

Innovative layer pre-composition system: another innovative aspect of the APS PLUS model exhibited at Brau Beviale is represented by the machine inlet and the layer pre-composition system, consisting of a sphere-based pack-turning belt, a row-forming belt and a layer-constructing belt. In this new system the packs are turned by a bottom-driven rotation operation (without hitting any fixed element to get turned), then the rows are formed and moved by an innovative transfer system and finally the full pack layer is precisely moved into the gripping head (basket) by a new transferring and compacting device.

Neat and logistically-efficient end-of-line: the new palletizers of Smipal's "3 in 1" APS PLUS series adopt a number of design features that, compared to traditional solutions, have led to a significant reduction in the size and overall dimensions of the system. The compact design of the system allows forklifts, transpallets and packaging material to be gathered within a well-defined logistical area, thus optimizing the management of loading and unloading operations. Furthermore, the integration of multiple functions (all housed in one central column) offers considerable advantages as regards operative flexibility, workplace safety and machine maintenance.

Cost-saving solution: the compact design of the APS PLUS systems represents a cost-effective solution for economical lines. Furthermore, the use of digitally-controlled brush-less motors and of independently controlled machine shafts improves machine flexibility, boosts mechanical movement precision, reduces format changeover time and cuts power consumption in comparison with gear-motor based equivalent systems.

The Packbloc Neo's MotorNet System® automation and control system is based on the sercos interface fieldbus and boasts a user-friendly man-machine interface display equipped with advanced graphics and touchscreen. The new automatic packaging system by SMI, designed according to FCR (Full Cost Reduction) methods, is fully assembled, wired and pre-tested before being delivered to the end user. The Packbloc's APS 1550 P PLUS's max output rate varies according to the pack size and the layer configuration and can reach a top speed of 50 packs/minute (roughly 150 layers/hour); furthermore, the system can also handle 1000x1200 mm pallets.

Integrated EASY ROUND turntable wrapper: the EASY ROUND turntable wrapping machine by Pieri has been designed as a compact and economical solution to optimize the end-of-line pallet-wrapping operations. The stability of the load has been further improved, since the EASY ROUND device is able to almost completely wrap the wooden pallet and the pack layers with no need for a lifting device. To attain an even better pallet stability, an optional roping device can be fitted on the reel carriage in order to create a thick film cord that fixes the load steadily with the upper section of the pallet. An easy and fast installation and virtually no necessity of maintenance interventions make the EASY ROUND turntable wrapper the ideal product also for high capacity packaging systems.

Easier palletization of unstable products: the machine configuration exhibited at Brau Beviale carries out the film stretch-wrapping operation simultaneously as the pallet layers are being constructed one above the other; that feature, for instance, enables to stack layers of loose bulky containers (such as 5-10 L bottles) in such a way that no cardboard tray is needed at the layer bottom in order to prevent them from falling off when the pallet moves ahead.

Packbloc NEO

THE ULTIMATE END-OF-LINE COMPACT SYSTEM WITH "EASY-ROUND" TURNTABLE WRAPPER



The Packbloc Neo solution by SMI is an example of how innovative ideas can be effectively applied to the industrial machine sector for compact, flexible and easy to use production systems. The Packbloc's design gathers in just a single block the functions of different equipment and allows the end user to reduce the length of the conveyor belts connecting the secondary packaging machine - be it a shrinkwrapper or a casepacker - with the palletizer, save on the initial investment and cut running and maintenance costs. In more details, the end-of-line packaging system exhibited by SMI at Brau Beviare is made up of a new LWP 30 wrap-around casepacker by Smiflexi and a new APS 1550 P PLUS palletizer by Smipal equipped with the innovative EASY ROUND turntable wrapper by Pieri that carries out the stretch-wrapping operation simultaneously as the pallet layers are being constructed one above the other. The Packbloc Neo compact system boasts the conceptual innovations presented at the latest edition of Interpack, that SMI designers have further streamlined by improving the compactness and flexibility of this system which, as concerns the part dedicated to line-end palletizing, takes advantage of SCARA technology features.

Main advantages

1. Compact layout solution
2. Flexible and easy to use end-of-line system
3. Full Cost Reduction-based design

Smiflexi LWP 30

Fast format change-over operations thanks to numbered counters: in the LWP 30 wrap-around casepacker the machine's main adjustments are performed by the operator through comfortable handles and numbered counters which allow simple, quick and accurate format change-over operations without the use of any tool.

Automatic change-over device: the machine can be equipped with DC motors instead of handles as to automate this operation with no need for human intervention.

Smooth carton transfer: the cardboard blanks picker is mechanical and ensures optimum synchronization with the other operations performed by the machine; thanks to a renewed ramp the cardboard blank is fluidly transferred to the main working surface.

Increased safety and efficiency levels: these automatic packers produced by Smiflexi can also be equipped with special devices increasing safety and efficiency levels; among them, it is worth mentioning the micromagnet-based door closing system, that allows eliminating any type of interlocking elements.

Automatic synchronization of the cardboard-lifting system with the product-separating unit: the cardboard-lifting system and the product-separating unit are now equipped with two motors; hence, during the change over operations the machine is able to automatically set the aforesaid systems according to the pack configuration selected.

Deformed pack detection by camera system: a camera system is installed on top of the machine outlet and it allows the detection of any deformed pack; furthermore, the machine is equipped with an innovative sphere-based ejection system which discards faulty packs onto a dedicated conveyor belt. This ejection system moves the packs from the bottom avoiding any damage to the contained product.

Optical barriers instead of sliding doors: as an alternative to traditional sliding doors, SMI machines can be equipped with safety protections based on optical barriers, without affecting the safety for the operator.

Video presentation



For more information on the Smiflexi Packbloc NEO, scan this QR code.

Smipal APS PLUS

All the mechanical components are housed in the machine's fixed column ("3 in 1" concept): the main and most innovative element of APS PLUS palletizers is the integration of all the mechanical components in the machine's fixed column: head-holding cross beam, which performs vertical movements along the main column; the loading head (the so-called "basket") that, thanks to a system of telescopic guides, performs rapid and accurate horizontal movements along the cross beam and, lastly, an articulated arm based on SCARA technology that performs both vertical and horizontal movements for feeding the empty pallets and inserting the interlayers into the palletization area. These operations are handled by the machine's automation and control system in perfect synch with the operations performed by the layer-loading head, so that the vertical and horizontal movements of the various mechanical units installed on the fixed column can follow precise and coordinated trajectories that prevent any contact or interference between them.

