



The specialist for industrial buildings.

TIROLPACK GMBH

INSIGHT



Cheese production is a well-rounded affair with IE Food.

Ten alpine dairies in Tyrol have joined forces under the name TirolPack to prepare their cheese specialities for shipment. At the new facility in Schlitters in the Zillertal valley, up to 10,000 tons of cheese made from high-quality hay milk and organic hay milk are to be cut and packaged each year: as pieces, wedges, slices or grated cheese. Each of the ten alpine dairies, which are supplied with milk by 1,500 small farms, will continue to produce and market their products independently.

// Nobody plans to fail, but most people fail to plan! A well-planned and constructed modern packaging and cutting plant for cheese, designed and built by IE Food. //

Burkhard Beissert, Managing Director



PLANNING AND CONSTRUCTION PERIOD

- › 1½ years, 2016–2018

CONSTRUCTION SCOPE

- › Floor space: 5.170 m²
- › Total built-up area: 4.257 m²
- › Gross volume: 20.000 m³

INVESTMENT VOLUME

- › Approximately EUR 16 million, including plant engineering

SERVICES PROVIDED BY IE

- › Feasibility study
- › Logistics planning
- › General building planning
- › Operations planning (processes/plants)

RECIPE FOR SUCCESS

- › Designed from the inside out
- › Comprehensive industry knowledge from IE Food
- › Hygiene expertise in the food sector



TirolPack faced several challenges: How could the many components be brought together to form a coherent whole? How should they be arranged within the building? How should operational processes, personnel, and material flows be planned to avoid conflicts? How could the hygiene zones be integrated in a meaningful way? Instead of dealing with different suppliers for individual functions, they entrusted the entire project to IE Food for planning. TirolPack was impressed by the industrial construction specialist's holistic approach to the food industry: IE Food is responsible for the engineering of the new production site as well as the architecture and general planning.

Success factors

1 From the inside out.

At IE Food, planning is consistently carried out from the inside out. This means that planners first focus on the core of the business: the processing. From this starting point, the ideal operational layout is assembled layer by layer, from the processing to logistics, hygiene, media supply, and storage technology to the building structure. The goal is perfect process flow: production lines should be supplied via the shortest possible route.

2 Plan and execute.

In the first step, IE Food analyzed the necessary process flows and defined them together with TirolPack. The challenge: The alpine dairies produce many different types of cheese and also deliver them in different ways – as whole wheels or blocks, each in different sizes. In addition, all alpine dairies have different requirements for the finished packaged product in terms of portion size, shape, and packaging. The planners at IE Food therefore visited all the alpine dairies and gained a detailed overview of all the raw materials and end products. Finally, five processing lines were developed with TirolPack in order to achieve the required production volume of initially 5,000 tons of cheese per year in the desired quality and in the appropriate packaging types.



3 A plan that works: the hygiene zone concept.

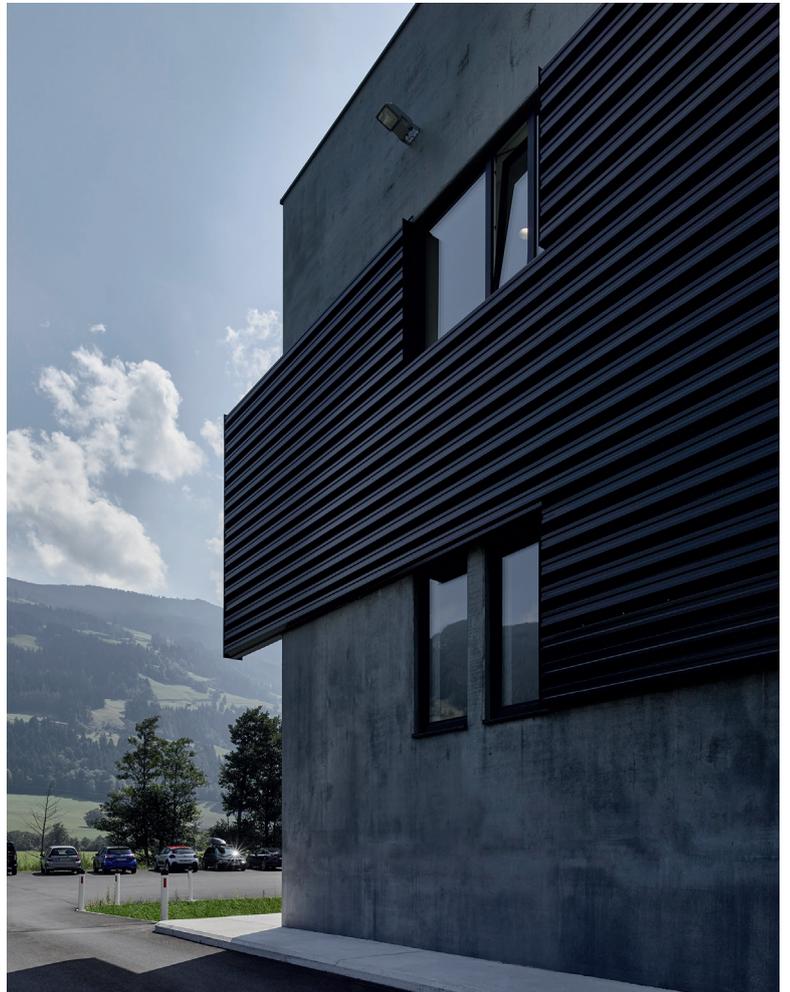
IE Food created a hygiene zone concept based on the process flow chart. Two different hygiene zones divide the entire operation. Zone 1 is where all processes with lower hygiene requirements take place: labeling and packaging of primary packaging in cartons, palletizing of cartons on wooden pallets, storage of raw and finished goods in cold storage, and logistics processes such as goods receipt and dispatch. The actual cutting, grating, and packaging process takes place in the hygienically demanding Zone 2, which requires controlled room and hygiene conditions due to the open product. The ancillary production rooms, where the cleaning and storage of production aids takes place, are also located in close proximity. There are only two points of transition between the zones: after the raw materials warehouse, when the whole cheese wheels and blocks are brought into production (this is also where the interface to the ancillary production rooms is located), and after completion of the first packaging stage, when the cheese is already hygienically packaged in its primary packaging.

4 Ensuring everything runs smoothly: spatial and functional relationships.

In the third step, IE Food created a diagram of the spatial and functional relationships. IE Food planned the routes for TirolPack consistently in line with the hygiene zone concept – down to the smallest detail. The routes taken by employees working in hygiene zone 2 do not cross those of their colleagues from zone 1 at any point. In addition, staff can only access zone 2 via precisely defined routes. Hygiene requirements are incorporated into these routes and employees are guided through these stations.

5 Efficiency with structure: the plant layout.

IE Food only created an operational layout in the fourth step. The final choice of building structure was ultimately made together with TirolPack, based on predefined evaluation criteria. When making the decision, it was just as important to consider the subsequent operating costs as the pure investment costs. The construction standards are based on the engineering for the processes, the hygiene zone concept, and the specification of room conditions such as temperature, humidity, air exchange rate, etc. IE Food adapted the technical equipment and the standard of fit-out to the requirements in each area. This resulted in a targeted, economical solution.



**We are the IE Group:
Your specialist for industrial
buildings.**

We plan, design, and construct industrial buildings. Our goal is to maximize the efficiency of your production - with the help of industrial buildings that are perfectly tailored to your manufacturing processes. We work in manageable and therefore effective teams of industry experts whose motivation and initiative you can rely on. Because at our company, all employees are involved in the business. Of course, we also give you guarantees on costs, deadlines, and quality. **IE Food, IE Plast, IE Life Science, and IE Technology** are part of the IE Group, which has been in the market since 1966 and offers the necessary financial backing - even for large construction projects.



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**SECURITY THROUGH
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