

EVOFILM® RANGE

SEAMLESS SHRINK-WRAPPING



*Performance
through
Understanding*

 **Sidel**

Shrink Film

Characteristics:

- Low-density polyethylene (LDPE)
- Print registered or neutral
- Thickness: from 27 to 100 microns (1.08 to 4 mils)
- Pack from recycled shrink film or film reducing heating needs
- Maximum reel diameter: 500 mm

Advantages:

- Economical solution
- High resistance to variations in humidity
- Tamper evident
- Transit packaging or SRP (Shelf Ready Packaging)
- Easy transportation and storage

Primary Packaging



Plastic bottles



Glass bottles



Cans



HDPE bottles



Aseptic cartons



Tins



Jars



Cluster packs



Containers



Aerosols



Small bottles



Cartons

Secondary packaging



Neutral shrink-wrapped pack



Printed shrink-wrapped pack



Tray (+ film)



Pack with corrugated pad



Promotional pack



Pack with U-board



Pack with stacked trays



Pack with stacked products



Reinforced pack

Nested Packs

- Stronger packs and improved pallet stability
- Cost savings: no more corrugated board or film thickness reduced
- Increase number of packs per pallet
- More space for marketing communication



Easy-Open Pack

- Film perforation system to tear the pack open more easily
- Very rigid pack with optimum protection
- Effortless opening
- No reduction in production speed



INNOVATION AND EXPERTISE DEVOTED TO FULFILLING YOUR REQUIREMENTS

RELIABLE MACHINE INFEED

The shrink-wrapper infeed is a key station for Overall Equipment Efficiency (OEE). A perfect link between the conveying/accumulation phases and the entrance of the containers (bulk or packs) into the shrink-wrapper's channels is mandatory. Our comprehensive range of infeed systems allows us to propose a perfectly adapted solution to your specific needs and line constraints (inline infeed, conical infeed, 90° infeed, connection to AQFlex contactless conveying solution, etc.). Our Active Infeed system also eliminates bottle bridges, blockages and jams due to lightweight bottles.



PRODUCT AND EQUIPMENT PROTECTION

Numerous fittings, adapted to your products shape and resistance, guarantee smooth handling at all times: plastic rollers integrated into the guiding lanes for easy, non-aggressive laning of products, sensors or robot to detect and remove fallen products, motorized conveyor with nose bar for transfer zones, flight bars positioned outside the label area, anti-jamming sensors at the tunnel outfeed, etc.



USER EXPERIENCE

The Human Machine Interface (HMI) controls production functions and machine parameters via an intuitive and ergonomic navigation. To improve the machine operability and maintainability, this touch-screen control panel includes tutorials and interactive rich media content. The user experience is completed with high connectivity, Equipment Smart Monitoring to optimize performance and remote access including video assistance with augmented reality for rapid and reliable recovery.



FLEXIBILITY / MULTI-FORMATS

From user-friendly to fully automated changeovers! With growing demand for greater product diversity and customization, we have built a portfolio of solutions perfectly adapted to the level of flexibility and assistance to operators you require, while still meeting your budget constraints. 100% automated from product infeed all the way down to the tunnel outfeed, motorization of adjustment points, digital read outs with LEDs that change from red to green as soon as the actual position of the part matches the data stored in the format recipe, reduction in change parts and easy dismantling of key modules and equipment and more. All contribute to optimizing ergonomics, repeatability and format changeover times to respond to the ever-growing number of products, formats and SKUs.



ACCESSIBILITY AND ERGONOMICS

The pure, elegant and clean design of the range improves access to all elements thanks to large see-through sliding doors. The shrink tunnel design and the extractable injection/vacuum table are also 2 other great examples of easy access for cleaning and maintenance. It guarantees higher overall productivity, the daily machine operation is simplified and operator working conditions are improved.



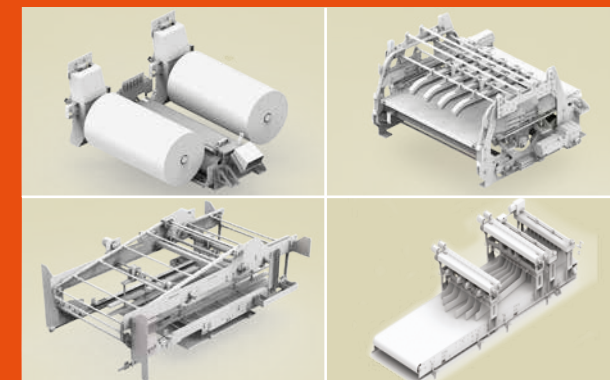
MAINTENANCE

Reduction in overall number of parts and components, easy dismantling of belts and machine organs, transmission chains replaced with servo-motors... Our machine design principles focus on optimizing maintenance operations while clear Standard Operating Procedures (SOP) support operators in preventive actions. The "System Diagnostic Manager" tool helps engineers and technicians to check machine operations and sort out problems by analyzing the controller's configuration or runtime settings.



CONTROL ARCHITECTURE

For increased performance and simplicity, the user interface, PLC and axis cards making up the control system are all sourced from the same supplier, capable of providing a high quality services worldwide. The component replacement is Plug & Play thanks to automatic firmware upgrades and program uploads.



MODULAR ARCHITECTURE

The design of the range in standard independent modules offers numerous advantages linked to reductions in costs and lead times during the manufacturing phase. Further advantages, in terms of versatility throughout the machine life cycle by integrating a selection of additional functions such as Options & Upgrades, extend the equipment's Return on Investment (ROI).

EvoFILM®

PRODUCT COLLATING SYSTEMS



REGULATED FLOW SELECTION (SDR)

Patented System

- Perfectly adapted when handling a large number of products/collations on the same machine
- Fixed module accommodating products in different collations and of varying diameters
- Servo-driven adjustment system for products with standard diameters from 53 to 124mm
- High reliability with unstable products due to the reduced number of transfers when creating the product batch
- Limited maintenance operations and costs

UP TO 150 CYCLES/MIN



PIN-GATING SELECTION (SDI)

- Individual module adapted to each product collation
- No mechanical adjustments depending on formats
- Simplified maintenance
- Solution designed for high speeds

UP TO 150 CYCLES/MIN



DIAGONAL SELECTION (CCO)

Patented System

- Compact single or dual lane solution avoiding distribution
- Continuous infeed for optimum product and label protection
- Selection by lateral fingers adapted to each collation and easily dismantled during format changeovers
- Handling of specifically-shaped products (ovoid, square with rounded corners, with straws, etc.)
- Maximum accessibility to operating parts

UP TO 60 CYCLES/MIN



PACK/CLUSTER SELECTION (MB)

- Simple and reliable system based on an "up and down" belt conveyor
- Cost efficient solution for packs, clusters or very stable products
- Accurate pitch creation
- All formats handled by the same unit with easy changeover operations

UP TO 40 CYCLES/MIN

FILM HANDLING AND LAPPING



LAPPING

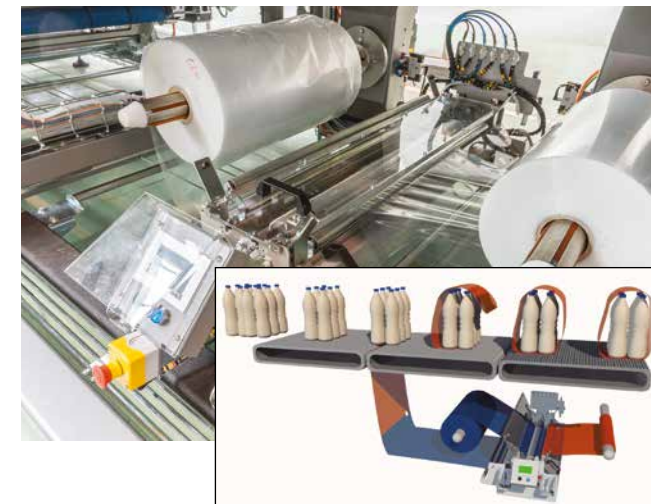
- Film guided under the batch and cut on the fly
- Film lapped around the batch in single, dual or triple lanes
- Lapping arm easily height adjustable to batch size
- Film reel supported by expandable mandrel
- Infeed and lapping bars fitted with electric torque limiter for maximum product protection
- Easy maintenance on the lapping belt



EXTRACTABLE CUTTING TABLE

Increased efficiency and easy maintenance

- Film fed in by direct injection (<60 cycles/min) or vacuum table (>60 cycles/min)
- Factory settings requiring no future adjustments whatever the film thickness - Patented solution
- Servo-driven technology
- Anti-static generator and bars to neutralize electric charges and guarantee optimal protection
- Table and dancing roller easily extractable
- Easy ergonomic access to the knife with quick release system



AUTOMATIC FILM REEL CHANGEOVER

Patented System

- Film preparation during concurrent operations by operator
- Saving in time increasing overall line efficiency
- Reduction of upstream accumulation conveyors
- Double sealing for improved machine efficiency at high speed - **Patented system**



POSITIVE AUTOMATIC FILM GUIDING SYSTEM

- Accurate film positioning
- High quality packs with perfect facing
- Perfectly adapted to high speeds and multilanes
- Ultrasonic sensors resistant to dirt and variations in material transparency

EvoFILM® SHRINK TUNNEL

HIGH-QUALITY FILM SHRINKAGE

- Modular unit with 2 to 5 turbines, depending on the required speed (up to 150 cycles/min)
- Shrinkage optimized by separate control and orientation of airflow per section
- Multi-channel shrink tunnel specially designed to improve pack shrinkage for multi-lane applications
- Powerful cooling fans at tunnel outfeed, to preserve the pack integrity before being conveyed to palletizer.



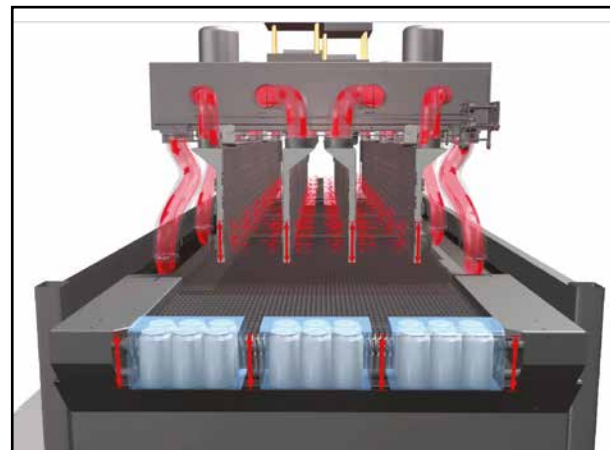
SAFETY AND ERGONOMICS

- Housing with reinforced external insulation for greater security during operation and maintenance
- Easy access to adjusting air circulation inside the tunnel via installation of digital counters (motorized adjustments on the multi-channel tunnel)
- Tunnel mesh belt: safe brush cleaning avoiding manual cleaning, for extended equipment lifetime



ENERGY SAVING

- Optimization of air circulation and improvement in insulation inside the tunnel contributing to a significant reduction in energy consumption and costs
- Temperature controlled by electronic regulator
- Infeed/outfeed tunnel flaps & tunnel energy mode to reduce tunnel temperature losses, both options acting in case of eventual machine or line stoppages
- New light-weighted versions of tunnel belt, an extensive source of savings since most of the shrink tunnel heat is absorbed and dispensed by its belt.
- Highly-secured gas-fired tunnel technology (in option) contributing to reducing energy costs and carbon footprint - very short warm-up time - four times less than an electrical tunnel



ADDITIONAL FUNCTIONALITIES

SIMPLE INTEGRATION OF ADDITIONAL EQUIPMENT THANKS TO THE MODULAR DESIGN OF THE EvoFILM® RANGE:



Product and tray stacker

- Even larger secondary packaging capabilities!** Integration of stacking modules either for primary packaging or tray stacking. Relevant for cans, tins, jars or products already in trays, it offers great advantages:
- Reduction in packaging cost
 - Easy transportation and stocking

Modules for corrugated supports

- Independent industrialized module for loading products onto corrugated trays (T), U-board or Pad (P) prior to shrink-wrapping
- Total flexibility according to your distribution network requirements: no support (film only), pad+film, tray+film
- Reliable extraction by motorized arm fitted with autocleaning suction cups
- Extended magazine for increased autonomy up to 80 cycles/min
- For film only and pad+film, positive transfer by using an bypass belt system, safer and more ergonomic than the traditional system of dead plate between bracket chains
- Quick and easy changeovers by motorizing the conveying belt.
- Option: corrugated tray magazine positioned 11° off course from the infeed conveyors combining accessibility and easy layout



Integration of additional functions

- | | |
|----------------------|---------------------------------------|
| ■ Ink jet coding | ■ Pack dividing |
| ■ Labeling | ■ Weight checking and pack rejection |
| ■ Brochure insertion | ■ Rotating system |
| ■ Leaflet insertion | ■ Batch quality control via 3D camera |
| ■ Handle insertion | |

- Reliable solution delivering high-quality shrink-wrapped packs
- Operability and flexibility thanks to a user-friendly HMI, a large primary and secondary packaging capability and a minimum 5-minute fully automatic changeover
- Robustness and maintainability at minimum cost, for speeds up to 120 cycles per minute (PET bottles), 150 cycles per minute (cans) in 3 lanes
- Factory of the Future platform with enhanced user experience thanks to high connectivity, Equipment Smart Monitoring and Video Remote Access
- Modular design for easier Options & Upgrades implementation over time and an extended Return on Investment
- Full set of Eco-saving modules, smart systems and sophisticated programming to reduce energy consumption, carbon footprint and costs.

Sidel is a leading provider of equipment and services solutions for packaging beverage, food, home and personal care products in PET, can, glass and other materials.

With over 40,000 machines installed in more than 190 countries, we have nearly 170 years of proven experience, with a strong focus on the factory of tomorrow with advanced systems, line engineering and innovation. Our 5,500+ employees worldwide are passionate about providing solutions that fulfil customer needs and boost the **performance** of their lines, products and businesses.

Delivering this level of performance requires that we stay flexible. We continuously ensure we **understand** our customers' changing challenges and commit to meeting their unique performance and sustainability goals. We do this through dialogue and by understanding the needs of their markets, production and value chains. In turn, we apply our solid technical knowledge and smart data analytics to ensure lifetime productivity reaches its full potential.

We call it **Performance through Understanding**.

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