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Meeting Point

SCHRÖTER
LEADING QUALITY

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Norwegian Tradition Meets Westphalian Ingenuity

WELL-FOUNDED SYSTEM CONCEPT GUARANTEES A HIGH DEGREE OF AUTOMATION

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CUSTOMER REPORT

Norwegian Tradition Meets Westphalian Ingenuity

If you go for a long walk in Norway, your hosts often bring along a matpakke – the Norwegian packed lunch. In addition to many other specialties, it also often contains a bread with leverpostei – liver pâté. It is precisely this traditional specialty that Oslo's Mills AS produces. Since 2021, it has been using system technology from Schröter Technologie GmbH & Co. KG.

The manufacturer is also conscious of tradition: Mills AS is a family-owned Norwegian company founded in 1885 in Grünerløkka, Oslo, and is still based there today. Numerous branded products such as margarine, spreads, mayonnaise, and gourmet salads are produced by Mills AS. Another specialty from Mills is a baked liver pâté. In order to synthesize the familiar product quality of the company with high productivity, the company was looking for competent partners.

First Test Series at the Schröter Technical Center

Our cooperation with Mills AS began in 2020 when Mills submitted an inquiry for "Ovnsbakt Leverpostei" via our Norwegian partner company Skala. The requirements of the Norwegian company on the product were extremely precise. In addition to a core temperature of 90°C (194 Fahrenheit) and a browned surface, the main aim was to ensure the uniformity of the pâté while keeping the process time as short as possible. Following an initial investigation, Mills, Skala, and Schröter agreed to conduct a series of tests at the Schröter Technical Center in October 2020. According to the customer's recipe, meat technologist Jens Wittig produced the raw mass to be cooked.

"We have been working successfully with our Norwegian representative Skala since mid 2013. The joint project with company Mills was a significant milestone that we are particularly proud of."

– DIETRICH SCHRÖTER
CEO

System Concept Developed in Partnership

The process times and results of the test series impressed our contact partners at Mills. This enabled us to build their trust in our technical expertise and the Schröter production systems. The next step was to develop a system concept for an optimal production process under the spatial conditions provided. The project team paid particular attention to the degree of automation being as high as possible. The result of the concept development phase: three SEMIjet® BAIKIK-6 units for baking and chilling with intermediate zone. The contract was awarded in July 2021.

Full Capacity Utilization with a High Degree of Automation

The three SEMIjets® are four-zone semi-continuous systems. The first zone acts as a "roasting section." This is a baking system in which processes can be carried out at a chamber temperature of up to 180° C (356 Fahrenheit). The second zone, an intermediate

“I am extremely satisfied with the progress of the project. Our collaboration with the companies Mills and Schröter far exceeded our expectations in terms of flexibility and reliability.”

–
THOMAS SOMMERSTAD
Business Unit Executive at Skala

–
FULL CAPACITY UTILIZATION IN PRODUCTION
thanks to a high degree of automation.

zone, is the thermal separation between the baking zone and the following two cooling zones. Each line in the system is designed for eight wagons, each wagon has a product load of approx. 124 kg. In combination with the required capacities and process times, the system’s zone division ensures optimum utilization.

Production was designed for a capacity of 1,000 kg/h for an eight-hour production day with a subsequent cooling function. The product cycle is 40 minutes, i.e., every 40 minutes, two wagons are automatically transported from one zone to the next. The product is cooled down from approx. 90° C (194 Fahrenheit) to approx. 6° C (42.8 Fahrenheit) in the core. Production takes place between 8 a.m. and 4 p.m. Nine batches are produced during this time. The tenth and eleventh batches remain in the intensive chillers overnight, system zones 3 and 4. A special energy-saving cooling program was developed for this purpose.

The entire production process has a very high degree of automation, ensuring the highest possible quality while maintaining the consistent characteristics. Compared to the previous process, the product quality in terms of uniformity and taste has even been optimized – and this with noticeably shorter process times. Special thanks go to Olav Sönksen, construction site manager and supervisor at Schröter. “Thanks to Olav Sönksen, we were perfectly able to implement the project with our special requirements with technical precision,” said Leif Magne Nilsen and Torvald Eriksen, project manager at Mills.

Optimal Partnership: Skala and Schröter
Skala AS is a leading supplier of food processing systems, production lines, and consumables for the Norwegian market. The company offers services in the areas of planning, project management, and automation. In cooperation with Schröter, the Skala project team was also involved in the system planning. “We have been working successfully with our Norwegian representative Skala for nine and a half years,” explains Dietrich Schröter. “The joint project with company Mills was a significant milestone that we are particularly proud of. The smooth process has shown us that we have a competent partner in the Scandinavian region by choosing Skala.”

Thomas Sommerstad, Business Unit Executive at Skala, adds: “I am extremely satisfied with the progress of the project. Our collaboration with the Mills and Schroeter companies far exceeded our expectations in terms of flexibility and reliability. I would particularly like to highlight the dedication of Reza Boozari, project manager at Schröter.”

Facts & Figures

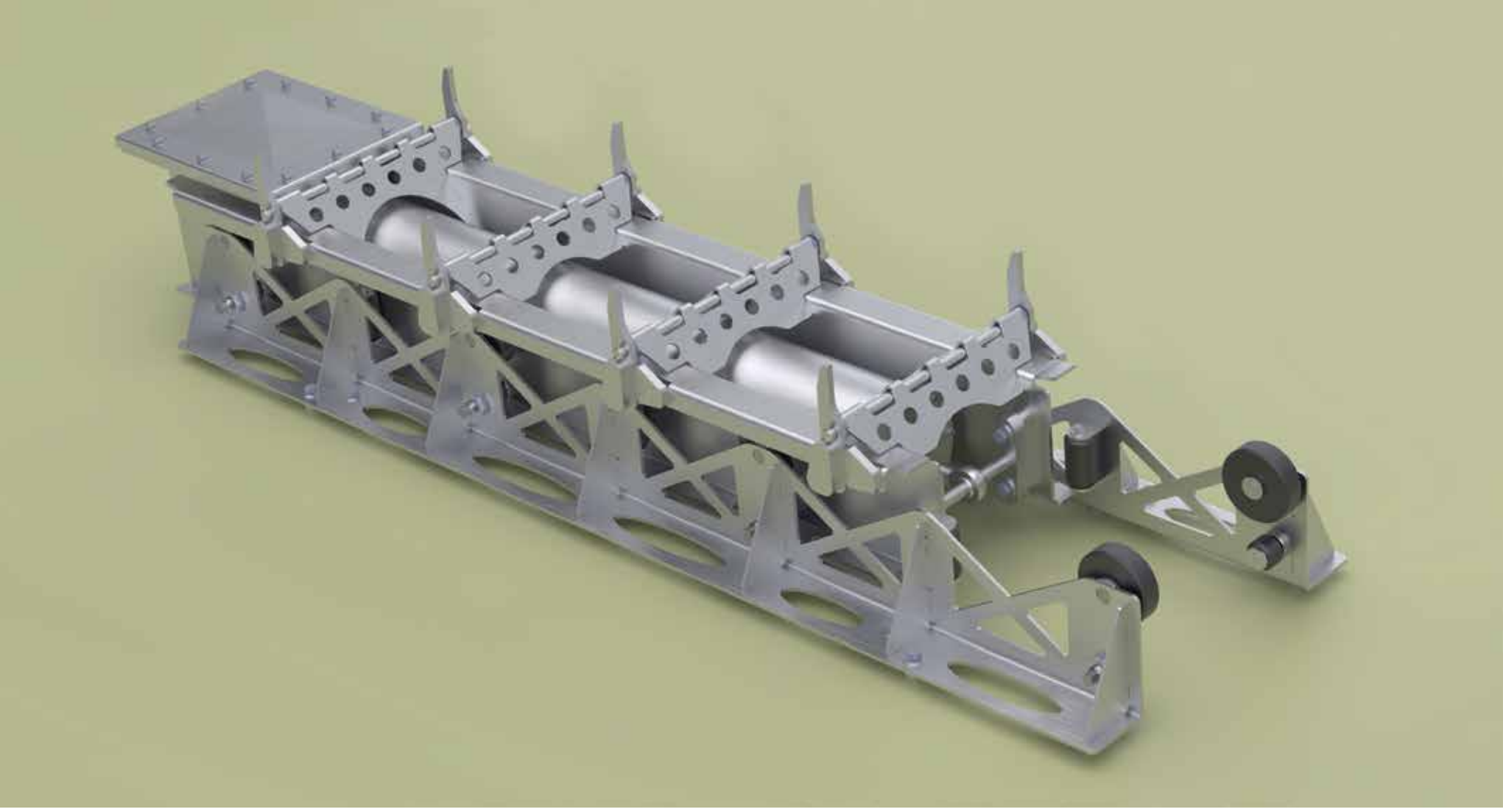
Mills AS is a family-owned Norwegian branded company founded in 1885 in Grünerløkka, Oslo. Mills is part of the Norwegian Agra Group, which is family-owned and has companies in Norway, Sweden, and Denmark.

- **HEADQUARTERS:** Oslo, Norway
- **EMPLOYEES:** 450
- **PRODUCT PORTFOLIO:** Spreads, margarine assortment, sauces, caviar, gourmet salads
- **PRODUCTION:** 50,000 tons/year

SCHRÖTERS

Scope of Delivery

- **3 X SEMIjet® BAIKIK-6**
  BAKING- AND INTENSIVE CHILLING SYSTEM WITH INTERMEDIATE ZONE
- **30 X BAKING WAGONS**
  WITH 12 SUPPORT RAILS
- **1 X RGA450**
  CENTRAL CLEANING STATION WITH TWO FEED PUMPS
- **1 X PROCESS CONTROL SOFTWARE**
  INTOUCH INCL. EWON ROUTER



SOLUTIONS

Innovation by Schröter Using Mills as an Example

One of Schröter's strengths is the ability to adapt its own solutions to the customer's requirements. An example of how Schröter solves such challenges.

Our systems often have to be integrated into existing processes and locations. Customers often present us with new challenges. The Mills project (see Customer Report) was no exception here. Two areas were particularly challenging: the transport system and safety technology.

To ensure a self-sufficient transport system that also allows fully automatic loading and unloading, many factors have to interact smoothly. The control system, position sensing of the wagons, and the necessary safety devices, for example, ensure that processes run smoothly. Conveyor systems with push-rod, chain, or pneumatic drives are used according to the requirements. All of this is standard in Schröter systems, but the Mills project has one special feature up its sleeve: the transport system should be able to operate at a baking zone temperature of 180° C (356 Fahrenheit). To ensure this, Schröter's development team designed an air-cooled, pneumatic conveyor system that automatically controls the cooling system thanks to continuous temperature monitoring.

Schröter is also taking the best possible approach in the area of safety technology. Safety switchgear and control systems have to be able to withstand the high standards of German and international testing organizations, be easily expandable if required, and allow easy configuration of safety circuits such as emergency stop switches, safety rope pull switches, and safety light barriers. For this order, Schröter has been relying on the tried-and-tested solutions from PILZ, whose systems meet all the aforementioned requirements. In addition, they enable the optimum diagnosis of incidents despite complex processes and links.

"In particular, the installation of security technology from PILZ enables fast remote access for the analysis of incidents. This enables us to offer our customers even greater systems availability."

JOACHIM GÖDEKE
Head of Electrical Engineering

MARCEL WENKEMANN
Program Developer

LEFT: This buffer zone can be accessed via a side door.

RIGHT: The transport system in the baking zone.
A temperature of up to 180° C (356 Fahrenheit) is reached here.

SERVICE

Competitive Edge through Inspections

The availability of systems is a top priority in industry and artisanal trades. That's why Schröter offers individual maintenance and inspection contracts, each tailored to the customer's portfolio of equipment.

It's obvious why a regular inspection of your systems is good and useful: you do not want to risk a drop in performance or downtime. Another reason is compliance with international and German standards, such as the IFS*, as well as legally required tests, such as the German Federal Emission Control Act (Bundes-Immissionsschutzgesetz).

"Our customers focus on food safety and the quality of processes and products," says Volker Kramme, customer service manager and consultant at Schröter. "If an official exhaust gas measurement by an independent institute detects a deviation from the permitted measurement values, this can be expensive and even result in a temporary system downtime." As far as Schröter's systems are concerned, customers can therefore ensure that the safety and functional soundness of all relevant areas are regularly checked by trained specialists as part of an inspection contract.

Schröter assumes responsibility for every professional inspection. The customer receives a test report that precisely lists the values measured. Inspection and air measurement of the systems are carried out on a regular basis every 12 months. The temperature sensors are checked and the smoke generators are measured every six months. The exact dates are arranged with the customer. If a necessary repair or part replacement due to wear is recorded, this is noted in the test report. The operator can then carry out the necessary work independently of the inspection themself or commission a service provider to do so. "Inspection contracts have an unlimited term, but can be terminated at any time," says Volker Kramme.

"We see time and again how even minor corrections and maintenance can make sure that our customers' Schröter systems operate smoothly for many years to come. In this respect, an inspection contract is the first step toward sustainable production facilities – and at the end of the day, it is even an important aspect of a company's competitive edge."

* International Food Standard

AT A GLANCE

Inspection Services

- CHECKING ALL RELEVANT SAFETY DEVICES
- CHECKING THE MOTORS AND FANS
- INSPECTING ALL ELECTRIC AND PNEUMATIC ACTUATORS
- CHECKING THE LEAK TIGHTNESS OF ALL RELEVANT SYSTEM PARTS (E.G., SYSTEM HOUSINGS, DUCTS, PIPES, CLEANING EQUIPMENT, ETC.)
- CHECKING CONTROL EQUIPMENT (ELECTRONIC COMPONENTS, POWER UNITS, ETC.)
- TESTING THE TEMPERATURE SENSORS (TEMPERATURE ADJUSTMENT)
- CARRYING OUT THE NECESSARY LUBRICATION WORK

COMPANY

Extremely Popular: Schröter's "Company Bicycles

The management and the works council have launched the leasing offer for early 2023. Some Schröter employees already have their own company bicycle.

Andreas Klaucke, Project Manager at Schröter, is thrilled: "For my family, this electric cargo bike is a real dream come true. My children are still small and like to be chauffeured around!" Christian Pohlmann, customer service consultant and member of the works council, is also delighted: "Bicycle leasing is really fair. My commute to work is about 8 km. With the e-bike, I experience a new sense of freedom – completely car-free!"

The company car privilege has also applied to company bicycles since 2012. According to the highest tax authorities of the German federal states, company cars and company bicycles are treated equally for tax purposes. This results in several advantages for our employees. On the one hand, they can save money on taxes and, for example, claim a kilometer allowance. On the other hand, all-round protection of the bicycle is always included and, if desired, it can be activated by the lessee after 36 months.

Antje Bohn from the HR department coordinates and brokers the e-bike leasing. She is delighted with the offer that has been accepted: "If you're thinking about buying an e-bike, you should consider and check our attractive offer. After all, the increased use of a bicycle also has its health benefits. In any case, I hope that many more leasing applications are set to follow."

"Bicycle leasing is really fair. My commute to work is about 8 km. With the e-bike, I experience a new sense of freedom – completely car-free!"

–
CHRISTIAN POHLMANN
Customer service advisor and member of the works council

–
FLEET OF COMPANY BICYCLES
The new bicycle leasing system is well received by Schröter employees

COMPANY

An Institution Retires

CEO Klaus Schröter affectionately calls her a "communication interface in persona," but she has actually become the company's heart and soul. Marlies Schengbier is now retiring – after almost 46 years with the company.

Marlies Schengbier began her career at Schröter at the age of 18 on September 1, 1977 as a commercial clerk. She quickly became familiar with things like telex, teletext, and fax. Her workplace was the switchboard in the main building, so she had a good rapport with employees, customers, and suppliers. Marlies knew everything: who was there, who was out of the office, who was sick, and which customers were being expected next. Over time, her area of responsibility grew to include customs processing, trade fair organization, and, most recently, key tasks for management.

Now we're excited to see if Marlies can handle it in her (un-) retirement. We wish her all the best, and would like to thank her for almost spending her entire life at Schröter.

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