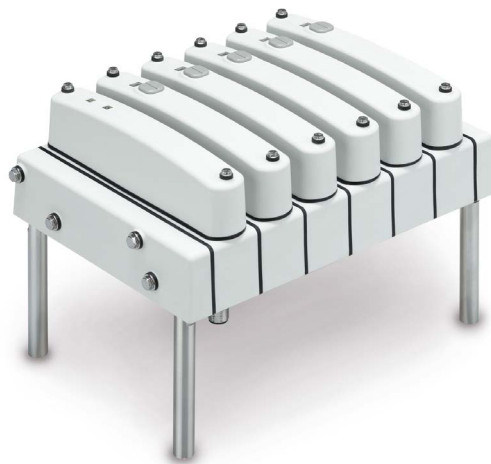


## NAMUR interface 3/5 port solenoid valve, clean design type

⊕ VFN2120N-X23/36 Series

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

# Clean & Hygienic design



## 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.

# Energy efficiency

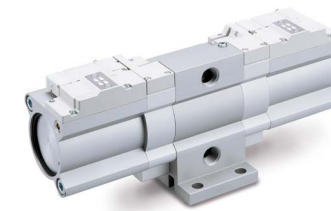


## Air Management System

### ⊕ 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.

# Process monitoring & control



## 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 Series

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

# Fluid handling



## 2-port solenoid valve

⊕ HF1B-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 collect construction
- Triple-seal.



## Digital flow switch for water

### ⊕ PF3W Series

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

# Air blowing



## 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 unit

### PU Series

- CO<sub>2</sub> emissions (Air consumption): 50 % reduction
- Possible to adjust operating frequency
- External power supply is unnecessary.

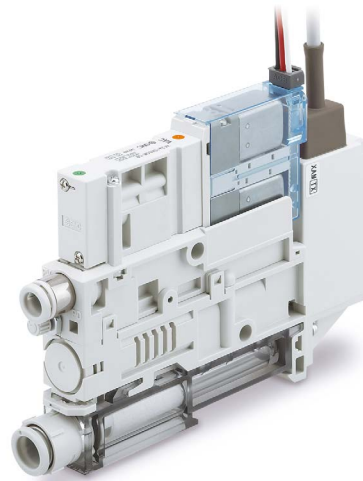


## Air amplifier

### ⊕ ZHV Series

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

# Vacuum



## 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 gripper system

⊕ ZGS Series

- Mountable in industrial robots and collaborative robots: Universal Robots, OMRON/TECHMAN, FANUC and Yaskawa
- Maintains grip in any orientation, regardless of contact area.

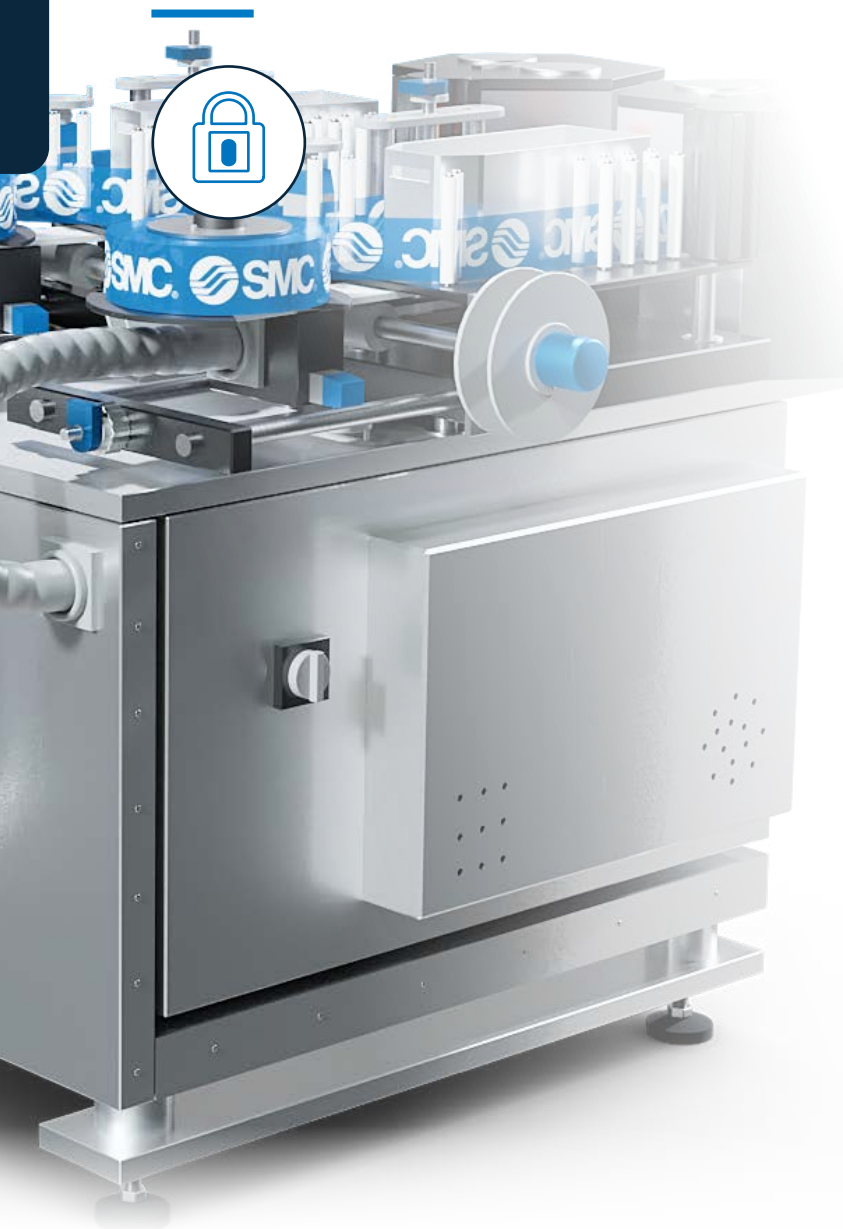


## Vacuum saving valve

⊕ ZP2V Series

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

# Safety



## Safe exhaust valve modular connection type

⊕ VPX400 Series

### Reduce risk, increase the capacity

- **Accomplish a high level of machine safety** – Peace of mind for category 3 & 4 compliance. Maximum PL e.
- **Enable a high speed exhausting of residual air** – Up to 15,000 l/min exhaust flow rate capacity.
- **Centralise machine air supply functions** – Combine exhaust control, soft startup and monitoring in a single product.
- **Compact and modular profile** – Mounting and aesthetics combine with other AC-D products.



## Integrated pilot check valve with residual pressure release valve

⊕ ASP-X352 Series

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

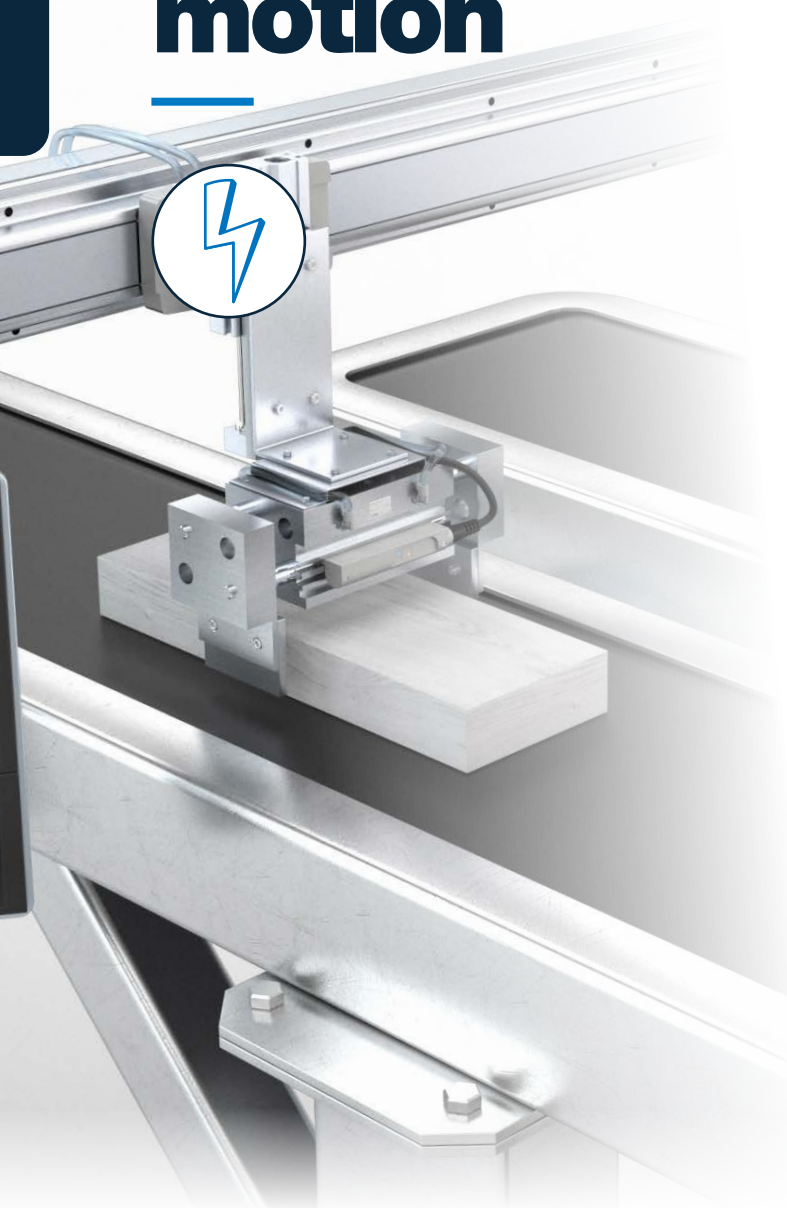


## Pressure relief 3 port valve with locking holes

⊕ HF1B-VHS-D Series

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

# Electrical motion



## 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.

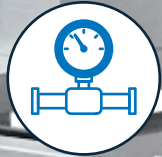


## Battery-less absolute encoder type electric actuator

### ⊕ LEYG Series

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

# High pressure



## 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 fluororesin 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.

# Static control



## Bar type ionizer

### + IZS51 Series

#### Optimise air, eliminate static

- **Streamline the control of static** – Option for integrated 2-port valve for reduced consumption and installation labour
- **Reduce setting errors and setup time** – IO-Link communication for monitoring of operating status
- **Get more information at a glance** – Integrated LCD display
- **Go for a seamless installation** – Compact and flat profile. Electrical connection and piping on the same side. Integrated power supply.



## 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.

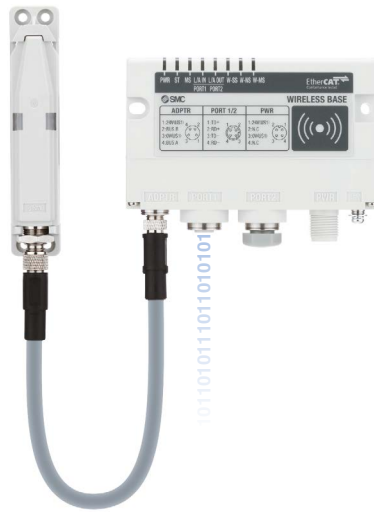


## Nozzle type ionizer

### + IZT43 Series

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

# Wireless system



## Compact wireless base

### + EXW1 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, quick connection & start-up and IO-Link communication.



## Compact wireless remote valve manifold

### + EXW-RD M5 Series

- For direct connection to valve manifold, up to 32 points
- Communication distance: up to 100 m
- Up to IP67 enclosure compliant.

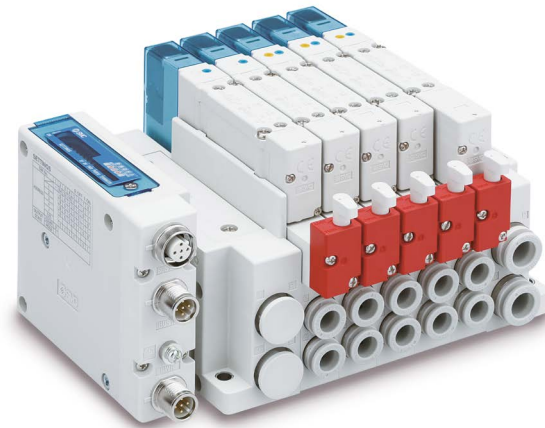


## Air management hub

### + EXA1 Series

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

# General solutions



## Pilot operated 4/5-port solenoid valves

### ⊕ New SY Series

#### The most versatile all-purpose valve

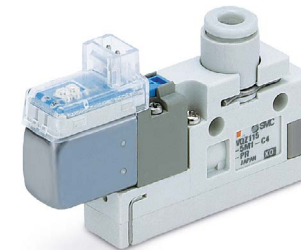
- **Improve your productivity** – Outstanding reliability and reduction in cycle time
- **Save on installation costs and assembly time** – Remarkable flexibility in design
- **Cut your costs** – Air savings by driving higher capacity cylinders and using mixed mounting valves
- **Simplify machine use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



## Speed controllers with push-lock & indicator

### ⊕ AS□FS 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.

# 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?



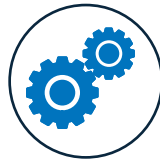
## Recover what you generate

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.



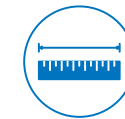
## Think efficient

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

# Condition Based Maintenance solutions

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

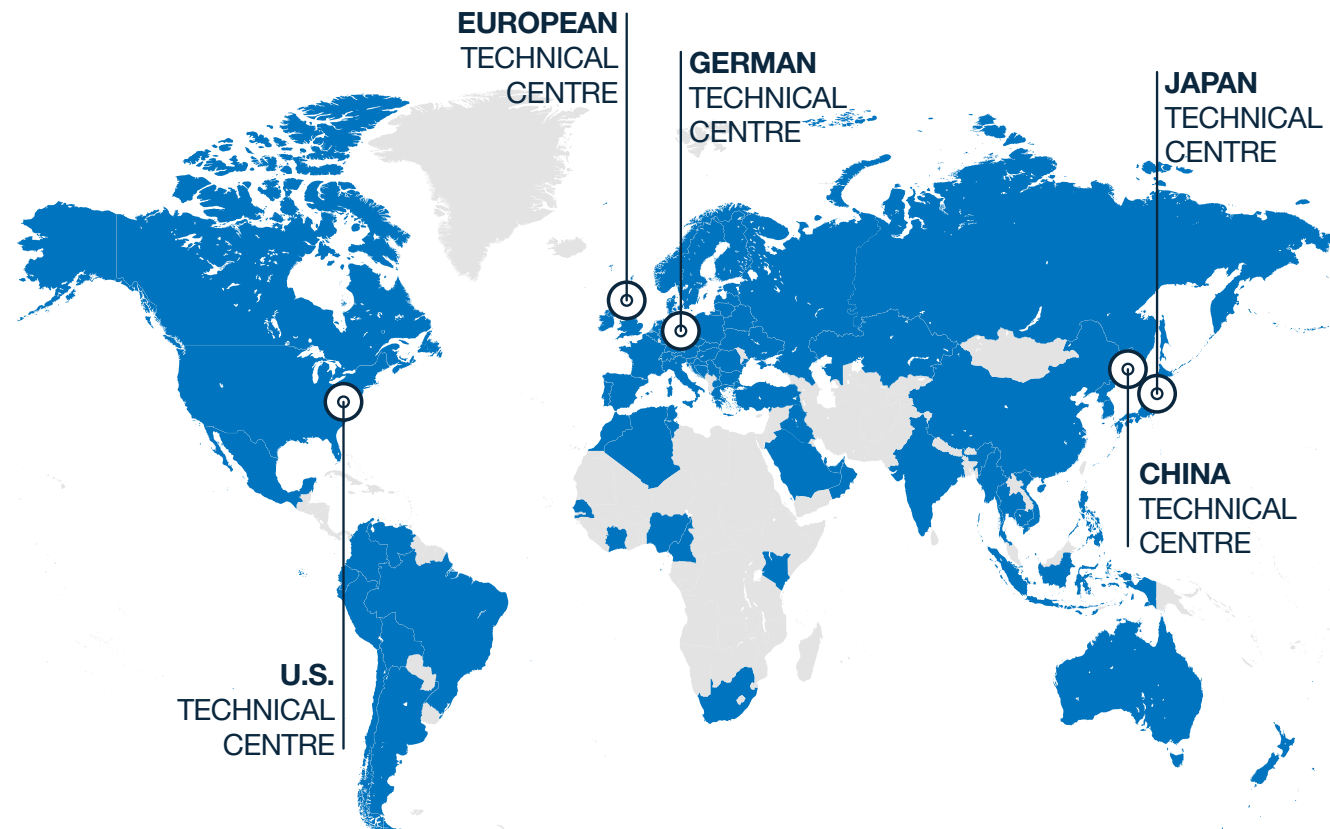
SMC sensors and positioners guarantee a high degree of positioning accuracy on the machine, meeting the most important requirements for sensors and positioners: precision, maximum process availability and a long service life.

# Our support network

## SMC's worldwide commitment

One of the things we do best at SMC is **being close to our customers**. Local support, on a global scale.

With support in over **500 locations** across **80 countries** and regions **worldwide**, our sales force of **7000 experts** maintains **close communication with customers**.



# 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.

## Production BCP

### Ensure customer order fulfilment

Reliable delivery for you thanks to our 9 global logistic centres and 38 production sites worldwide, 10 of which are located in Europe. 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

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

## 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](#)



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