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HIGHEST STANDARDS OF HYGIENE WITH SIDEL'S NEW MATRIX HOT FILLER



Sidel, the international supplier of liquid packaging solutions to the drinks industry, has produced a new modular hotfill machine that offers customers an extensive range of possible configurations. Part of the Sidel Matrix[™] range, it provides the highest standards of hygiene to meet the production demands of more natural and fresher beverages, even those including pulps or fruit pieces.

The radical, modular Sidel Matrix hotfill system has been developed to ensure the levels of product safety and quality required by the fastest growing segment of the beverage industry. This includes juices, nectars, still drinks, isotonics and tea (JNSDIT). It is part of Sidel's global Matrix solutions configured to provide a revolutionary level of process flexibility with an increased production capacity for a broad range of beverages. Backed by reliable operations to meet the exacting requirements of liquid producers, Sidel Matrix solutions include blowers, fillers, Combis and labellers.

Suitable for products of high and low acidity

Based on Sidel's experience of sensitive products and existing hotfill technologies, the new Sidel Matrix hot filler has been developed to meet these high safety and quality production standards for any kind of drink - of high or low acidity - to be bottled in PET containers in sizes from 200 ml to 2 litres. It is suitable for still products, such as teas, isotonic beverages, juices and nectars. Equipped with Sidel's 'Integrated Slurry Dosing' (ISD), it also handles products with pulps or fruit pieces, sacs or fibres for products like pulpy juices, flavoured waters with fruit pieces, even Chinese Aloe Vera or coconut-based drinks. Having electronic filling valves each equipped with individual flow meters, it is extremely accurate in dispensing the appropriate filling volumes, while minimising product wastage. The new hotfill machine is also capable of operating at production rates ranging from 6,000 to 60,000 bottles per hour.



Robust and modular

The Sidel Matrix hot filler offers great end-product versatility, managing a broad range of products with or without pieces. In straightforward block-rinser configuration, it manages still beverages, with a simple grid valve. It can also handle products with small pulps and fibres up to 1 x 10 mm, with the option of a plunger valve. It is also available for products with pieces measuring up to 10 mm³, using a volumetric bits dosing turret. Of course, any of these configurations can be utilised as the 'filling' module of a fully integrated 'blow-fill-cap' solution within a Sidel Combi set-up.

All components of the Sidel Matrix hot filler that come into contact with the product are made from stainless steel and sized for a robust and durable design to give a long and productive working life. The fillers can readily be adapted to meet customers' changing needs and the system's upgradeable platform will enable customers to take advantage of technical developments that are introduced in the future.

Hygienic design for product quality and integrity

Throughout the entire packaging process, Sidel's Matrix hot filler ensures complete product safety through hygienic design and contactless filling valves. The product never comes into contact with the ambient air and at no point during the production process is any bottle in contact with the filling valve, therefore reducing the risk of cross contamination.

The filling environment of the Sidel Matrix hot filler can be tailored according to the level of hygiene required by the product being bottled, with various alternatives being available: an open enclosure with the option of a roof with an air filtration unit and a reduced enclosure. In the reduced enclosure, the volume of the filling area has been lowered by 72% compared to the standard configuration. Requiring fewer chemicals to clean the space, this offers greater hygiene and less filtered air treats the filling area. It uses an automatic cleaning system for which all effluents are drained into one single point, through collecting trays located around the base and the carousel.

Accurate filling

Throughout the filling process, it is possible to control the flow rate from the tank to the filling valve without stressing the product being bottled. Any turbulence created by changing the flow rate remains within the tank, which acts as a buffer from the incoming product. This does not affect distribution and delivers a constant pressure on the filling valve, ensuring high accuracy in the process whilst the dual-speed filling avoids the generation of any foam. The bottle and filling valve are both fixed during filling, to avoid any splashing and subsequent product wastage.

When the slurry dosing (ISD) is integrated, the system undertakes a two-phase process: the first phase delivers the slurry (or particles) into the bottle, and the second fills the liquid juice. The slurry-dosing turret is also equipped with contactless valves. No parts enter the bottle, so once again, hygienic filling is ensured. The conic design of the valve for the volumetric doser avoids product leakage and waste.



This dual-stream dosing by pistons ensures a constant and accurate delivery of pulp or slurry. Particle concentration can be adjusted from 20ml to 300ml, depending on the recipe and size of format being bottled, with a tolerance of plus or minus 10%. With less than 10% of particles being damaged, the Sidel Matrix[™] hot filler therefore ensures beverage quality, maintaining the physical integrity of the particles during processing.

Forward-looking solution backed by 40-years experience

Sidel's first hot filling was into glass bottles and took place back in 1969. The company's blow moulding, heat resistant, process expertise dates back to 1986. With over 40 years experience in hotfill solutions, Sidel has now installed more than 900 pieces of equipment worldwide for both glass and PET, including innovative PET heat resistant (HR) packaging solutions.



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About Sidel

Sidel is the leading global provider of PET solutions for liquid packaging. We are also a driving force for glass and can solutions. We are committed to being the most innovative, responsive and reliable partner, providing sustainable solutions for the beverage industry.

Headquartered in Switzerland, we have production sites in 13 countries and 30,000 machines installed in more than 190 nations worldwide. With over 5,500 employees worldwide, we provide optimal PET, glass and can packaging solutions for water, soft drinks, milk, sensitive products, edible oils and alcoholic beverages including beer.

We aim to create value for our customers by giving them A Better Match. This is the tailored solution that caters to their needs exactly. We do this by offering flexible and reliable production systems that are easily adaptable to market developments and future technology, supported by value-added services.

We are Sidel. We are A Better Match.

Find out more at www.sidel.com