

Advanced, versatile, flexible modular machines

Mark the difference between the present and the future

Aranow is a packaging company specialising in the design, manufacture and sale of single-dose packing and packaging lines worldwide. Constant innovation and the development of advanced automation systems mean that Aranow is now a manufacturer of multi-lane stickpack and 4-side-seal flat envelope (single-dose format in flexible film) packaging machines that are well known around the world.

Aranow also offers packaging solutions with flat envelopes, alternative packaging (shaped envelopes and the twinpack, which forms two cavities in the envelope, allowing two products to be packaged in one) as well as secondary packaging (packaging with cardboard cartons, pillow bags, stand-up pouches or flowpacks at the end of the line). All full production lines designed by the company are suitable for packaging any kind of product (liquid, granules, powder or solids).

Excellent customer advice. The key to success

Aranow's equipment and production lines offer the performance levels customers need: high levels of production (OEE >95%), easy maintenance and versatility. The company also offers technical, logistic and documentary support under a user-friendly concept. "Our aim is to prevent unforeseen circumstances that could have a negative impact on our customers' manufacturing and production processes, developing standards that help them increase their profitability," says Sales Manager Jan Molina. "We also offer personalised training and ongoing, personalised support throughout the useful life of the machine". This personalised attention, adapted to customer needs at all times, allows them to save time and costs on maintenance, with an overall efficiency of over 95%.

"Under the slogan: 'satisfaction, commitment and follow-up,'" stresses Jan Molina. "We keep customers informed about any innovation we make in case they want to update their machines. It is a matter of achieving more satisfied customers who are given the chance to stay up-to-date. A working philosophy focusing on the needs and requirements of the modern market; making our customers the most competitive in the market."

The markets Aranow targets in the packaging sector are:

- Food and beverages.
- Dairy products, one of the most critical markets due to the strict and exhaustive hygiene and cleanliness controls to which all dairy products are subjected.
- Pharmaceuticals.
- Cosmetics.



Practically 95% of its turnover comes from exports to America, Europe, Africa and Asia/Oceania, with the latter currently being the market with greatest potential and where the single-dose or stick format is very well received.

Stickpack available to everyone!

The wide range of machinery manufactured by Aranow for packaging food products includes specialised systems for different textures (granules, liquids, viscous, powdery or solids, etc.) and offers solutions to production, maintenance and final pack finishing needs adapted to each project. There are also machines that have been specially designed for producing single-dose packs for the pharmaceutical sector that meet this industry's particularly strict hygiene, monitoring and control requirements. Medium-scale production equipment with the same performance is also manufactured: servomotor-powered machines operating at 60 cycles per minute, easy to use, with free access and no tools for the principal components, etc.

Stickpack is the alternative with an advantage over conventional single-dose solutions. It is a very economical and precise format, allowing better dosing and storage. Its main advantages are:

- Easy to open for dosing.
- Saving of up to 40% on film compared to square envelopes, resulting in a reduction of additional costs (reel storage, use of consumables, etc.), while protecting the environment by using less material.
- Better use of packaging capacity, eliminating cavities in the dosing system and therefore increasing the quality of the finished product.
- Less space needed to store finished packages.
- High levels of production and low machinery maintenance requirements.

Aranow's range of machines includes:

- Stickpack machines with up to 16 lanes (high-speed) and 24 lanes (high levels of production).
- Multi-lane sachet machines (4-side-seal flat envelope).
- Machines designed for low levels of production and performing market tests.

Aranow also manufactures complete lines integrating stickpack machines with cartoners or flowpack machines.

The machines developed by Aranow reach speeds of up to 60 cycles per minute, conditioned only by the properties of the product and the film used for packaging. They are modular solutions in which the number of machine lanes can vary depending on packaging needs, offering quick, easy format changes thanks to specially designed solutions.

The stick dosing time and speed is sequenced and synchronised by a control system based on Omron's Sysmac automation platform, allowing integrated control of the whole machine as well as the advantages offered by use of the EtherCAT open communications standard.

"Thanks to Sysmac, the production cycle has been increased, along with versatility and flexibility."





The use of Accurax G5 servos offers an important technological advance.

The whole process is managed by an Omron Sysmac NJ controller with shaft control, specially chosen for the exhaustive requirements of the packaging process. For this, Omron Accurax G5 servomotors have been chosen by Aranow, rather than pneumatics, because of the need for maximum flexibility.

Thanks to the Accurax G5, the various drives (raising and lowering the dosing nozzles, transporting packages, vertical and horizontal seals, non-stop cutting system, etc.) are synchronised with absolute precision and very low tolerances of +/- 1%, thanks to the 20-bit resolution of the servomotors. This precision is necessary to protect the printing of the packages. On the other hand, as regards packaging liquids, the use of servomotors in the filling nozzles prevents splashing, increasing productivity by 95%, along with the quality of the end product.

This shaft control under Sysmac technology makes it possible to considerably increase productivity. Gentler, more fluid movements are achieved, which are faster and more synchronised and flexible, resulting in increased production and a higher quality of the end product.

At the same time, EtherCAT is an ultra-fast deterministic bus intended for controlling the machine and allowing easy slave management. The number of slaves can be expanded or new machine modules can be added at any time from the program

and during operation time, with everything managed from a single bus.

The all-in-one Sysmac saves installation costs, offering quicker assembly times and faster installation thanks to its user-friendly nature. Shaft control offers greater flexibility with minimal maintenance and greater scalability, as the same servo architecture can be used for different machines by simply changing the controller's CPU.

All parameters involved in the process (speed, dosing, temperature, quantities, etc.) are managed from the programmable HMI terminal. The other devices involved in the process can be displayed and controlled, including: timers, selectors of different external components, and external modules added to the machine depending on the customer's needs so that the machine communicates with the feeder and the secondary packaging process, which controls and adjusts counting inside the box.

Convinced of the importance of accompanying the product with specialised service from the point when the customer starts thinking about how to develop the line, Omron works closely with Aranow on designing the automatic control system under the Sysmac automation platform.

About Aranow Packaging Machinery

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About Omron

Omron Industrial Automation is a leading manufacturer of high-tech products and solutions for industrial automation. The company is part of the Omron Corporation founded in 1933 in Kyoto, Japan, and employs more than 37,000 people worldwide. The wide product range includes control, drive and safety technology, image processing and sensor systems, as well as control and switching components. The aim is to provide engineers with demand-driven, integrated automation solutions from a single source. In addition, Omron offers its customers comprehensive application know-how, as well as region-wide on-site service.