



SECONDARY
PACKAGING



ocme
Moving Ideas

HQ

OCME
43122 Parma
Via Del Popolo 20/A
e-mail info@ocme.com
Tel +39 0521 275111
Fax +39 0521 272924

SUBSIDIARIES

OCME UK Ltd.
King John House, Kingsclere Park - Kingsclere
Newbury BERKSHIRE RG20 4SW
Tel +44 1635 29 81 71
Fax +44 1635 29 79 36

OCME FRANCE
42 avenue Montaigne
75008 Paris - France
Tel +33 627893620

OCME SA
110 Koornhof Road, Unit 3, lions Cove,
Meadowdale Johannesburg
South Africa

OCMEXICO Embalaje, S. de R.L. de C.V.
Homero 425 Torre "A" Desp. 102
V Sección México D.F.,
11570 - Mexico
Tel +52 5552542401

OCME AMERICA
5300 N.W. 33rd Avenue, Suite 105
Fort Lauderdale
33309 - FL United States
Tel +1 (954) 318 7446
Fax +1 (954) 634 0238

OCME PACIFIC Co. Ltd.
Level 20, Suite 9 and 27, Metropolis Building 725
Sukhumvit Road, Wattana District
10330 Bangkok - Thailand
Tel +66 2 207 9295;
Tel +66 98 249 9658

OCME Packaging Equipment (Jiaxing) Co. Ltd.
Nr. 86 JiuLiTing Road,
Jiaxing Economic Development Zone
314003 Jiaxing City - China
Tel +86 573 83971680
Fax +86 573 83971690



OCME AMERICA
OCMEXICO

OCME UK
OCME FRANCE
OCME HQ
ITALY

OCME SOUTH AFRICA

OCME CHINA
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Secondary Packaging - Heat-Shrink Wrap Packers - English - 05/2019 **accanto**



SHRINK WRAPPER PACKERS

A wide range of shrink film solutions to meet the various needs of our customers in the beverage, food, lubricating oil, detergent and other sectors.

OCME reserves the right to change product specifications, designs and equipment illustrated in this document without notice and without incurring obligation. All company names and product names mentioned herein are used for identification purposes only, and may be the trademarks or registered trademarks of their respective companies.

OUR VALUES: INNOVATION

OCME was established in 1954 and is known all over the world as one of the most reliable and innovative leaders in the automated packaging machinery and solutions sector. The headquarters are situated in Parma, Italy, and has operations world-wide. It has provided its customers top-quality consumable packaging solutions, based on ongoing innovative research for 64 years. OCME solutions are devised and produced in packaging valley, the Italian packaging machinery production hub and just like our red logo, the symbol of successful Italian industry across the globe. In 2017, OCME signed an agreement with Robopac, joining forces and pooling together their experience and expertise, to offer a product range of outstanding technological solutions, with high added value for end-of-line systems. After half a century of business, we believe our red line logo symbolizes our uninterrupted journey towards our sole objective: excellence.



125 M€
Sales across
the globe



610 employees
(75% in Italy,
25% rest of the world)



+11.000
Machine sold



8 locations
worldwide



2 systems
Production in Italy
and China



+ 60 Centres
Worldwide
after-sales
support

OUR SOLUTIONS



Moving Ideas



DEPALLETIZERS



Antares
Crate depalletizers

Dorado
Depalletizer for loose
containers

Pegasus D
Robot Depalletizers

FILLERS



Libra R
Rotary filler

Libra LT
In-line filler

Virgo
Rotary filler for edible oil

PACKERS



Altair
Wrap-around carton packer

Vega
Shrink wrapper packer

Gemini
Combined solution

PALLETIZERS



Perseus
Traditional palletizer
with 90° infeed

Orion
Traditional in-line
palletizer

Pegasus
Palletizer Robot

Mizar
Layer forming system

STRETCH-WRAPPERS



Helix
Stretch-wrappers
with rotary arm

Genesis
Stretch-wrappers
with rotary ring

Rotoplat
Stretch-wrappers
with turn-table

INTRALOGISTICS



Auriga PS
Powered Stacker

Auriga CT
Counterbalanced Truck

Auriga Z
Stabilizer

Auriga C
Conveyor

Auriga 14RT-H
Vehicle with retractable forks

SHRINK WRAPPING OF BUNDLES

Towards the end of the '80s, OCME entered the packaging market with its own design of flexible shrink wrap packers capable of processing various types of containers in various configurations.

Over the years, shrink wrap packers have continued to undergo improvements, perfecting the shrinking properties of the films used but the operating mechanism has remained nearly the same for all steps of the process.

OCME shrink wrapper packers were the pioneers in their sector, developing the technology and offering an unprecedented level of flexibility and performance.

VEGA HT is today the result of optimized solutions to real bundle packaging problems ensuring:



TOTAL ADAPTABILITY TO ALL SIZES



LOW ENERGY CONSUMPTION



FAST SIZE CHANGEOVER



HIGH PERFORMANCE



HIGH QUALITY SECONDARY PACKAGING

PROCESSED PRODUCTS



The improvements made in packaging technology and advancements in printing techniques have today led to the production of bundles with colourful, high quality graphics.

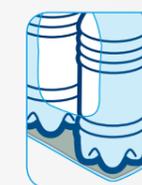
The Vega HT series is designed to cover a speed range of up to 150 cycles/min, in single, dual or triple track configuration according to size, and capable of processing containers such as bottles, cans, jars, multipacks and more in film only, layer-pad, U-board and tray packing configurations.

Version/Cycles/Min	Vega HT	Vega HT F	Vega HT VA	Vega V	Gemini
Cycles/Min	From 40 to 150	From 40 to 100	From 40 to 120	From 40 to 120	From 40 to 80
Tray			✓	✓	✓
Shrink pack	✓	✓		✓	✓
Pad with film		✓		✓	
Tray with film				✓	✓
U-Board		✓			
Carton					✓



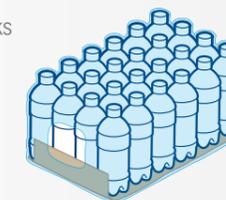
Film only

This is the classic configuration dedicated to retail packs, such as 3x2 1.5-litre PET bottle packs (extremely widespread in the mineral water sector) or 2x2 packs of standard 33cl cans (equally common in the soft drink and beer industries). Another typical retail format is the bottle or can multipack on which printed film is often used to make the pack more attractive. In recent years, thanks to technological improvements in shrink wrapping tunnels and film manufacturing, the film-only option has also been adopted for wholesale packaging, which previously requires layer pads or trays to guarantee stability.



Film + layer pad

This is the most cost-effective solution for wholesale packs: the layer pad provides stability to the pack, which is generally composed of multiple loose containers or multipacks.



Wholesale pack with U-board

This is a cost-effective alternative to trays that allows saving on glue and blanks. The system developed by OCME folds the blanks accurately, guaranteeing excellent resistance even at high speeds.



Film + tray or tray only

Wholesale packs are created using a blank with folded and glued side flaps to form a tray. The sides of the tray are generally used to advertise the product brand. The corners of the tray can be 90°, 45° or rounded.



Easy Opening

A rotating blade system makes micro-perforations on the film before winding to create easy openings on the bundle once produced. The blades can be easily disengaged when perforations are not required.



Nested pack

This is a specific type of film-only pack, in which the containers are arranged so as to optimize the occupied space. The arrangement of the bottles ensures greater compactness of the bundle.

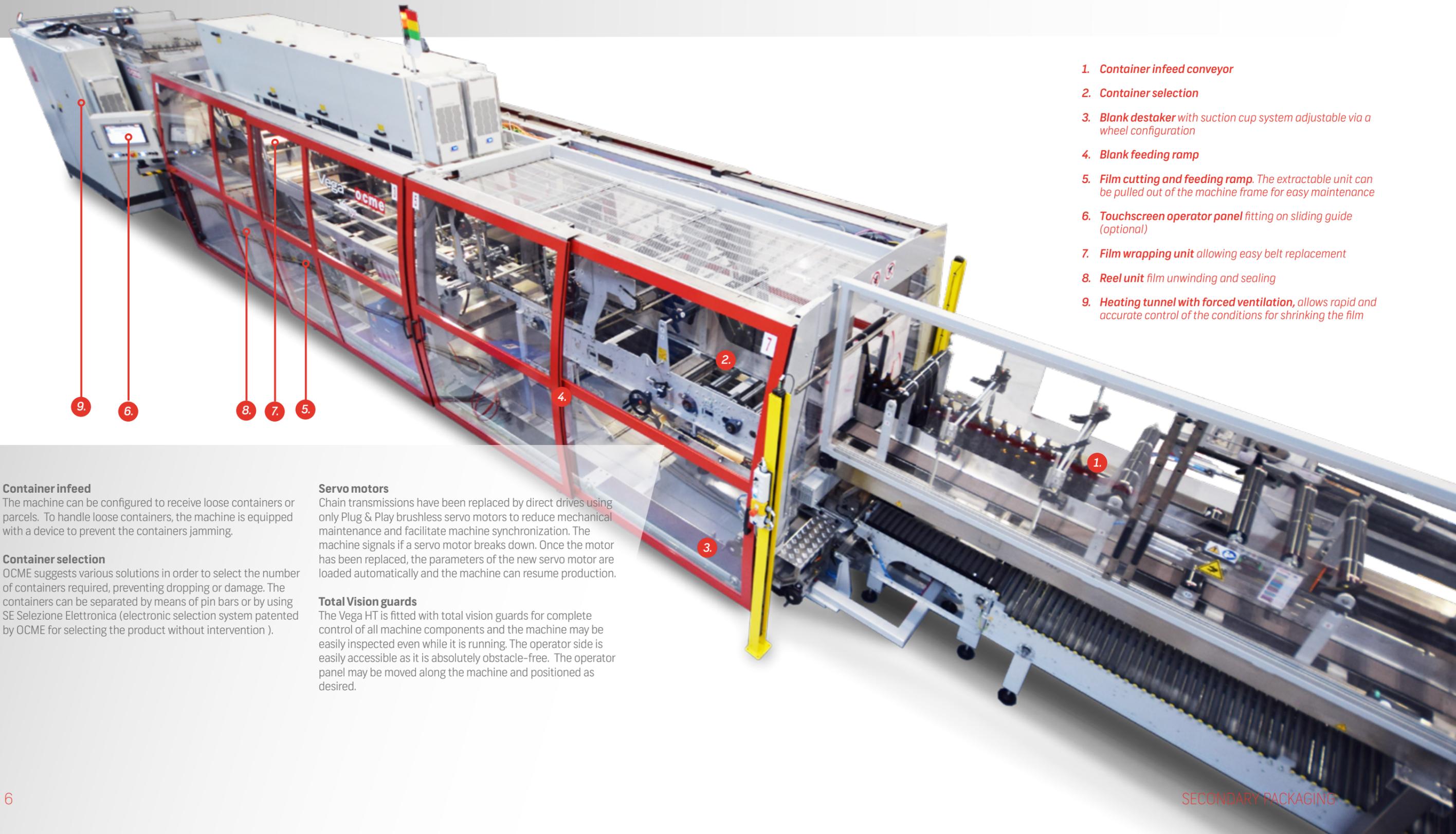


Rainbow

A "Pick & Place" robot can combine bottles with different contents in a single package to create a multi-flavour bundle.

SHRINK WRAPPER TUNNELS PACKERS IN DETAIL

The Vega HTV shown in these pages is a flexible machine capable of producing film-only packs, pad and film packs, tray and film packs or tray only packs. The machine is equipped with various optional devices designed to increase its performance even further.



1. **Container infeed conveyor**
2. **Container selection**
3. **Blank destaker** with suction cup system adjustable via a wheel configuration
4. **Blank feeding ramp**
5. **Film cutting and feeding ramp.** The extractable unit can be pulled out of the machine frame for easy maintenance
6. **Touchscreen operator panel** fitting on sliding guide (optional)
7. **Film wrapping unit** allowing easy belt replacement
8. **Reel unit** film unwinding and sealing
9. **Heating tunnel with forced ventilation,** allows rapid and accurate control of the conditions for shrinking the film

Container infeed

The machine can be configured to receive loose containers or parcels. To handle loose containers, the machine is equipped with a device to prevent the containers jamming.

Container selection

OCME suggests various solutions in order to select the number of containers required, preventing dropping or damage. The containers can be separated by means of pin bars or by using SE Selezione Elettronica (electronic selection system patented by OCME for selecting the product without intervention).

Servo motors

Chain transmissions have been replaced by direct drives using only Plug & Play brushless servo motors to reduce mechanical maintenance and facilitate machine synchronization. The machine signals if a servo motor breaks down. Once the motor has been replaced, the parameters of the new servo motor are loaded automatically and the machine can resume production.

Total Vision guards

The Vega HT is fitted with total vision guards for complete control of all machine components and the machine may be easily inspected even while it is running. The operator side is easily accessible as it is absolutely obstacle-free. The operator panel may be moved along the machine and positioned as desired.

FILM MANAGEMENT



Film wrapping system

The various stages of the packing cycle merge seamlessly. The film is unwound from the reel and cut to the required length, it then transits via an upward ramp where it is held in position by vacuum ready to wrap around the containers as they move along the conveyor.

As the pack advances, a rotating bar guides the film around the pack.

- 1. Reel unwinding**
Various solutions are available for controlling the reel unwinder, either by hydraulic brake or brush-less motor, in order to guarantee deformation-free film feed into the cutting system.
- 2. Reel sealing**
This is achieved by a sealing bar system and can be either manual or automatic.
- 3. Film tensioning**
A roller system compensates for the variations in speed which occur during the film unwinding cycle.

- 4. Electrostatic charge reduction**
Kevlar brushes or ionizing antistatic bars are used to eliminate static electricity and keep the film from sticking or curling.
- 5. Film cutting system**
The cutting system consists of a blade and a counterblade driven by a brushless motor. This ensures high precision at all speeds. The entire cutting system moves and may be automatically positioned at the point where unwinding speed is low according to the length of the film and speed of the machine.



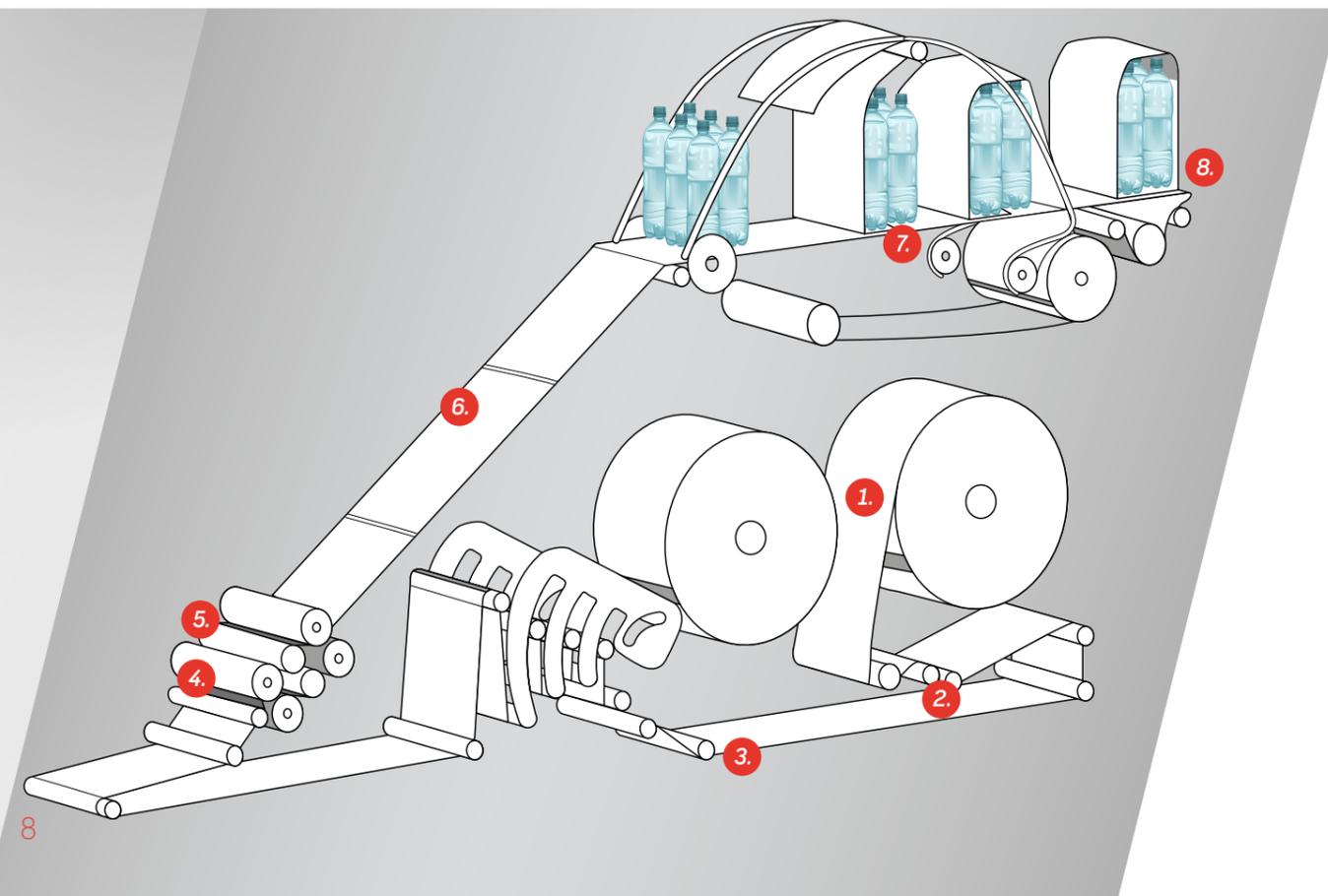
Film cutting system

- 6. Film feeding ramp**
This is the device that feeds the film to the wrapping area. It is actuated by a brushless motor to guarantee high accuracy at top speed.
- 7. Film wrapping system**
In this area, the film enters the upper part of the machine inserting itself between the containers, while the film wrapping bar takes the remaining free edge to complete the wrapping before entering the tunnel.

- 8. Connecting belt**
This is the belt between the machine body and the shrink wrapping tunnel. It is controlled by a brushless motor and adjusts the speed of the pack to the speed of the tunnel in order to have a transfer that does not cause breakdowns or falling of containers.

- + Easy maintenance**
The Vega HT was designed with particular attention to routine and supplementary maintenance requirements. All the components used are easily available on the market. The cutting and film feeding unit is fitted on tracks to facilitate extraction for supplementary maintenance purposes. The film wrapping unit was designed for easy replacement of the belt in case of wear.

Film wrapping unit extraction



PACKETTO

Packetto is OCME patented system designed to reduce the use of film and significantly increasing the appearance of the bundle.

The improvement is possible by applying small spots of glue on the bottles, on which the film is wrapped. Initially, the film passes through two different centring systems to correct all movements of the films in real time.

The bottles move outwards where the spots of glue are applied to the bottles. Then, a system of brushes, synchronized with the speed of the pack, makes the film stick to the spots of glue. In this way, the film remains in place during the heat-shrink process, ensuring a perfectly formed package.

By using this film fixing method, the amount of film used can be reduced by up to 30% and the printing area is increased at the same time.



● Small spots of glue on the bottles on which the film is applied



INTEGRATED HANDLE APPLICATOR

Handle application system directly on the film using a unit incorporated in the lower part of the shrink wrapper packer and completely removable for inspection and maintenance.

Handle applicator

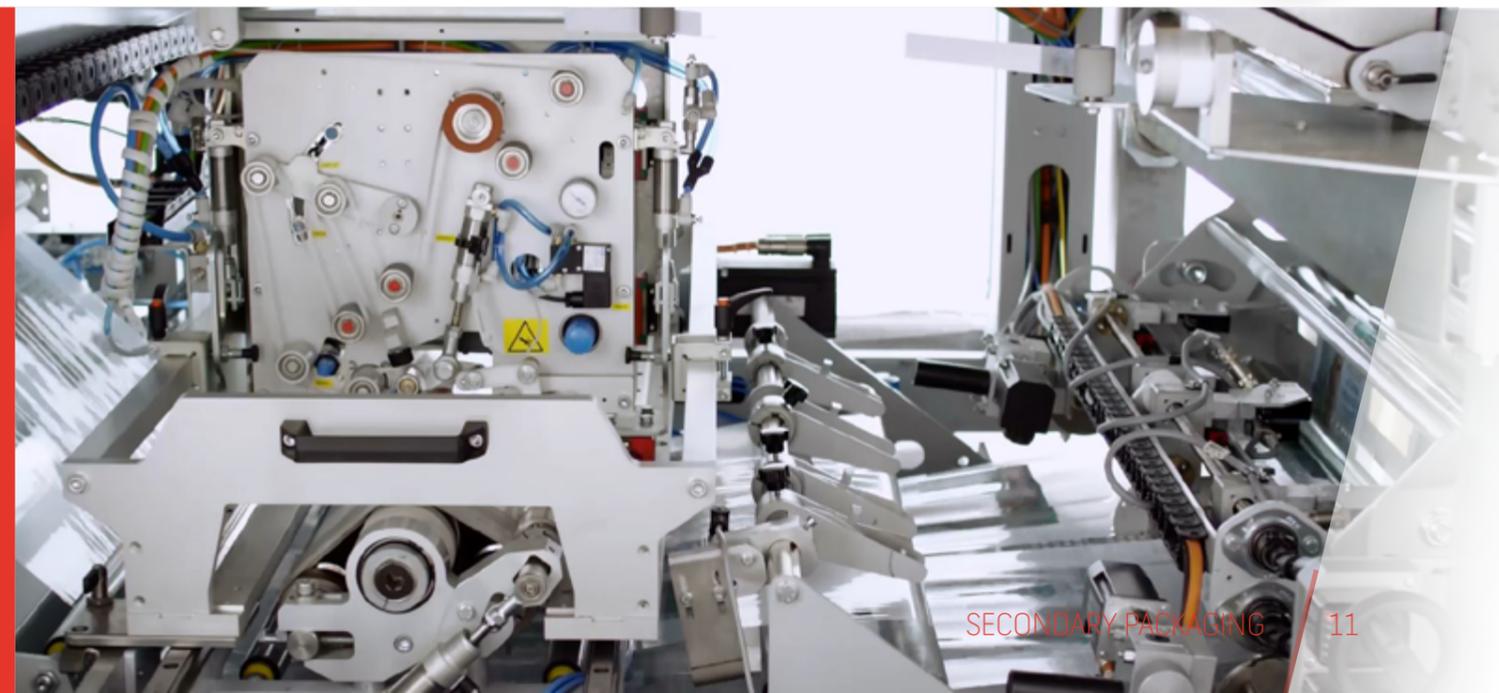
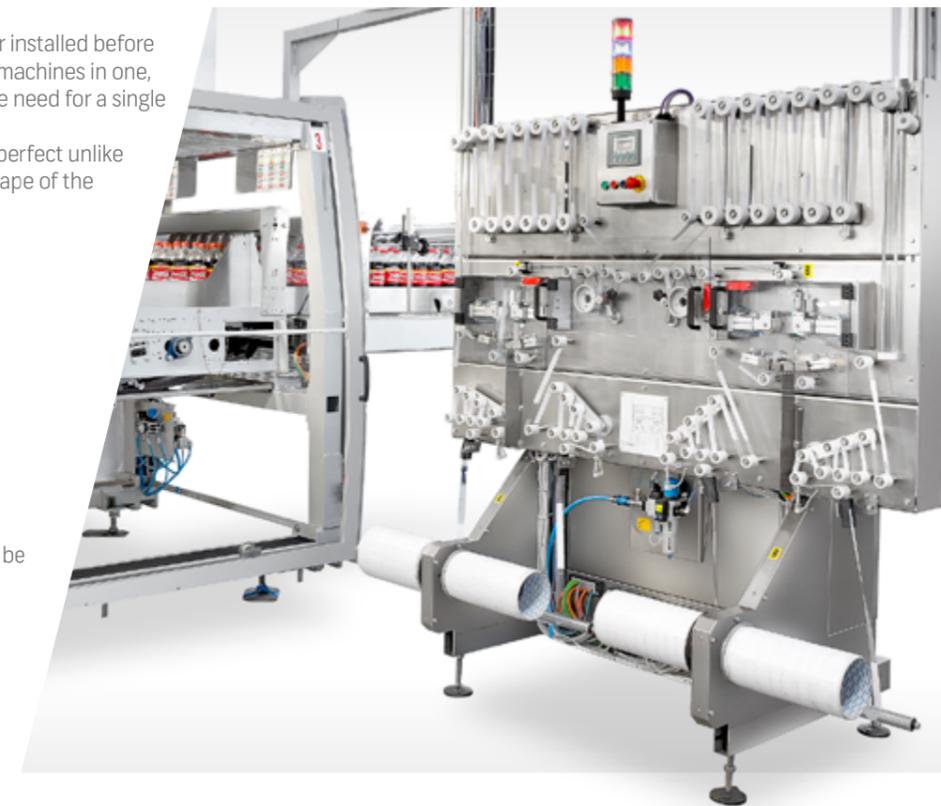
With the OCME integrated handle applicator installed before the winding module, the customer has two machines in one, which allows a more compact layout and the need for a single operator to operate it. The application of the handle on the film is perfect unlike "traditional" solutions constrained by the shape of the container.



Archetto

This optional device patented by OCME can be installed on integrated handle applicators. The system allows easy adjustment of the hand insertion space between pack and handle, making it easier for the consumer to grip.

Handle tape store



SHRINK WRAPPING TUNNEL

The most recent generation of Vega HT shrink wrapping tunnels implements innovative patented solutions in the field of bundle shrink wrapping quality and energy saving.

Once wrapped with film, the pack is transferred to the shrink wrapping tunnel where the controlled flow of hot air allows the correct shrinkage of the film to ensure the compactness of the package. The range of Vega HT tunnels today offers models of 3.6 metres, 5.0 metres and 8.0 metres in length to offer all the possible customizations in terms of time spent inside the tunnel but also in terms of air flow and temperature. All these improvements have led to a 40% reduction in energy consumption, compared to previous technologies, and design has paid particular attention to the control of forced ventilation, characterizing the thermodynamic model to obtain numerous benefits:



Total adaptability: The hot air flows present in the tunnel are channelled in precise directions according to the size of the packages to be treated and the number of tracks being processed.



Maximum thermal insulation: By using rock wool and polyurethane inner panels.



Temperature control: The heating elements are continuously monitored and the heating intensity is gradually adjusted.



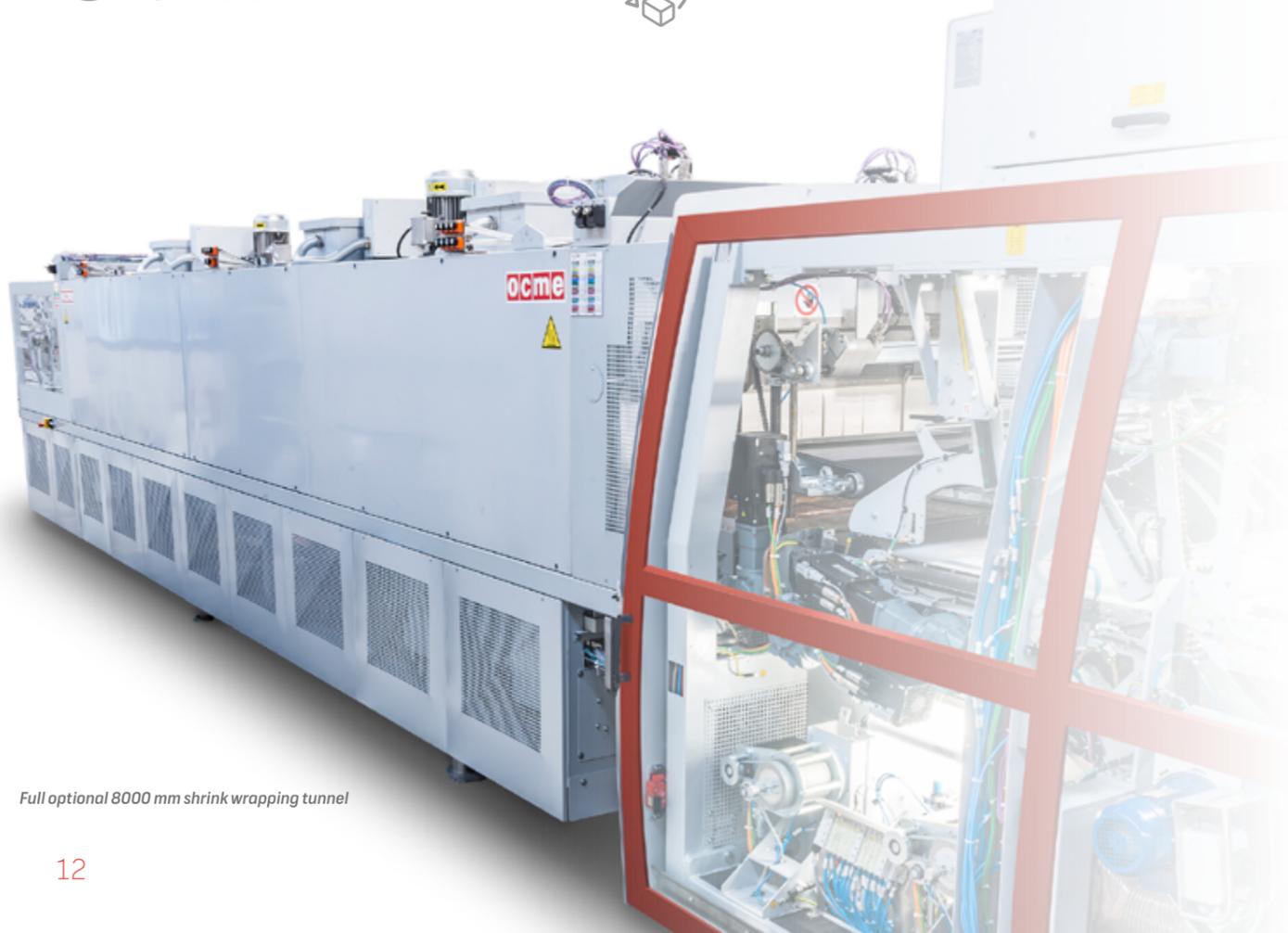
Temperature maintenance: On every single package produced by the machine, maintaining a very high degree of repeatability and shrinkage quality.



Long-lasting components: Improved duration of the electric elements by eliminating thermal shocks using a new type of electronic management.



Size history: All control parameters can be set on the operator panel and stored for size changeover.



Full optional 8000 mm shrink wrapping tunnel



Tunnel outlet

Heating elements and fans

The tunnel was designed to facilitate access to the heating elements for maintenance and replacement. The heating elements are located on the roof of the tunnel, in easily accessible compartments.

Air flow control

The air flows can be choked both longitudinally and vertically for a complete flexibility in relation to the shape of the containers. They can also be quickly adjusted from the outside of the tunnel.

Electrical panel

The electrical panel is located on the side of the tunnel to allow maximum accessibility.

Mesh cleaning

A metal roller brush removes any plastic residue which could cause a malfunction if heated.

Cooling

The tunnel mat is cooled by two fans and two more fans cool the bundle and tunnel outfeed. The fans are controlled by inverters.

Sliding side panels

The side panels can be fitted on linear guides and disassembled without the need for lifting equipment (optional).

Heating element control

Through the HMI it is possible to obtain an alarm should one or more heating elements burn out. The tunnel management software recalibrates the heating element on/off cycle without loss of efficiency.

Energy saving kit

The kit consists of a series of motorized curtains at the tunnel inlet and outlet which close when the shrink wrapper packer is not receiving any products from the line. Heat is preserved inside the tunnel by closing the oven inlet and outlet, slowing down conveyor and cooling fans and reducing the current drawn by the heating elements to minimize dispersions and energy consumption.

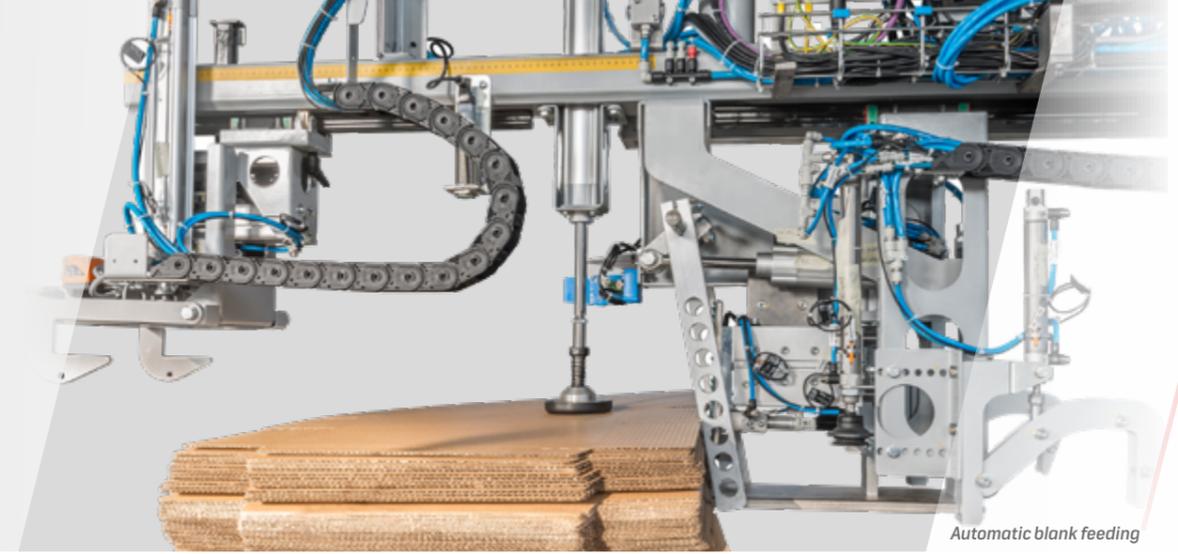
Air flow control



Energy saving kit



THE ACCESSORIES



Automatic blank feeding

Automatic reel sealing

This optional feature reduces idle time especially on highly automated systems in which the operator is responsible for supervising multiple machines. When a new reel is inserted, the leading edge of the film simply needs to be placed in position and the machine automatically splices the film and restarts operation with the new reel when the previous reel comes to an end. This system minimizes the risk of losing the film by tearing off the seal.



Size changeover

To make the size changeover easy, quick and repeatable, Vega HT has several customizations that allow simple adjustments importantly without tools. The repeatability of each adjustment is guaranteed by counters and numerical tables which correspond to an adjustment value for each size.

Adjustments are totally automated on the motorized version and the operator intervention is required only to start the procedure and for a minimum number of the operations.

A step-by-step guided procedure, complete with photographs, may be uploaded onto the operator panel to help the operator during size changeover. In this way, size changeover becomes easy even for operators without specific training, who just need to carry out all the steps in the correct order.

In the model with the PDA device, the machine adjustment points are identified by barcodes. A PDA reader scans the code that reproduces the description of the adjustment to be made and the corresponding value.

Automatic blank feeding

The capacity of the blank magazine can be extended by means of a robotized blank picking system directly from the pallet. The pallet from the paper mill only needs to be positioned on the conveyor by the fork-lift truck driver who removes the wrapping strap, after which the machine runs completely automatically for a long time. The operator is thus relieved of the need to lift stacks of blanks manually.

External reel loader

In order to facilitate the operator in loading the shrink film reels, the machine can be equipped with an external loader which guarantees a high level of ergonomics. The loader is complete with automatic welding unit for maximum accessibility to the film tensioning unit.



External reel loader

Insert deposit module

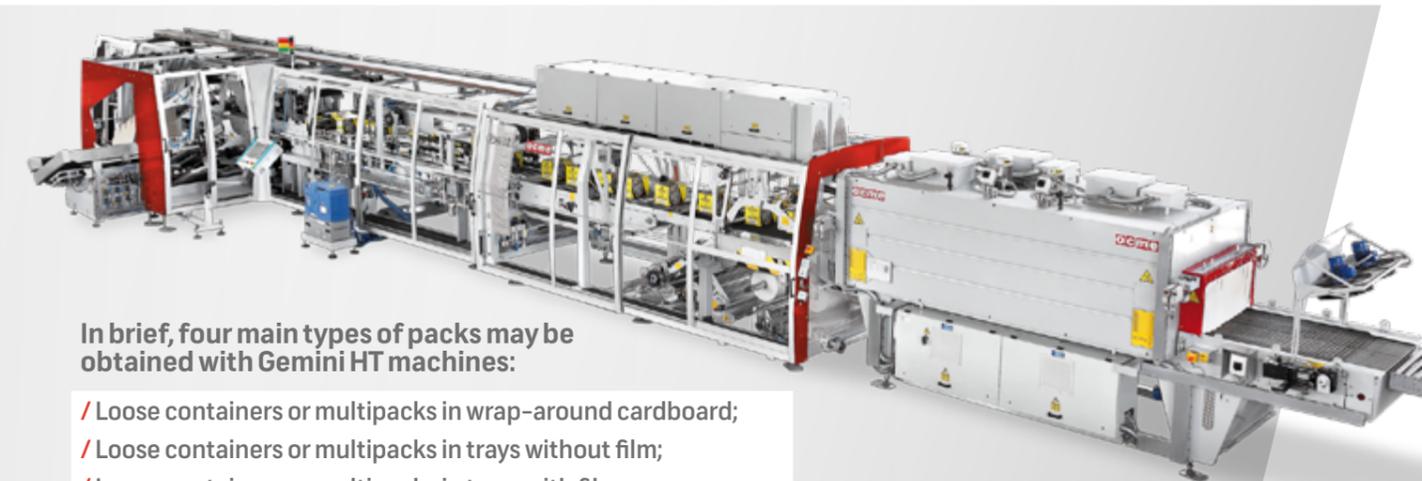
If the product needs additional protection against shocks and internal rubbing, the VEGA HT can be equipped with an insert storage module. Two different technologies can be adopted depending on the type of protection required, such as traditional or preformed inserts.



Insert deposit module

GEMINI, THE COMBINED SOLUTION FOR SECONDARY PACKAGING

The range of shrink wrapper packers comprises the Vega HT and combined Gemini HT machines in which the shrink wrapper packer works in line with an Altair series wrap-around packer. The use of this kind of combined machine creates a flexible system with the capacity to process various pack configurations on the same packaging line.



In brief, four main types of packs may be obtained with Gemini HT machines:

- / Loose containers or multipacks in wrap-around cardboard;
- / Loose containers or multipacks in trays without film;
- / Loose containers or multipacks in trays with film;
- / Multipacks (in bundles or cardboard) in film only packs.

The OCME Tech Lab is an R&D laboratory. One of its tasks is to analyse the shrink films to improve secondary packaging quality for all market sectors. The aim is to provide support to customers in order to obtain the best possible results and minimize production costs.

The laboratory is equipped with instruments to perform traction, shrinkage, breakage and elasticity tests. In addition, it is equipped with a shrink tunnel, identical to one installed on the machines, to test film behaviour in terms of shrinkage.

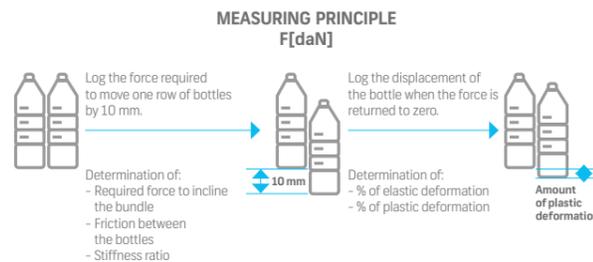
The OCME Tech Lab generates over 10,000 packs a year.

LIS - LINE INFORMATION SYSTEM

BUNDLE STRENGTH TEST

We test the strength of the bundle by moving the containers and measuring the force needed to move a batch of bottles with respect to the rest of the bundle.

EXPECTED BENEFITS: The strength of the bundle can be checked for logistics management on pallets. Useful to test strength before reducing the thickness of the shrink film.



FILM SHRINKAGE TEST

The percentage of shrinkage in length and width of the film due to the effect of heat is measured (the film is immersed in an oil bath)

EXPECTED BENEFITS: the longitudinal shrinkage is closely linked to the compactness of the bundle and the depth of the grooves that are created between one neck and the other of the bottle. Transversal shrinkage, on the other hand, is linked to the appearance of the bundle. A higher value generally means fewer wrinkles at the expense of a larger side hole.

Test carried out according to UNI 8515

RECOMMENDED VALUES:

BUNDLE CONFIGURATION (Cans)	LONGITUDINAL SHRINKING	TRANSVERSAL SHRINKING
2x2	80%	35%
3x2	80%	25%
4x2	80%	25%
4x3	75%	20%
6x4	80%	25%
Nested pack	80%	5%
Multipacks	80%	25%

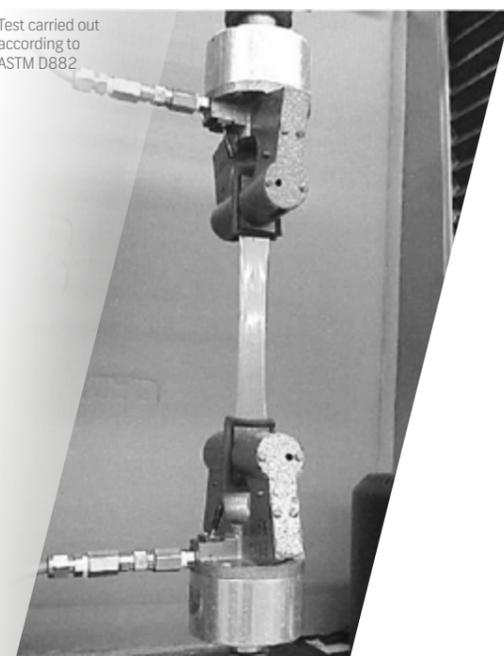
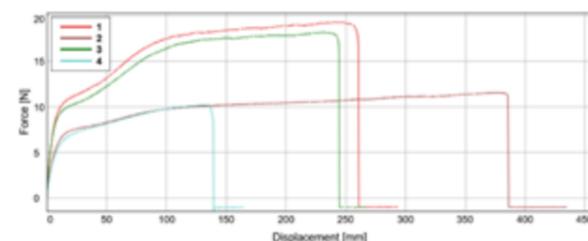
BUNDLE CONFIGURATION (PET & Glass)	LONGITUDINAL SHRINKING	TRANSVERSAL SHRINKING
2x1 o 3x1	75%	35%
2x2 o 3x2 o 4x2	75%	35%
4x3 film only	75%	20%
6x4 film only	80%	25%
4x3 with pad	75%	20%
6x4 with pad	80%	25%
4x3 with tray	75%	20%
6x4 with tray	80%	25%
Nested pack	80%	5%
Multipacks	80%	25%

FILM SHRINKAGE STRENGTH TEST

Test carried out according to ASTM D882

Film samples are deformed under tension until the sample breaks. During deformation, a load cell records the force as the sample is resisting elongation in real time.

EXPECTED BENEFITS: in this way it is possible to completely characterize a material understanding its elastic field, Young's modulus, yield strength and breaking load.



The line supervisor can be customized according to line features and customer needs. It was developed on a ZenOn platform (COPA-DATA) and runs on a dedicated Windows10-based server.

It may be installed in the office or directly in the production area, so as to monitor all the machines of one or more production lines.

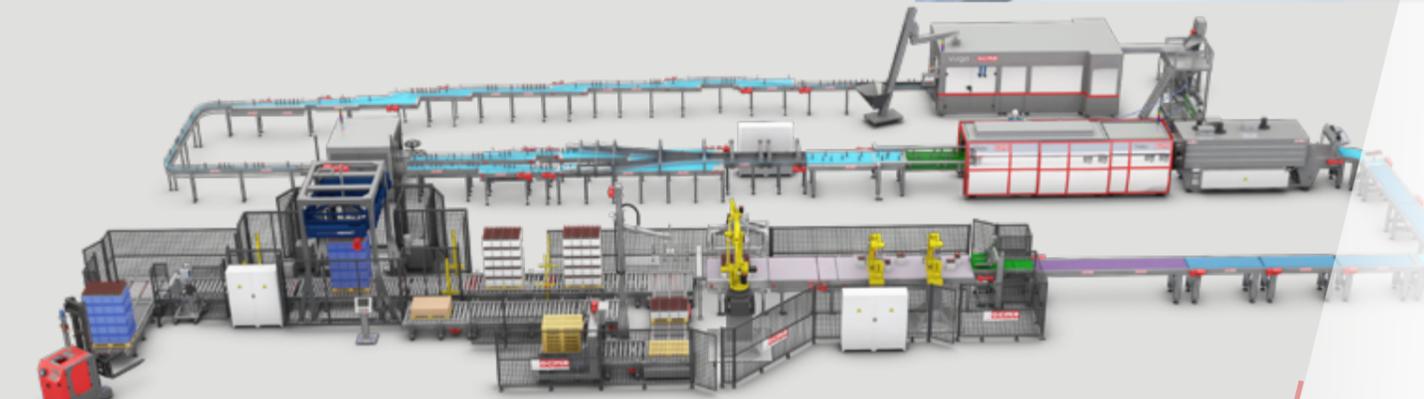
The supervisor is designed to communicate with all the machines on the line using the most common Ethernet-based protocols (PVI, ethernetIP, etc.). Acquired data are formatted according to the international OMAC - PackML standard and are all easily accessible using a simple and user-friendly operator interface.

The many features offered by the LIS offers include:

- / Viewing the operating status of the entire line
- / Monitoring production status
- / Managing production shifts
- / Managing user authentication

The system provides the following information in historical form and real time:

- / Operational status (OMAC status, speed, stops, etc.)
- / Performance and production data
- / Alarm events
- / Production reports



CUSTOMER SERVICE



With OCME's service solutions, an investment is made in long-term performance. OCME offers an extensive range of customer-focused services, based on assistance and after-sales support for the machine.

We provide several services, such as local or remote technical support through the use of the most modern technologies, the supply of spare parts, the installation of updates, maintenance contracts and more. Everything is devised with the aim of meeting the needs of our customers and building a lasting relationship, based on mutual trust and cooperation. Reactivity, proactiveness and proximity are some of the values we believe in, some of the principles we follow to accomplish our mission to the best of our abilities and reach our objectives.



FIELD SUPPORT

OCME can rely on a network of technicians situated across the world, ensuring your machines continue to work, and that production is optimal at all times. Field support includes several activities, such as diagnostics visits and reports, scheduled maintenance, servicing, installing updates and emergency intervention for problem-solving. Through direct analysis of the machine, the OCME technician will also be able to recommend the most appropriate upgrades and services for your plant. As soon as we receive a request from a customer, we select the most appropriate technician, taking into consideration the machine family and the activity to be performed on site.



SOPHISTICATED IT SOLUTIONS

We have devised a series of technologically advanced systems and services to put at your disposal, which envisage cooperation between customers and OCME technicians. Thanks to our 24/7 service and with the aid of wearable devices (wearable devices for remote visual support) you will have the opportunity to link up directly with our expert technicians, who are available 24/7, in the event of a problem during production (paid service).



TRAINING

OCME offers consultancy programmes aimed at transferring and sharing our experience and technical expertise. This way, you'll be able to get the most out of your machine, achieve safe production and optimise machine performance long-term. Each training course can be customized according to your needs. The aim of the course is to train your personnel on the method of intervention to guarantee machine operation with outstanding quality standards, taking into account the efficiency of production and basic compliance with prevention and safety procedures. This coaching phase helps maintain a high level of efficiency and productivity for your machine. These courses are designed to enable your staff to solve problems independently, improve results and achieve the success your company expects.



UPGRADES AND SPARE PARTS

As an original equipment manufacturer, we know exactly what your production line needs to deliver optimal and consistent results. Our specialised technicians analyse and test each and every part before delivery on time. Once the request has been received from a customer, a feasibility study is opened on the machine involved. The engineering department develops the request and offers the best solution, making use of cutting-edge materials and technologies.



MAINTENANCE CONTRACT

The maintenance contract is another great feature for your peace of mind! Rely on our experience to anticipate any possible problems, as well as on our prompt response times for impeccable service. The services we offer are designed according to a strategy that aims to provide added value to our customers' machines and plants over the years (TCO), to keep a trust-based cooperative relationship with our Customers, to prevent causes for malfunctioning and quickly solve any critical issues that may arise. The maintenance contracts are offered to Customers in a modular and flexible form, in order to put together an effective offer that is capable of accommodating the specific requirements of the Customer.



One of our IT solutions is the "MyOCME" App. This new App will grant you access to OCME services quickly and in a revolutionary manner, simply using your smartphone. The App will allow you to open Emergency Tickets relating to machines covered by a contract by means of an interactive channel that will further improve communication with our technicians and with the remote support service. "My OCME" allows us to digitize several existing procedures and also to include new features, such as routing and improving information on OCME services to our customers, speeding up requests for technical support in case of problems with our systems, providing any useful information on the services included in the Service Contract (SLA, list of machines, emergency ticket management, etc.).

