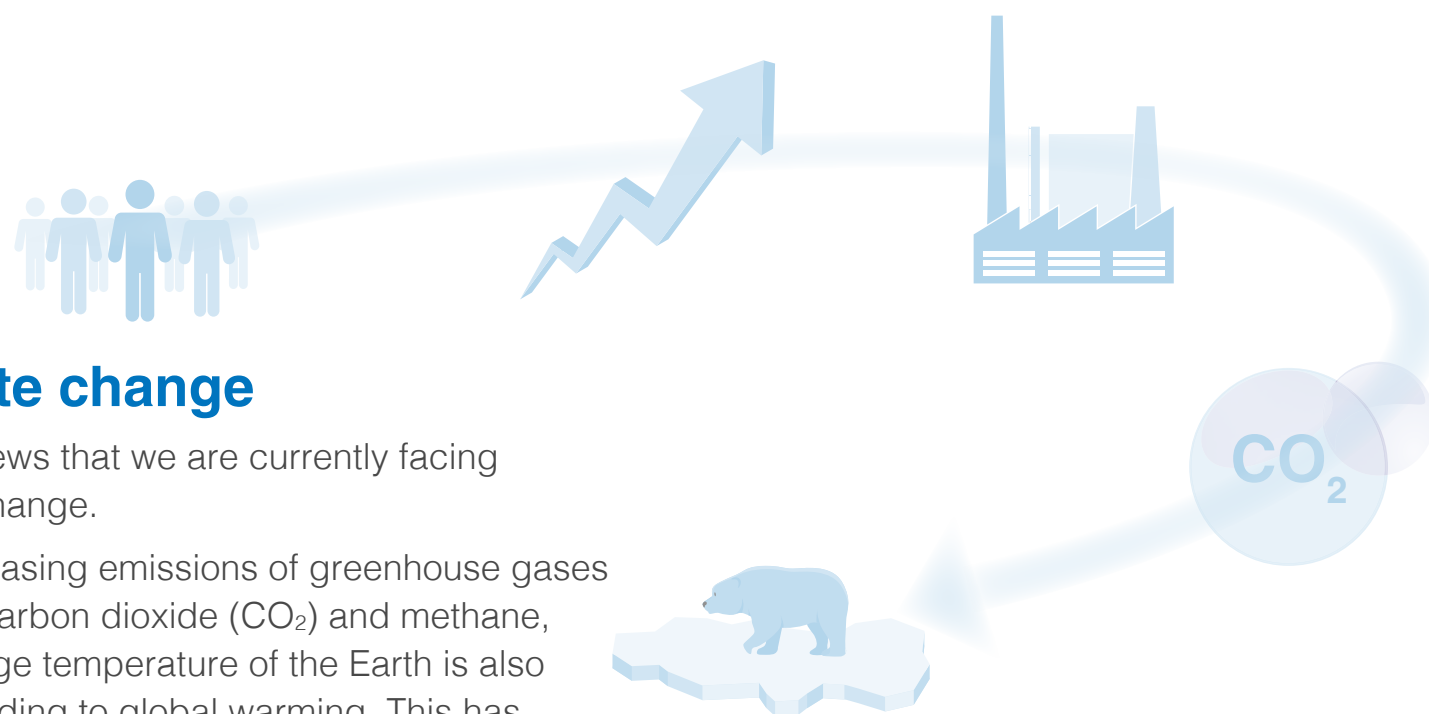




Expertise – Passion – Automation



Supporting sustainability
Energy assessments



Climate change

It is not news that we are currently facing climate change.

With increasing emissions of greenhouse gases such as carbon dioxide (CO₂) and methane, the average temperature of the Earth is also rising, leading to global warming. This has catastrophic consequences for our planet: melting glaciers, flooding of islands and coasts, more destructive hurricanes, migration of certain species and desertification of fertile land, among others.

As can be seen, there is an urgent need for action to curb the greenhouse effect and mitigate the effects of climate change.

Energy assessments

SMC supporting sustainability

- **Sustainable Development Goals**
- **Menu of services**
- **SMC strategic partnership program**
- **Action in practice**
- **SMC Business Continuity Plan**

United Nations and Paris Agreement

At the end of 2015, leaders from 192 parties met at the Paris Climate Conference (COP21) organised by the United Nations to discuss climate change and approve a common plan: the Paris Agreement. This is the first universal and legally binding agreement on climate change and aims to limit the global temperature increase in this century to 2 °C above pre-industrial levels. It also seeks to promote additional efforts to ensure that global warming does not exceed 1.5 °C. At the same time, it intends to strengthen the capacity of countries to deal with the effects of climate change and to support them in their work.

The EU ratified the Agreement on 5 October 2016, enabling it to formally become effective on 4 November 2016.

The implementation of the Agreement is key for achieving the Sustainable Development Goals as it requires climate action to reduce emissions and increase climate resilience.

The Sustainable Development Goals (SDGs) set out the world we aspire to under the slogan “Leave no one behind”. They are applicable to all nations and imply a guarantee that we are all in this together.

There are 17 objectives which are classified in these points, called by the UN the “5Ps”: People, Planet, Prosperity, Peace and Partnership.



SMC has implemented action plans in four project themes to address various SDGs

1 Project theme:

Sustainable measures to prevent climate change

- Proposals to reduce CO₂ from customers' factories around the world
- SMC eco-factories: Reducing our environmental impact
- Factories in harmony with the natural environment
- Development of energy saving products
- Development of environment friendly products.



2 Project theme:

Healthy, safe and secure working environment

- Work environments where employees can work safely and healthily
- Pleasant working environments with no human rights violations
- Better working environments for older people and those with disabilities.



3 Project theme:

Development of human resources and promotion of automatic control technology

- Teaching children about automatic control equipment
- Higher education scholarship system
- Global talent management system
- Global awards system.



4 Project theme:

Global social contribution activities

- Global social contribution activities
- Disaster countermeasures and support.



All this effort has been recognised by the Japan SDG Association, which has certified SMC in December 2020.

SMC offers a menu of services related to energy assessments, carried out by experts, so that your business can contribute to energy efficiency and gain a competitive advantage.

Basic review of compressed air generation

Checking the...

- ✓ **Pressure drop and differential**
 - After storage tank, mainline filters
 - Pressure drop across filters
 - Pressure drop in 4-6 locations around factory compared to compressor room.
- ✓ **Flow**
 - Installation of flow meter/s and recording of data
 - Or review customers' data.
- ✓ **Storage**
 - Size
 - Suitability.
- ✓ **Temperature checks**
- ✓ **Piping best practices**
 - Undersized piping
 - Located near outside wall or cold location for condensation issues
 - Pipe drops taken from bottom of pipe.

Compressed air quality analysis

- ✓ **Install test equipment**
 - Basic overview via visual inspection
 - Detailed analysis which needs to be sent to third party company (Surcharge applicable)
 - Other services available on request such as bacterial testing (Surcharge applicable)
 - Dew point analysis.

Compressed air consumption analysis of energy intensive uses of air

- ✓ **Air blow analysis**
 - Cooling
 - Drying
 - Product moving.
- ✓ **Vacuum generation**
- ✓ **Pneumatic vibrators**
- ✓ **Diaphragm pumps**
- ✓ **Material transfer**
- ✓ **Others**

Individual machine analysis (All data recorded for 24 h)

- ✓ **Pressure and flow at inlet of machine**
- ✓ **Pressure and flow at interior of machine as needed**
- ✓ **Review checklist of best practices**
- ✓ **Evaluation of idle mode savings**

Leakage detection and analysis

- ✓ **Mainline factory pipelines (Parabolic for distances over 2 metres)**
 - Ultrasonic leak detection test
 - Report and potential savings identified.
- ✓ **Machine analysis (Flexible for close proximity and parabolic for further than 2 metres)**
 - Ultrasonic leak detection test
 - Report and potential savings identified.
- ✓ **Leaks in compressor room**
- ✓ **Pneumatic controls for refrigeration, process and HVAC**
- ✓ **Nitrogen or other gases**
- ✓ **Additionally**
 - Dust collection
 - Waste water treatment
 - Handling equipment
 - Warehouse conveyors and other systems
 - Others to be confirmed between both parties.



Designed to support our customers across many different and challenging needs throughout their business.



1 Dedicated corporate account manager

An SMC Corporate Account Manager is assigned as your one-point person of contact. They work closely with your Corporate HQ Sponsors, Engineers and all production facilities - to deliver, create, manage and execute all collaborative program objectives.



2 Local factory support

SMC has over 6,000 local sales engineers in 83 countries to support all of your local production facilities.



3 Design engineering support

To fully support your Engineers - SMC has 1600 dedicated R&D Engineers that can develop new products or solutions. SMC can quickly customize or modify existing components to meet design standards or unique applications.



4 Machine safety support

SMC will work with your Engineering and local facilities for design assistance related to plant safety upgrades to meet ISO 13849-1 or other Machine Directives.



5 OEM machine supplier support

SMC will support your OEM Machine suppliers with the integration of SMC specified components. SMC will provide pricing support, innovative design assistance and SMC project management to ensure on-time delivery and commissioning of new machines or lines.



6 Critical spare parts for new OEM machines

SMC will work with local factories receiving new OEM machines - to ensure all critical spare parts are available and onsite prior to production.



7 Compressed air energy savings assessments

SMC has developed a Streamlined Energy Savings Assessment program for our Corporate Accounts. Our goal is to find innovative solutions to reduce waste of compressed air in the factory environment.



8 Machine analysis assessments

SMC will perform plant level machine analysis to improve machine performance, identify waste, reduce scrap rate and improve line efficiency.



9 Storeroom assessments

SMC will perform plant level storeroom assessments to reduce vendor base, eliminate duplication, standardize components, identify critical spares and offer cost savings solutions.



10 High usage spare parts analysis

SMC will work with all local plants to identify high usage pneumatic components. SMC will conduct failure mode analysis and offer robust alternatives to ensure better performance and uptime on machines where components are used.



11 Improvement activity reports

SMC will document all Corporate Account application successes with Improvement Activity Reports (IAR's). These IAR's are a one-page overview of the application - highlighting operational improvements, energy savings, cost savings details or plant process improvements. These IAR's are designed to be shared with other facilities to duplicate activity.



12 Onsite & online training classes

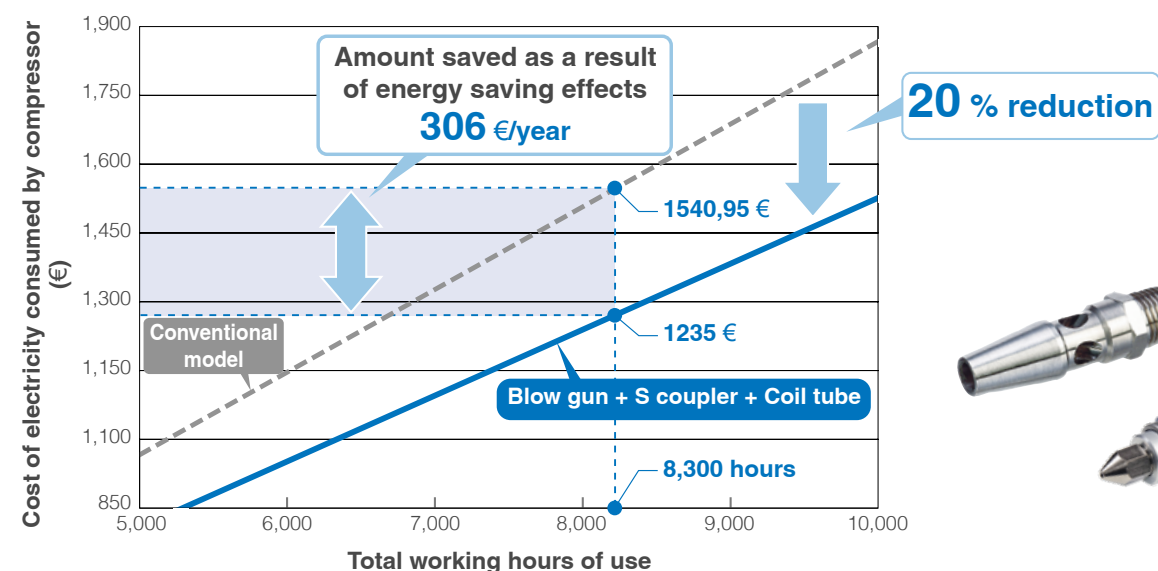
SMC offers customized onsite and online training classes - on a variety of subjects related to pneumatic components, electric actuators, energy savings, optimal machine design and TPM methodologies.

Action in practice

At SMC we have teams of experts around the world specialised in the characteristics of each industry: in their laws, regulations, standards and specific technology requirements. We are knowledgeable in the specifics of each production process, so here are some experts' experiences.

Snack industry

A producer of seasoned snacks uses blow guns to clean down product weighers, conveyors and packaging machines in-between product and shift changes. Continuous blowing at full pressure is expensive and risks causing injury if a safety nozzle isn't incorporated.



By changing to VMG blow guns, the customer was able to reduce the failure rate of the guns as well as improving the energy efficiency and reduce CO₂. We were also able to supply an extension rod and tamperproof regulator as a single part number kit. The customer made savings of over 7,000 € per year, with a return on investment of 247 days.

MR. MIKE BROWN, INDUSTRY MANAGER BEVERAGE, SMC UNITED KINGDOM



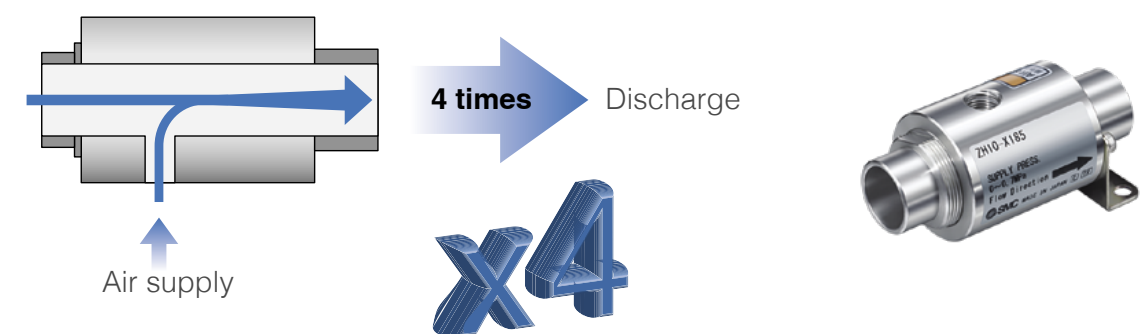
MR. ANDY STILL,
INDUSTRY PROJECTS
MANAGER, ENERGY
EFFICIENCY, EUROPE

When our clients look at energy costs, they often find that approximately 20 % of the energy used in a factory supports the pneumatic systems. Our experience in assessing factories shows that 30-50 % of the compressed air generated is lost to leaks and/or inefficient use of compressed air. Reducing these “hidden costs” by repairing leaks, optimising inefficient uses, and substituting alternate technologies can result in significant reduction in operating costs with the resultant increase in “up time”, and all with very low capital investment.

[Discover more on Energy Efficiency](#)

Beverage industry

Producers of liquid beverages which are packed in bottles, cans and cardboard packs must print a validation date on the product. When the surface before printing is not dry, the print will be not visible or printed which can result in rejected products. Normally the solution to avoid this problem is to install a blowing nozzle or air knives.



After the installation of the ZH20B-X185 air amplifier, the customer reduced their current air consumption by more than 50 %. The return on investment of this project was less than 450 days. With the pressure reduction (below 5 bar), the customer also reaches their corporate goals of energy efficiency and CO₂ reduction.

MR. GARY BROWN, INDUSTRY MANAGER BREWERY, EUROPE

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

8,700 sales engineers worldwide ready to recommend the best solution for you.
83 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 8 global logistic centres and 34 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

1,700 engineers at our 5 technical centres around the globe (2 in Europe - Germany and UK).



Expertise – Passion – Automation

www.smc.eu

DIG-ENAS-A-UK