



## IOT TECNOLOGIES FOR PACKAGING 4.0



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# "Nothing great was ever achieved without enthusiasm"

*Ralph W. Emerson*

The SMI Group is made up of the parent company Smigroup, the subsidiary companies SMI, SMIPACK, SMIMEC, SMITEC, ENOBERG, SMIENERGIA, SMILAB, SARCO RE and a network of foreign branches. With a workforce of 770 people and a 109,802 m<sup>2</sup> industrial area devoted to offices and production departments, in 2024 the SMI Group achieved a sales revenue of 190 million euros.

SMI designs and manufactures a wide range of bottling plants and packaging machines able to meet production requirements up to 50,000 bottles/hour and used in countless sectors:

food products, beverages, household cleaning and personal hygiene products, chemical and pharmaceutical products.

Additional value of the SMI product range is the mark "Made and designed in Italy".

In fact, all machines are produced in Italy in the town of San Giovanni Bianco, not far away from Bergamo.



## PROJECT ENGINEERING

Creation of customized packaging solutions as regards single machines, integrated systems and complete bottling & packaging lines



## TECHNICAL ASSISTANCE UPGRADES & SPARE PARTS

Constant customer assistance by means of online services or on-site intervention by a specialized technician; supply of original spare parts and upgrades to enhance the machine's efficiency



## IOT & ECO-FRIENDLY SOLUTIONS

Implementation of smart solutions for energy saving, the reduction of production costs and the environmental protection



**190** 

Sales revenues in  
2024 millions of €

**93%** 

Exported  
production

**109802** 

Manufacturing facilities  
& offices (m<sup>2</sup>)

**770** 

Employees  
(638 in Italy - 132 abroad)

93% of the production is exported to 130 countries, where SMI operates through an extensive network of branches, agents and resellers, providing customers with technical and sales support.

SMI's target group is extremely wide and varied as ranges from middle-sized bottlers to multinational corporations such as Coca Cola, PepsiCo, Nestlé, Danone, Unilever, AB-Inbev and many more.



OVER  
**650**  
MACHINES  
"WET AREA"  
DELIVERED



OVER  
**250**  
BOTTLING  
LINES  
DELIVERED



OVER  
**6500**  
MACHINES  
"DRY AREA"  
DELIVERED

#### VISION

SMI aims at strengthening its position of global player and satisfying the customer requirements in the best way possible, providing customized solutions strongly oriented to innovation.

#### MISSION

SMI is a customer-oriented organization, which, thanks to investments in human resources, particular attention to customer requirements, use of advanced technologies and great quality-price ratio, has become one of the world's leaders in the packaging machines sector.





## A SUCCESSFUL STORY

How can a small metal-working business turn into a large, forward-looking industrial reality?

Thanks to Luigi Nava's and his sons' initiative and foresight, SMI is today capable of sealing the fate of the bottling and packaging industry through the continuous innovation and the development of Industry 4.0 and IoT (Internet of Things) technologies for the "smart factory".

SMI foundation  
and launch of  
the first film  
shrinkwrapper

1987

Launch of the  
range of  
automatic  
palletizers

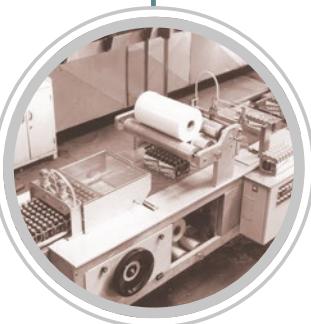
2009

Installation of  
the first  
complete  
bottling line

2011

1999

The first stretch-  
blow moulder  
is rolled out



2010

Introduction of  
stretch-blow  
moulding, filling  
and capping  
ECOBLOC®  
integrated  
systems





Presentation of the ultra-compact EBS K ERGON stretch-blow moulder



SMI launches on the market the new EBS KL ERGON range of compact rotary stretch-blow moulders up to 25,000 bottles/hour



2017

2014

Moving of workshops and offices to the SMI Group's new headquarters

2020



Launch of the new ACP series of pick & place case packers

2021

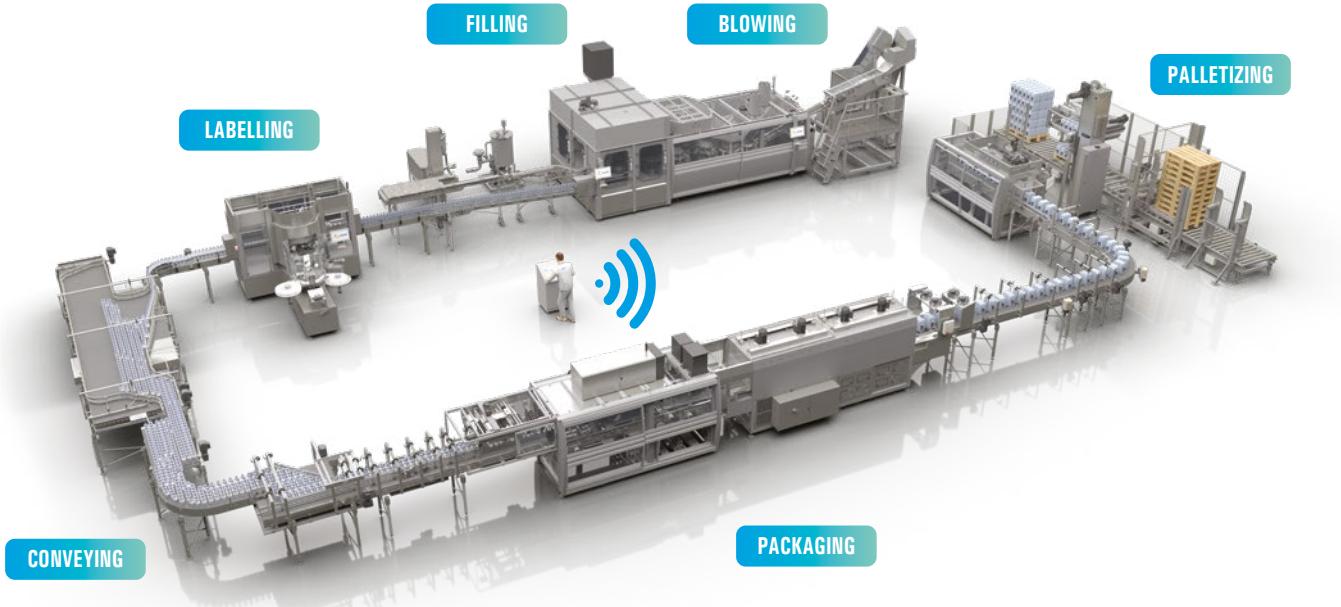


2022

Constant innovation and attention to environmental sustainability led to the development and the launch of the TPP ERGON range, a plastic-free solution for packing cans in multipack through the application of a cardboard pad in the upper part of the pack



# SMART SOLUTIONS FOR EVERY BOTTLING AND PACKAGING NEED



SMI offers complete bottling and packaging lines for production needs up to 50,000 bottles/hour intended for the food & beverages sector; designed in compliance with Industry 4.0 and IoT (Internet of Things) innovative principles, SMI plants can be considered as real "smart factories" thanks to the technological solutions of the latest generation they are equipped with.

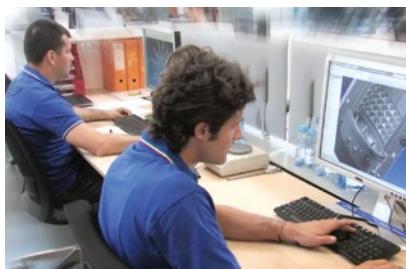
The preliminary phase of every project of a new bottling line consists of an accurate analysis of the customer's needs, coming out of sales and technical meetings between the customer and SMI engineers; subsequently, the processing of a project feasibility study and a customized

proposal defining all the details of supply take place. Thanks to this approach, SMI can create turnkey solutions capable of fully meeting the customer's expectations.

While designing machines and plants, SMI engineers commit themselves to matching customers' needs through innovative solutions in terms of manufacturing process efficiency, automation of operations, cost reduction and energy saving.

The solutions proposed by SMI are the outcome of a synergistic integration between a 35-year-long expertise in this field and the latest technologies compliant to Industry 4.0 and IoT (Internet of Things).

The latter allow to collect, analyze and manage through a single control platform the whole of the operating data concerning every machine of the manufacturing plant; the platform provides users with the real time monitoring of the industrial site's efficiency and enables them to remotely alter production flows, streamline resources and sort out problems or breakdowns.



**BLOWING**



**FILLING**



**PACKAGING**



**CONVEYING**



**PALLETIZING**



# BLOWING AND FILLING

SMI manufactures fully automatic bottling and packaging plants for rPET/PET/PP containers up to 10 L, equipped with the newest technical innovations ensuring production efficiency, operating flexibility, cost reduction and energy saving. SMI rotary stretch-blow moulders of the EBS ERGON series are designed to achieve a maximum output rate of 50,000 bottles/hour and are available in many models in two major variants:

- stand-alone configuration
- "combi" configuration, integrated into ECOBLOC® compact systems which combine into a single machine the operations of stretch-blow moulding, filling and capping

## The range includes:

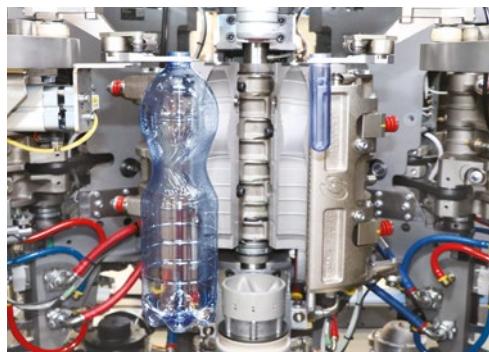
- 3 EBS K ERGON models, from 2 to 4 cavities, ideal for the production of PET/rPET/PP bottles with a maximum output of 2,500 bph/cavity;
- 4 EBS KL ERGON models, from 4 to 10 cavities, ideal for the production of PET/

rPET/PP bottles with a maximum output of 2,500 bph/cavity;

- 4 EBS E ERGON models, from 12 to 20 cavities, ideal for the production of PET/rPET/PP bottles with a maximum output of 2,500 bph/cavity;
- 3 EBS KL HC (High Capacity) ERGON models, with 3, 4 and 6 cavities, specifically designed for the production of PET/rPET/PP high-capacity containers with a maximum output of 1,200 bph/cavity.

## Key advantages

- compact and ergonomic frame
- fully electronic rotary technology
- motorized stretch rods
- highly energy-efficient IR rays lamps for preform heating
- air Master compressed air recovery system as a standard feature
- easily accessible machine for cleaning and maintenance operations





### EBS K ERGON SERIES

#### » ultra-compact rotary stretch-blow moulders

- output rate up to 10,000 bottles/hour
- rPET/PET/PP containers from 0.10 to 3 liters
- motorized stretch rods
- energy-efficient IR ray lamps for the preform heating

### EBS KL HC ERGON SERIES

#### » rotary stretch-blow moulders for high-capacity containers

- output rate up to 7,200 bottles/hour
- rPET/PET/PP containers from 5 to 10 liters
- motorized stretch rods
- energy-efficient IR ray lamps for the preform heating

### EBS KL ERGON SERIES

#### » compact rotary stretch-blow moulders

- output rate up to 25,000 bottles/hour
- rPET/PET/PP containers from 0.10 to 3 liters
- motorized stretch rods
- energy-efficient IR ray lamps for the preform heating

### EBS E ERGON SERIES

#### » rotary stretch-blow moulders

- output rate up to 50,000 bottles/hour
- rPET/PET/PP containers from 0.10 to 3 liters
- motorized stretch rods
- energy-efficient IR ray lamps for the preform heating

### ECOBLOC® SERIES

#### » compact stretch-blow moulding, filling and capping systems

Fit to production plants for:

- flat and carbonated water
- carbonated soft drinks
- edible oil
- milk

# SECONDARY PACKAGING

SMI is the largest international manufacturer, by number of units delivered every year, of automatic packers for the end-of-line secondary packaging running at the maximum output rate of 450 packs/minute (according to the machine model and to the container/pack features); all of the machine models are designed in accordance with the latest principles of modularity, ergonomics, flexibility and expandability and allow to pack in multiple packaging solutions a wide range of containers:

- plastic and glass bottles
- jars
- cans
- cardboard briks
- other rigid and stable containers

The range of SMI machine for the secondary packaging is equipped with an automation and control system of the latest generation

(MotorNet System®) and is composed of:

- stretch film packers
- film shrink wrappers
- tray packers
- pick & place case packers
- wrap-around case packers
- combined machines
- cardboard multipack sleeveers

## Key advantages

- Compact, modular and ergonomic frame
- Top operating flexibility
- Possibility to personalize the machine through a wide range of accessories
- Quick and easy format changeover
- Low energy consumption and reduced maintenance



## PACKERS WITH IN-LINE INFEED

### » Shrink wrappers (LSK, CSK and SK series)

- packaging in film only, cardboard pad+film, cardboard tray, cardboard tray+film
- production speed up to 450 packs/minute (SK working on triple lane)

### » Stretch film packers (SFP series)

- packaging in stretch film
- production speed up to 30 packs/minute

### » Wrap-around case packers (LWP, CWP and WP series)

- packaging in wrap-around cases or corrugated cardboard trays, rectangular or octagonal, with standard or extra-large size and with walls with the same or different heights
- production speed up to 80 packs/minute





## PACKERS WITH IN-LINE INFEED

### » Pick & place case packers (ACP series)

- packaging in American cardboard cases (RSC cases)
- production speed up to 25 packs/minute

### » Packers in multipack cardboard (MP and TPP series)

- overlapping cardboard sleeves ("over the top" or "neck through") or cardboard top pad
- production speed up to 300 packs/minute

### » Combined packers (LCM, CM and CM R series)

- packaging in film only; cardboard pad+film; tray only and wrap-around cases
- production speed up to 80 packs/minute

## PACKERS WITH 90° INFEED

### » Shrink wrappers (ASW series)

- packaging in film only, cardboard pad+film, cardboard tray, cardboard tray+film
- production speed up to 150 introductions/minute

### » Wrap-around case packers (ACW series)

- packaging in wrap-around cases or corrugated cardboard trays, rectangular or octagonal, with standard or extra-large size and with walls with the same or different heights
- production speed up to 150 introductions/minute

### » Combined packers (AFCW series)

- packaging in film only; cardboard pad+film; tray only and wrap-around cases
- production speed up to 150 introductions/minute

# CONVEYANCE AND PALLETIZING

For the handling of loose containers or packs within bottling and packaging plants, SMI provides a wide range of:

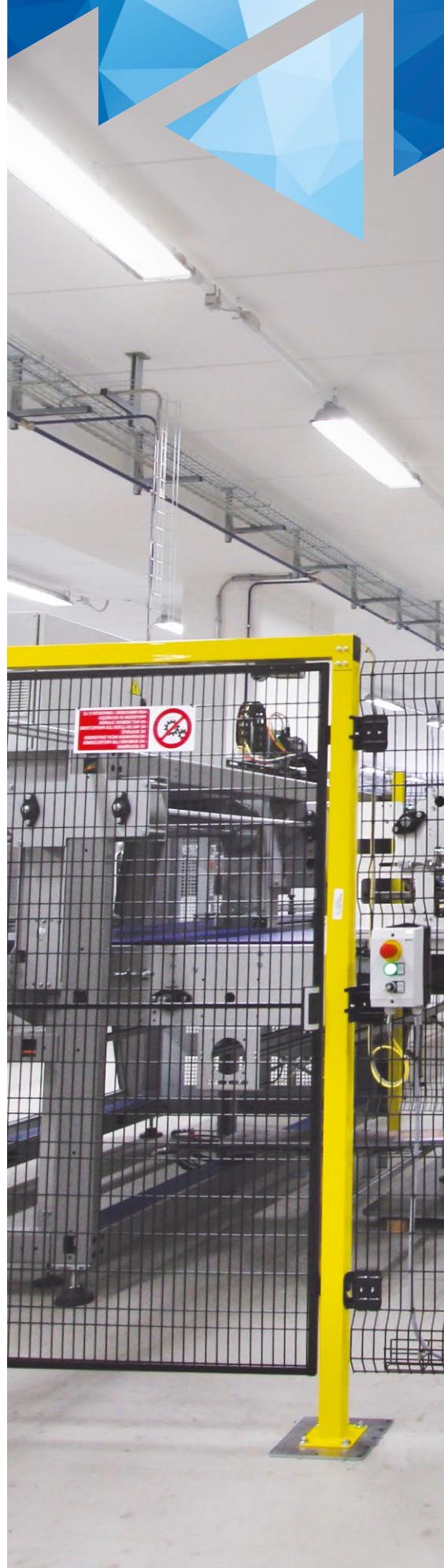
- air conveyors
- chain conveyors
- multilane dividers

SMI conveyor belts are designed as modular units which can be easily combined in order to get the most suitable configuration for customer's needs. They are made of durable and reliable materials and are operated by energy-saving brushless motors.

In order to streamline end-of-line operations, SMI offers many different solution of automatic palettization available both as stand-alone" equipment and combined with a film shrink wrapper or a wrap-around case packer to form an integrated system called "Packblock" (a really compact block which doesn't require conveyor belts to connect the two machines).

## Key advantages

- compact and robust column frame
- moving mechanical elements operated by brushless motors, ensuring top precision and high reliability
- ample customization possibilities thanks to optional devices



## APS 615/620 ERGON SERIES

### » compact palletizers

- output rate up to 20 packs/minute
- palletizers for cardboard blanks, trays and packs in general
- layer formation by in-line infeed

## APS 1540 ERGON SERIES

### » automatic palletizers

- output rate up to 40 packs/minute
- palletizers for cardboard blanks, trays and packs in general
- layer formation by 90° infeed

## APS 1570 ERGON SERIES

### » automatic palletizers

- output rate up to 70 packs/minute
- palletizers for cardboard blanks, trays and packs in general
- layer formation by 90° infeed

## APS 3070 L ERGON SERIES

### » automatic palletizers

- output rate up to 70 packs/minute
- palletizers for cardboard blanks, trays and packs in general
- layer formation by in-line infeed

## APS 3105 L ERGON SERIES

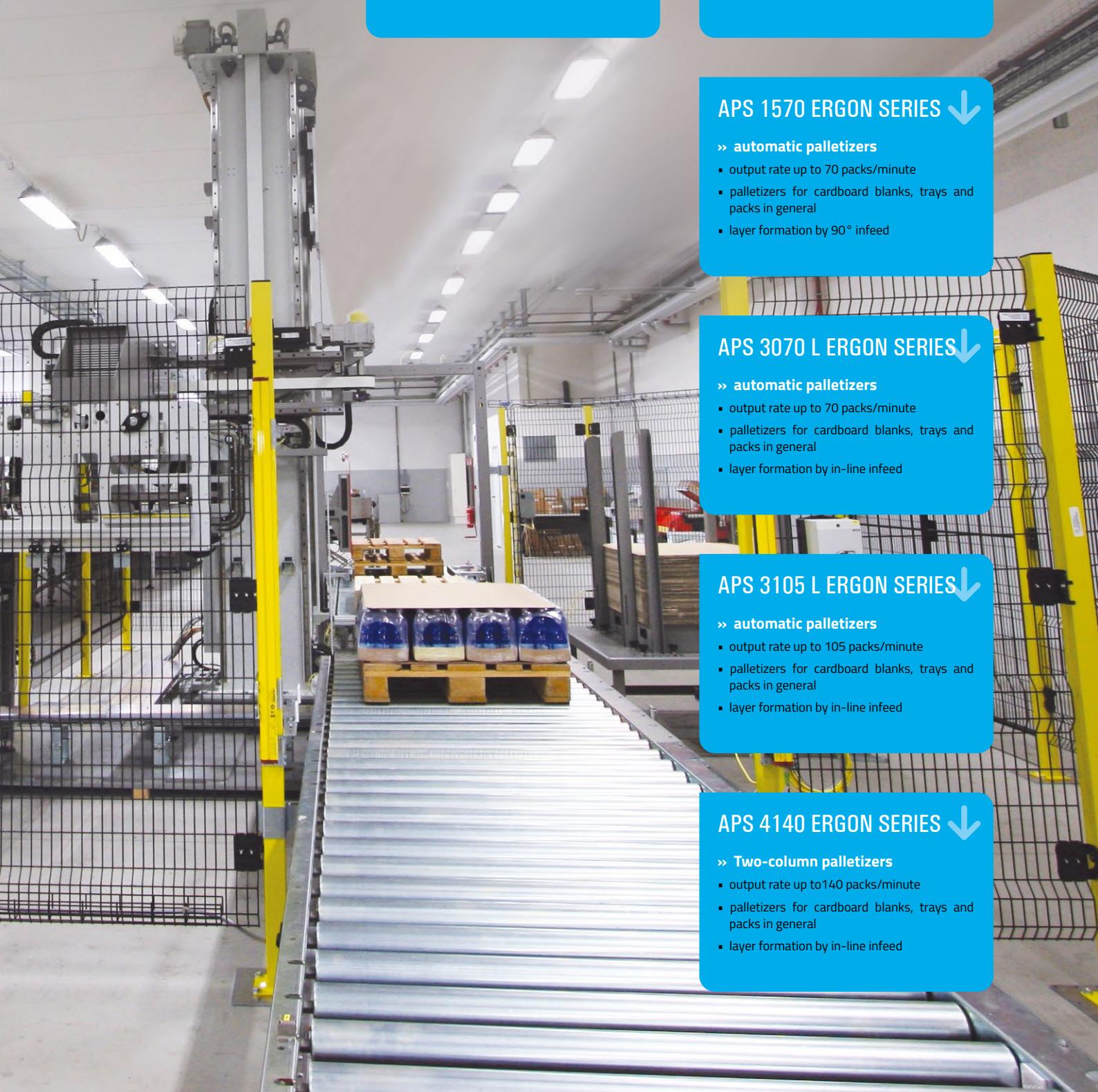
### » automatic palletizers

- output rate up to 105 packs/minute
- palletizers for cardboard blanks, trays and packs in general
- layer formation by in-line infeed

## APS 4140 ERGON SERIES

### » Two-column palletizers

- output rate up to 140 packs/minute
- palletizers for cardboard blanks, trays and packs in general
- layer formation by in-line infeed

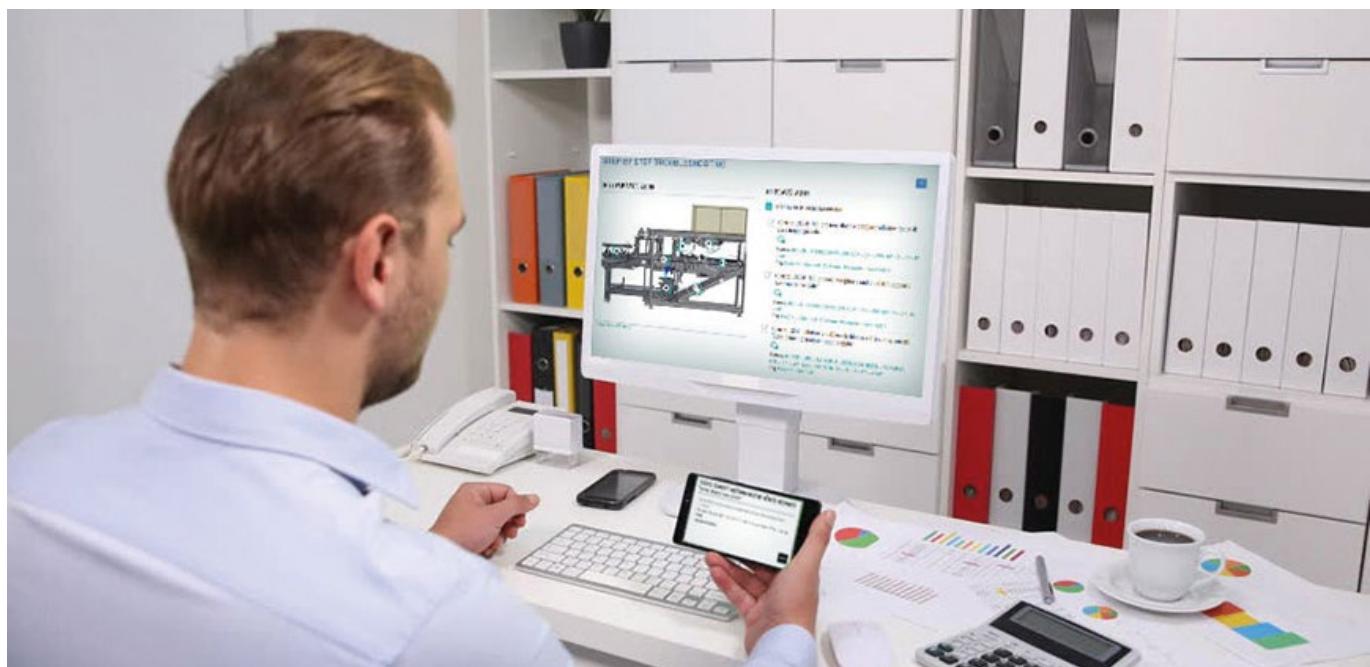


# AFTER-SALES SERVICES

The wide range of SMI products is combined with the offer of countless services to maintain machine efficiency and profitability over time.

## ➤ ON-LINE TECHNICAL SUPPORT THROUGH SMYPASS PRIORITY

- **SmyCall:** telephone line for an immediate technical support in case of malfunctions of machines and plants
- **SmyChat:** it allows to communicate via real time chat with a SMI technician, sharing pictures or other attachments
- **Intervention request:** it allows to generate a request for technical assistance by simply filling in all fields of a specific form
- **Teleassistance:** "peer to peer" remote link between the machine's operator panel and a SMI technician's computer



## > ON-SITE TECHNICAL SUPPORT

SMI staff is at the customer's disposal everywhere in the world in order to provide:

- interventions for solving technical problems
- interventions for carrying out planned maintenance operations
- interventions for machine updating

## > SPARE PARTS & UPGRADES

- **SmyCloud:** multimedia digital library collecting operating, maintenance and spare parts manuals and wiring and pneumatic diagrams
- **SmyReader:** app for Android and iOS devices allowing to easily and quickly order spare parts
- **SmyUpgrades:** software and hardware updates to enhance machine efficiency over time

## > TRAINING CENTER

It organizes comprehensive courses addressed to those who want to take full advantage of the potential offered by SMI machines and to increase their operational efficiency. Training courses are intended for groups of up to 6 people, consist of theoretical and practical sessions and can be held both at SMI's headquarters in San Giovanni Bianco and at the customer's facility.



## > AUGMENTED REALITY GLASSES

This smart tool is not only efficient, but also easy to use. Its functioning consists of a few simple steps:

- In case of a machine problem, the operator wears augmented reality glasses and frames the QR code license
- The machine operator is put in contact with SMI Help Desk
- The view the operator sees is replicated on the computer screen of SMI after-sales technician
- This audiovisual assistance allows SMI technician to guide the operator and help him solve the problem quickly



Augmented reality glasses offer several advantages for SMI customers:

- Since SMI Help Desk performs audiovisual support, the operator doesn't need to send emails with heavy attachments to receive assistance
- The fact that SMI technicians can access real-time images and videos of what the operator is seeing enables to perform a guided troubleshooting process and to solve problems more easily and quickly
- SMI Help Desk can send specific documentation to the operator's glasses, by making the communication between SMI and the customer easier
- This system allows to overcome physical distance and cut on costs of on-site interventions
- Machine down time is reduced, with great advantages for customers in terms of time saved and productivity level



OVER  
**8000**

SMI machines  
installed in  
130 nations

# 123

specialized technicians  
to provide after-sale  
support all over  
the world



# OTHER SMI GROUP COMPANIES

## > SMIPACK

### **L-sealing hood and continuous packers, shrinkwrappers and handle applicators**

It is specialized in the production and selling of:

- L-Seal hood machines
- manual, semi-automatic and automatic L-Sealers
- intermittent and box motion automatic side sealers
- shrink tunnel
- semiautomatic and automatic shrink wrappers with sealing bar and overlap shrink wrappers
- automatic handle applicators

#### **SMIPACK machines can be used in the following sectors:**

- food: bakery, confectionery, pizza, fruit and vegetable, dairy products, drinks and preserved food
- non-food: products for graphic, electronic, mechanical and computer industry, laundry, toys, detergents, perfumes and pharmaceutical products



OVER  
**90,000**  
SMIPACK SECONDARY  
PACKAGING MACHINES  
DELIVERED

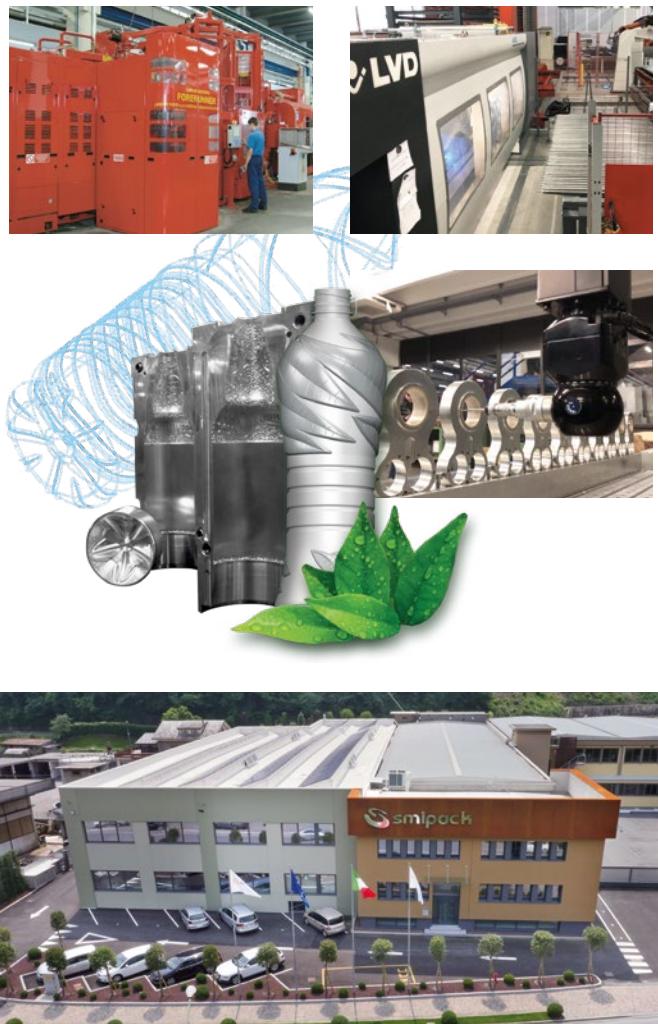
## > SMIMEC

### **Moulds and mechanical components**

It is specialized in manufacturing structural parts, mechanical components and aluminium, steel, iron and cast iron moulds.

It was founded in 1999 with the aim of meeting the main requirements of the companies of the Group for the production of the parts and mechanical components for the assembly departments.

It has been developing throughout the years in order to be able to carry out several works for third parties and offer a wide range of high-quality components manufactured with machines of the latest generation, able to meet the requirements of the most established and demanding markets.



# OTHER SMI GROUP COMPANIES

## > SMITEC

### Industrial Automation

It is specialized in developing and manufacturing integrated electronic devices and hardware/software systems for the automation and control of machines and industrial processes.

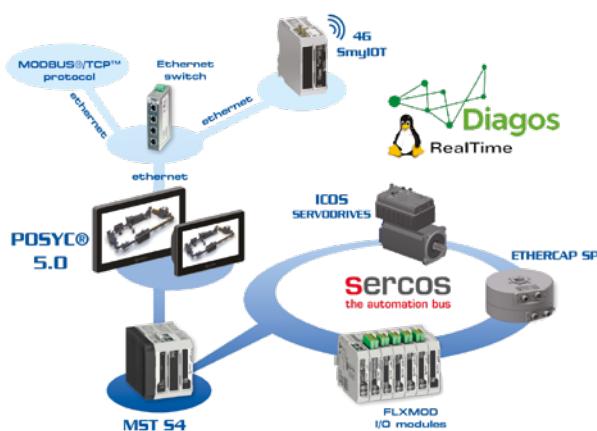
#### Smitec products stand out for:

- high technological content
- reduced dimensions
- simple installation and use

The focal point of SMITEC product range is the MotorNet System (MNS)®, a PC-based automation system for the management and control of industrial machines with independent axes.



### MotorNet System®



## > ENOBERG

### Filling systems

It became part of the SMI Group in 2016 and deals with the production of:

- electronic volumetric filling systems
- electro-pneumatic counter-pressure level filling systems
- recirculating filling systems

These machines are used in the following market sectors:

- water
- soft drinks
- juices
- beer
- wine and other alcoholic drinks
- milk and derived products
- edible oil
- detergents and pharmaceutical products
- sauces



# OTHER SMI GROUP COMPANIES

## > SMILAB

### Centre of Research and Technology Transfer

It is a Center of Research and Technology Transfer – CRTT accredited by the regions of Lombardy and Veneto and by MIUR.

It deals with:

- research and innovation
- corporate consultancy
- training

The aim of the company is to enhance the relationship between research and industry through the transfer of technologies developed within its own labs and the realization of joint projects



## > SMIENERGIA

### Energy from renewable sources

It deals with the management of plants producing energy from renewable sources, within the SMI Group's facilities; they include:

- a hydroelectric power plant with installed power of 1 MW
- assembly plants photovoltaic roofing with installed power of 1.5 MW
- solar thermal system for heating the water used for the company's services
- lighting through low-energy consumption LED lamps
- air conditioning system within the working environment, providing in summer natural cooling through use of fresh air from the hydroelectric power plant and in winter heating thanks to heat generators



# SUSTAINABLE DEVELOPMENT

## > QUALITY, ENVIRONMENT AND SECURITY

Sustainable development represents a key value of SMI mission, whose aim is to create a close relationship between industrial activity, product quality, respect for the environment and security of the workplace. For this reason the company adopts:

- a quality-environment integrated management system, in compliance with UNI EN ISO 9001:2015 (quality management system) and UNI EN ISO 14001:2015 (environment management system)
- an occupational health and safety management system, in compliance with UNI EN ISO 45001: 2018
- the adherence to the WHP (Workplace Health Promotion), as company adopting all measures to prevent accidents and work-related diseases and is committed to offer all workers opportunities to improve their health, reducing the general risk factors

The headquarter of the SMI Group is the perfect exemplification of the combination "architecture-environment", proof of the attention paid by the company to sustainable environment, together with the adoption of measures like:

- the replacement of machine plastic components with steel parts recovered by producing rejects
- the renewal of the company car fleet, opting for electric vehicles generating low CO2 emissions
- regular controls of the "carbon footprint" and continuous adjustments in order to reduce it



## > SOCIAL CORPORATE RESPONSIBILITY



In an economical context featured by an even stronger competition, SMI has remained faithful to the following principles and values: social solidarity, safeguard of the

human rights, guarantee of the working regulation and fight against corruption. These are part of a continually evolving company project based on the 10 principles of the United Nations Global Compact, universally recognized and preserved.

# THE SMI GROUP IN THE WORLD

Through an extended network of branches and representation offices, SMI is able to ensure a direct presence in the main international markets, providing the customers with sales and technical support.





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