

Precision and Optimization in the Filling Industry

In today's industrial landscape, optimization is a fundamental pillar upon which business innovation is built. Maximizing efficiency and reducing costs are essential goals for any company wishing to compete in the global market.

In the filling sector, the importance of optimization is further magnified due to inherently complex and delicate processes that involve managing a variety of products, formats, and dosages with high standards of precision and hygiene.

A recent study highlighted how the implementation of automated filling systems in the food and beverage sector led to an 8% reduction in production costs and a 5% decrease in waste. Investing in innovation and cutting-edge technology is, therefore, key to securing a lasting competitive advantage.

Smart Technology for Industrial Filling

Isobaric Technology has been taken to the next level at Ferrari Filling by incorporating sophisticated electronic solutions. This innovation marks a turning point in the industry, presenting a next-generation Isobaric Filler that is fully automated. By eliminating the need for mechanical cams for opening, closing, and venting operations, which previously required manual intervention, this technology introduces a new level of efficiency and precision. Its revolutionary design allows for unlimited adjustment of all functionalities through intuitive software, making the entire filling process smoother and more flexible.

To accommodate the diversity in production needs, the system allows the insertion of specific "recipes" for each type of bottle and liquid to be filled. This feature ensures that the machine's functions automatically adjust to the parameters set by the operator, simply by selecting an option on the touchscreen. This customization capability greatly facilitates the management of production changes and improves operational efficiency. In particular, the system demonstrates its superiority in handling PET and aluminum containers, like cans, where precision in the liquid volume is crucial. Optimal isobaric filling is achieved through the use of the Electronic Isobaric Machine, which employs an innovative volumetric system based on "Flowmeters," or electronic flow meters. This technology ensures that the volume of liquid introduced into the container exactly matches the predetermined measure, eliminating waste and ensuring product uniformity.

The versatility of the "GranPrix" system allows for processing a wide range of products, both carbonated (with CO₂) and non-carbonated (without CO₂). The machine can easily switch from an isobaric to a pure gravity system, operating without the need for pressure. This flexibility is particularly advantageous for companies that need to manage different types of products with a single piece of equipment, optimizing production times and reducing operating costs. Thanks to these innovations, FERRARI FILLING confirms itself as the ideal partner in the bottling sector, offering solutions that meet the needs of an ever-evolving market.

[IMAGE 01]

When precision and reliability are required, along with rapid washing and format change capabilities, with automatic adjustment from the panel, the choice falls on the "GranPrix" isobaric electro-pneumatic electronic machine, where precision electronics integrate with mechanics to achieve a highly reliable filling technology.

The utmost precision and versatility

The main feature of these machines is the electronic filling system with flow meters, capable of ensuring the determination of the filling liquid quantity with high accuracy and the considerable simplicity of washing, sanitization, and sterilization, making it suitable for delicate liquids like milk and its derivatives.

- The machine is equipped with flowmeters controlled by dedicated software, measuring the liquid quantity with a high degree of precision ($\pm 0.2\%$ per liter).
- Real-time auto-correction: automatic adjustment of filling quantities for each nozzle to compensate for any excesses or deficits in product in the next cycle.
- Filling containers simply involve feeding the liquid from the central storage tank through specific piping to the flow meter and filling valve; the required volume can be set from the control panel, and the system automatically opens and closes the aseptic valve.
- The machine is preset to be connected to sanitization treatment (CIP / SIP). The entire circuit is completely sanitizable, allowing for the filling of very "delicate" liquids.
- The dispenser has been designed to allow complete sanitization in every part and to prevent dripping.
- "No bottle - no filling" filling device - Electronic filling control adjustable even when the machine is in operation.

With high precision in the quantity of product dispensed and ease of sanitization being the main qualities of the electronic filling machines of the INFINITY series, these have been designed to be particularly versatile in handling different types of products, minimizing format change times. Thanks to these features, the INFINITY series machines are used in many food production sectors such as: milk and its derivatives like sorbet and yogurt, natural fruit juices and milk-based, tomato and derivatives, condiments like oil, vinegar, mayonnaise, ketchup, creams, mineral waters, hot filling products, energy drinks and supplements, pharmaceutical products.

Besides food sectors, this series of machines is also used for the treatment of chemical products: detergents, washing products, personal care products, lubricating oils.

[IMAGE 02]

[IMAGE 03]

Even support becomes SMART

In a perspective of complete technological revolution, technical support for problem-solving occurs online through electronic data exchange. This way, we have the possibility to operate in real time in

case of problems with the machine via a telephone line dedicated exclusively to this service, connecting directly to the general electrical control panel of the machine.