PALLETISER RANGE INCREASED

Smipal palletising systems are the result of continuous investment in the search for innovative solutions and multiple sectors: beverage, food, chemical, pharmaceutical, detergents, glass, paper and many others. The main development of the APS 3100 L series, equipped with a continuous in-line layer pre-composition system, and easily adapt to any logistical condition of the line-end area, both in existing and new installations.

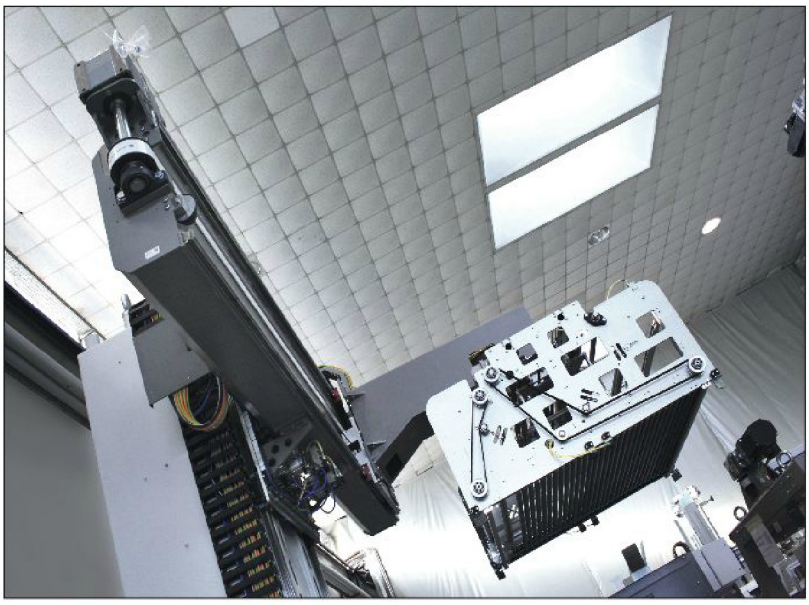
The **APS 1035** series consists of automatic palletisers with man-like movements for palletising cardboard blanks, bundles, trays and packs in general, up to 35 p.p.m. The new Smipal installation is a single-column system with two Cartesian axes, where the vertical axis consists of a fixed column on which the horizontal beam slides on guides with recirculating balls; instead, the horizontal work axis consists of the beam on which the gripper slides also on guides with recirculating balls. Packs arriving on the single-lane infeed belt (located at operator height) are grouped in the row pre-composition area and are arranged in one line, oriented in the same direction (all are fed either on the long side or the short side), therefore creating the palletising row. The row thus formed is picked up by the gripper that, with fast and precise

movements, places it on the pallet in the desired point; the sequential repetition of this operation allows you to form a complete layer in a very simple way. An accessory device, if provided, turns the pallet 90° to change the orientation of the row of packs. Smipal's APS 1035 series is made up of a basic model, which includes the fixed central column, the infeed of the single-row with simple pre-composition, the pallet conveyors and the pallet magazine, and the APS 1035 P model that, besides the standard equipment, includes the pad-inserter and the pads magazine.

establish a new standard in robotic palletisers. Smipal systems are able to optimise line-end operations of main development of the APS 3100 L series, equipped with a continuous in-line layer pre-composition system, and the APS 1035 series, equipped with row pre-composition and gripper. Both new systems are very flexible

The **APS 3100 L** series includes four models of automatic palletisers for the palletising of cardboard blanks, bundles, trays and packs in general, up to 100 p.p.m. The new Smipal installation is a single-column system with two Cartesian axes, where the vertical axis consists of a fixed column on which the horizontal beam slides on guides with recirculating balls; instead, the horizontal work axis consists of the beam on which the gripper slides also on guides with recirculating balls; instead, the horizontal work axis consists of the beam on which the gripping head arm slides also on guides with recirculating balls. The gripping head picks up the layers of packs from a conveyor belt at operator height and places them where required on the pallet with fast and accurate movements.

A special feature of the APS 3100 L series is the continuous in-line layer pre-composition system; in fact, using an innovative "multi-way diverter", the loose bundles arriving on the belt in a single row are turned or shifted and arranged on more than one row in the position shown in the palletising diagram, thus pre-forming the layer. An appropriate mechanical actuator separates the newly-completed layer from the accumulating bundles, while the "multi-way diverter" prepares the next layer. The layer thus formed is then pushed into the roller-fitted



gripping head by a motorised bars system. The infeed with the continuous in-line pre-composition is very compact and reliable and stands out from traditional ones for its one-way motion and for the possibility of orienting the bundles in any position.

Continued

PALLETISER RANGE INCREASED - Continued

The central column of Smipal palletisers of the APS 3100 L and APS 1035 series is driven by brushless motors that ensure precise movements of all the machine's operating axes. System automation and control are performed by a PC-based system called MotorNet System®, which is based on Sercos fieldbus and industrial Ethernet communication protocol. The use of this technology in the field of palletising systems, characterised by repetitive actions, is synonymous with high reliability, less maintenance and low operating costs. In addition, system management is facilitated by a simple and user-friendly human-machine interface panel, with advanced 3D graphics, touch-sensitive screen and a wide range of diagnostics and technical support in real time. Each module of Smipal's automatic palletising systems is designed as a standalone unit connected to the central column; therefore, the entire system is easy to transport and can be installed and started up in a short time.

The accurate sizing of the central column and the horizontal beam, together with slides on ball recirculating guides, ensures smooth, continuous and precise motion, with minimal bending dynamics and virtual absence of vibration. All this allows to reduce the wear of the mechanical components and, therefore, ensures great operating reliability, less maintenance and low operating costs during the machine's entire life cycle.

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SAVING SPACE

GEA Procomac has introduced Artis Evo, their latest development in palletising technology. Artis Evo uses a new (patent pending) system of layer handling to save space, reduce maintenance cost and maintain high-speed production.

Artis Evo is an innovative layer pick-up head, mono–column type palletiser that guarantees high performance using a very compact system that allows operator's high visibility and easy maintenance accessibility.

What's new?

The new innovation is the absence of the pusher. This is made possible by the new layer handling system.

The pick-up head, fits directly on the layer and picks it up as soon as the layer is ready. Artis Evo doesn't need the pusher since, inside the head, there is a special plate moving underneath the layer. This innovation reduces the machine cycle dead times achieving the remarkable speed of six layers per minute with a simple and compact system.

The reduction of footprint is 10-15% compared with a traditional machine and, thanks to the no pusher design, the maintenance costs are reduced. Artis Evo small size makes it easier to transport and install at customers' facilities. The price is competitive when compared with medium/high-speed beverage filling lines (30,000 bottle per hours on 1,500 ml) palletisers.