

Berglandmilch, Feldkirchen (Germany)

Efficiency through modernization



In a challenging Retrofit project, Körber has upgraded production cooperative Berglandmilch's cheese warehouse with state-of-the-art pallet conveyors and modern control systems during continuous operation, and thus prepared the system for further growth and future market requirements.

Customer

With eleven plants in Austria, processing more than 1.3 billion kilograms of milk per year, dairy cooperative Berglandmilch eGen at Wels is one of the largest manufacturers in the food sector in Austria. More than 11,000 dairy farmers deliver their milk to the production sites. There, Berglandmilch Group produces more than 1,000 different articles including fresh products, UHT milk, cheese, butter, yoghurt and curd cheese. The largest cheese dairy of the group is situated at Feldkirchen, north of Salzburg. There, 40 different varieties of cheese are produced. During three shifts, 120 employees process and refine up to one million liters of milk a day, creating cheese varieties, coveted by customers in more than 50 countries throughout the world.

Features and benefits

- **Modernization without production downtime**
- **Operating hours 24/7**
- **Step 1: Implementation gateway**
- **Step 2: Modernization of the three stacker cranes**
- **Step 3: Construction of new dispatch area (pallet conveyor system) incl. control**



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Customer requirements

The cheese warehouse is directly connected to the production site. With a continuous increase in cheese production at Feldkirchen, and considering technological development, the existing system could no longer fulfill the requirements in terms of efficiency.

To be able to cope with further growth and stiffer competition in the market, Berglandmilch decided to update their intralogistics to a state-of-the-art solution within a reasonable modernization project.



Special features / benefits

A challenging project in which it was only possible to carry out the modernization to an exactly planned concept and schedule, having to face highest hygiene standards and continuous three-shift-production.

Besides installation of a new pallet conveyor, it was mainly the modernization of the conveyor control and implementation of a new material flow control, which required overall coordination of the project steps during realization. A substantial restriction of internal business processes - as well as an interruption of production or shipping caused by the project phases - was absolutely impossible.

Under these circumstances, Körber presented a concept by which the modernization could be completed after only six months. As a result, a state-of-the-art conveyor control system now manages operation of the entire plant. So the project was implemented without restricting production.

Solution / Integrated components

The project was planned in three steps. The existing hardware required only minor amendments to the rack system and the stacker cranes. The challenges mainly concerned the communication structure of IT components. As a result, the process related commands, the so-called telegrams, of Berglandmilch's existing AS-400 mainframe computer were analyzed in the first project phase. Based on these, Körber developed a gateway which enabled adaptations to these telegrams to fit the logic of the newly implemented S7-PLC control. In the second project phase, the stacker cranes were converted one by one to the modern controls and fully integrated in the course of processes. For this transition period, the gateway made it possible to run both the old and new controls in parallel operation.

At the same time, the new material flow control computer and the material flow control module K.Motion PMS-M, part of Körber's process management system, were installed and implemented into the communication structure with the existing SAP warehouse management system. Afterwards, the new pallet conveyor was assembled at site. It was possible to divide the implementation into two steps, due to the fact that installation of the conveyor system for the shipping area could be carried out separately and independently.

The existing shipping area remained untouched and fully operational until the new shipping section had been completely implemented. After the mechanical installation of the conveyor and new shipping lanes, it





was necessary to include them into the process management. The shipping lanes are supplied by the stacker cranes according to the existing logic. The AS400 system, however, does not recognize the new conveyor system, so the gateway comes into play. When an order for outbound transport to the shipping area is transmitted, the gateway detects this and sends a task to the relevant stacker crane via the new PLC control, with a transport order to the new shipping lane. The response of the PLC, again, is re-transformed by the gateway in such way that the AS400 system recognizes it as the former response.

After the mechanics and PLC control of the new shipping area had been completely implemented, communication via the gateway was established and the former shipping area could then be deactivated “at the push of a button.”

The allocation of orders now is completely handled via the new shipping section with modern pallet conveyor. The system visualization K.Sight PMS-V, implemented by Körber, helps to make processes visible and transparent in Berglandmilch’s maturation warehouse at Feldkirchen. The switch to modern controls and conveyors guarantees quick response times as well as efficient relocation processes and retrievals for shipping.

With this modernization project, the plant at Feldkirchen is now optimally prepared for further growth and future market demand, and all this with a reasonable investment.

Körber Supply Chain Automation

Our impartial consultants will advise on, and help you select, the right automation solution for your organization. We have our own range of competitive products, but we are equally willing to procure and implement other products if they are better suited to your needs.

Facts and figures

Industry

Food (dairy products)

General contractor scope of delivery

- Delivery and installation of new transport conveyor system
- Mechanical modification of racking systems
- Integration of high-speed gates
- Modernization of the three stacker cranes
- Automation conveyor system
- K.Motion PMS-M
- WinCC system and disturbance visualization
- K.Sight PMS-V

Particularities

- Modernization without production downtime
- Operating hours 24/7

Step 1

Modernization of the three stacker cranes

Step 2

Modernization of the three stacker cranes

Step 3

Construction of new dispatch area (pallet conveyor system) incl. control