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| Subject: | New KHS aseptic line for RAMSEIER Suisse AG |
| Number of characters: | main text approx. 8.000 characters (with spaces and without boiler plate) |

**Title**

A real original

**Subtitle**

RAMSEIER Suisse AG invests in state-of-the-art aseptic line from KHS

**Teaser**

With sophisticated technology from KHS, RAMSEIER Suisse AG in Sursee in Switzerland recently commissioned a very special aseptic line: one that is flexible, highly efficient and perfectly tailored to the company’s high demand for quality.

**Main text**

Established as a cider press over 100 years ago, with a gross turnover of CHF 156 million traditional company RAMSEIER Suisse AG is now one of the biggest beverage producers and most important independent breweries in the Swiss Confederation. At its four facilities it produces not just beer but primarily apple juice, cider and apple spritzers, fruit juice, mineral water, soda pop and soft drinks – some as exclusive own brands for retail chains such as Coop or Migros.

As it processes more than half of all cider fruit in Switzerland, RAMSEIER Suisse AG attaches great value to quality. Apples, pears and the apple mint used in its freshly brewed iced tea are sourced from local farmers and governed by strict specifications. The company’s high demands equally apply to its products and the methods used to make them: many of the fruit juice and tea beverages are not hot filled, for example, but instead undergo gentle pasteurization and are filled into the bottle under aseptic conditions in order to retain the full fruity or herbal flavor.

**Strong partnership**

It thus goes without saying that when it comes to the production technology, for the Swiss using standard equipment is not a satisfactory option. RAMSEIER Suisse AG has worked with systems provider KHS for over 30 years. The most recent product of this cooperation is an aseptic line at the production site in Sursee near Lucerne. The Dortmund engineering company has supplied the process technology, the stretch blow molder/filler block and a labeling machine. The new line, in which around €15 million have been invested, is part of the systematic innovation process that is to make the bottler technologically fit for the future. “We reckon that the variety of products and packaging will continue to increase,” explains Christoph Suter, CTO and board member of RAMSEIER Suisse AG. “In the future our production setup must be able to react even more flexibly to constantly changing market requirements. This calls for continuous renewal of our plant infrastructure.”

RAMSEIER Suisse AG’s key demands in this respect are flexibility, operational reliability, efficiency and sustainability. “Our machines have to process a broad spectrum of beverages,” says Suter. “What’s more, the PET aseptic line especially has to cater for a variety of packaging specifications, such as different bottle shapes, sports caps or sleeve labels, all of which feature in our highly diverse product portfolio.”

**A unique construction**

One special challenge faced by the KHS engineers was the limited amount of room available for the new machinery. Despite the production shop being expanded, there was only a narrow space provided for the line. The answer was to construct a large stainless steel platform above the stretch blow molder/filler block that contains all of the process engineering with a juice deaerator, flash pasteurizer, sterile buffer tank, valve manifold, CIP system and all control cabinets for the entire line. A dormer had to be especially built into the production shop roof to accommodate the enormous tank. With a total volume of 9,000 liters, it allows a new batch of product to be prepared while the filler is still being cleaned. So that it runs completely empty using the natural incline, the tank was also placed on staging so that its upper edge stands at over ten meters. A practical door accessed from the roof facilitates inspection and maintenance.

Not only the customer is enthused by the result, says Lutz Müller, sales manager at KHS, “This is a unique construction, a real eye-catcher. Here, we can see how product preparation and product filling perfectly interact – the result of an elaborate and thorough planning process mastered together with the engineers at RAMSEIER Suisse AG.” This great display of teamwork is confirmed by Christian Stampfli, product manager for the Swiss beverage producer. “The coordination between the various companies involved in the project really worked extremely well.”

**Optimal product quality**

The InnoPET BloFill ACF-L aseptic stretch blow molder/filler block from KHS is one particularly good example of the high-tech now erected in Switzerland. This includes the sophisticated InnoPET Blomax Series V, the latest generation of KHS stretch blow molding technology. It has been equipped with a box tilter which with its dosed preform infeed exerts a lower load on the preforms and thus causes less damage to them. A dedusting and an inspection module have also been installed. While the first blows out the preforms, the second identifies any foreign particles or deformation and ejects all affected PET preforms, thus preventing production downtimes. A cap inspection unit at the filler that checks for shape and color fulfills the same purpose. The tried-and-tested linear aseptic filler itself fills up to 12,000 PET bottles per hour holding between 250 milliliters and 1 liter or 9,000 containing 1.5 liters.

It scores with a number of technical innovations which include, for instance, further-developed bottle grippers that hold the bottles in place better than the previous model. Innovative switching valves control the volume of the inflow to the actual filling valve and thus permit a total of four different infeed speeds adapted to the beverages’ respective foaming properties. The filling valves and valve outlets were specially optimized to cater for RAMSEIER Suisse AG products. “There’s absolutely nothing normal about this line,” emphasizes Lutz Müller.

**Higher efficiency thanks to smart technology**

The system control unit based on TIA Siemens technology is one of the novelties on this line, making use of modular software for the very first time. It enables any adjustments to be made to the affected module only without the entire system having to be handled. The machinery is operated from the new ClearLine HMI (human machine interface) operator panel. One practical feature for the operator is that the panels installed at filler height at ground level can also be used to control the process engineering up on the platform. This means that personnel do not have to waste time climbing stairs or walking round the machine, as screens are positioned on both sides of the stretch blow molder/filler block.

Every effort has been made along the entire line to speed up, shorten or simplify processes in order to save time and make the plant engineering as efficient as possible. Further examples are the quick and flexible format changeovers, which for Christoph Suter are a particular technological highlight, and shorter cleaning and sterilization times, reduced from a previous five to a current three-and-a-half hours. “Thanks to its great flexibility during product and bottle changeovers and the reduced amount of time needed for CIP and sterilization, the new line now has a much higher availability,” smiles the CTO. “In addition, the new filler is now sterilized with hydrogen peroxide instead of peracetic acid which was formerly used in wet aseptics. We therefore expect to make savings in maintenance, operating materials, steam consumption and in water and wastewater. The new line is also more efficient regarding fixed product loss caused by the system.”

All told, Suter and his team appear to be extremely satisfied. “KHS convinced us not just with its comparison of the TCO but chiefly with its high degree of expertise. Our cooperation during the entire project was always open and constructive – from planning through implementation to commissioning.” With its new line RAMSEIER Suisse AG is now perfectly placed to also fill small and very small batches flexibly, efficiently and in the best quality for many years to come.

**For more information go to:** [**www.khs.com/en/media**](http://www.khs.com/en/media)

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**Pictures and captions**

(Source: KHS Group)

**Download:** [**https://KHS.dphoto.com/album/y5vcun**](https://KHS.dphoto.com/album/y5vcun)

**Photo captions**

**Overall view**

High-tech in the smallest of spaces: full view of the KHS aseptic line.

**Platform**

A dormer had to be built into the roof to accommodate the 9,000-liter buffer tank installed on the platform.

**Bottle grippers**

Bottle grippers are provided on a trolley for format changeovers.

**HMI recipe selection**

For product changeovers recipes are selected on the ClearLine HMI operator panel from KHS.

**Sleeve labels**

PET bottles filled with tea are dressed with sleeve labels on the KHS labeler.

**Excerpt from the portfolio**

Fruit juice and tea beverages in premium Swiss quality: excerpt from the company’s portfolio.

**Christoph Suter**

Christoph Suter, CTO and member of the board of RAMSEIER Suisse AG.

**Christian Stampfli and Lutz Müller**

Strong team: project manager Christian Stampfli (RAMSEIER Suisse AG) and sales manager Lutz Müller (KHS GmbH).

**About the KHS Group**

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| The KHS Group is one of the world’s leading manufacturers of filling and packaging systems for the beverage and liquid food industries. Besides the parent company (KHS GmbH) the group includes various subsidiaries outside Germany, with production sites in Ahmedabad (India), Waukesha (USA), Zinacantepec (Mexico), São Paulo (Brazil) and Kunshan (China). It also operates numerous sales and service centers worldwide. KHS manufactures modern filling and packaging systems for the high-capacity range at its headquarters in Dortmund, Germany, and at its factories in Bad Kreuznach, Kleve, Worms and Hamburg. The KHS Group is a wholly owned subsidiary of the SDAX-listed Salzgitter AG corporation. In 2020 the KHS Group and its 5,085 employees achieved a turnover of around €1.130 billion. |

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