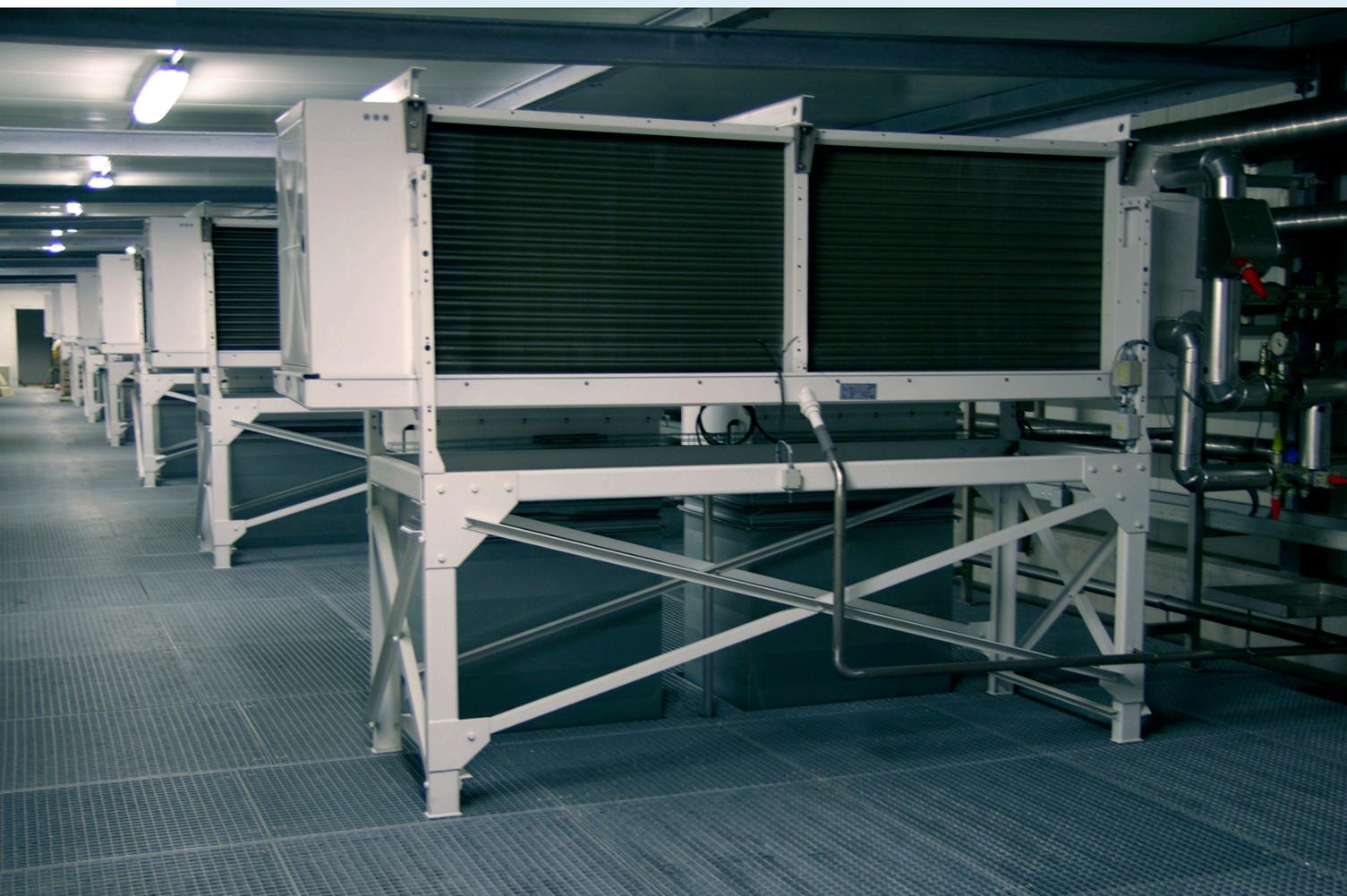


New concept: penthouse coolers

Bauer Frischdienst is open for new approaches.



Line of Business:	Industrial Refrigeration
Application:	Dairy Product Cooling
Country / City:	Germany / Wasserburg
Fluid:	NH ₃
Product:	Wall/ceiling unit cooler AGHN (S-AGHN Penthouse)

Tradition and progress in harmony with each other

Tradition and continuity do not necessarily mean a lack of development capability. This was proven convincingly by Bauer Frischdienst (a private dairy) when it came time to find a suitable cooling concept for the new storage warehouse to be built in Wasserburg am Inn.

The company TH. WITT Kältemaschinenfabrik GmbH was hired to find a way to implement the cooling requirements in a manner which suited the architectural solution already found. For the cooling area, the planning envisaged a large storage building with three temperature

zones, which did not have to be sharply separated from each other. For the refrigeration and air-conditioning components, quality products from the company Guntner were chosen.

Erwin Stollmann, refrigeration systems engineering expert at WITT, explains: "Bauer Frischdienst made it clear from the start that they didn't want a conventional concept with the evaporators mounted under the ceiling and the piping routed between the units. They wanted something innovative." Together with a consultant from the company Guntner, Erwin Stollmann visualised the alternative approach.

This new concept involved so-called penthouse coolers, already widely used in the American market. This means that the evaporators are not housed in the cold room itself, but in a separate compartment on the roof of the building. The air is blown through ducts into the building's interior.

What at first sounds like an unnecessary additional investment actually brings numerous advantages.



The units are easy to install.

Advantages for the building

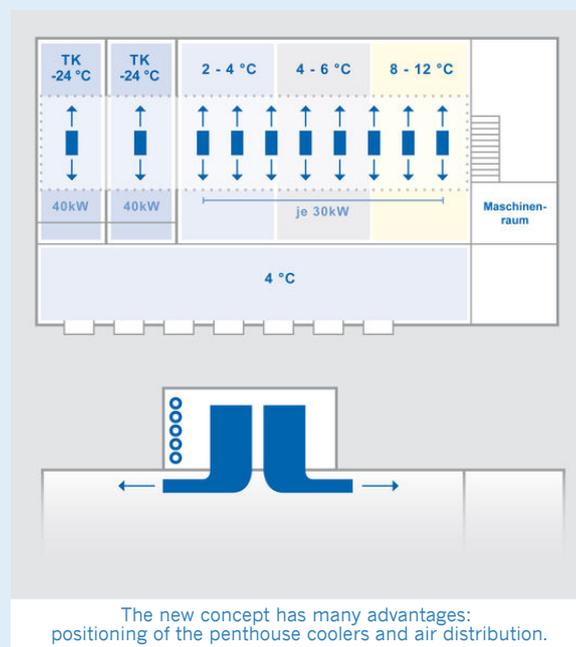
As the evaporators were no longer mounted below the ceiling, the building height could be reduced by about 50 cm without changing the storage capacity, which more than made up for the additional costs of constructing the compartment (penthouse) on the roof.

Advantages for the installation work

For a conventional installation, the units would have had to be individually fastened to the ceiling at a height of eight metres, which would have entailed significantly higher costs and, above all, would have taken longer.

With the penthouse construction, the units could simply be lifted onto the roof with a crane. Once the units were installed, the walls and roof of the penthouse structure were built around the units.

The piping is also much easier to lay, as instead of being laboriously installed overhead, it is simply routed along the side of the penthouse. Moreover, the material costs and installation costs of impact protection are also saved: as the piping is situated outside the hall, it can no longer be damaged by forklifts. Also, the drip water drainage is installed in the penthouse and no longer runs through the building.



The new concept has many advantages: positioning of the penthouse coolers and air distribution.

Advantages for operation and maintenance

The piping is easily accessible; it is also simple to carry out work on the units. In addition, escape routes are perfectly integrated, as the penthouse has several doors to the roof, so personal injury in the event of a leak is practically ruled out.



Above all, operations in the building are not disturbed during maintenance and servicing: the units can be accessed easily via the assembly aisle, there is no need for a hoisting device, normal work processes in the building are not interrupted and the forklifts can still access the aisles.

In short, all challenges were met by means of close cooperation between WITT, Güntner and Bauer. As Erwin Stollmann points out: "We found the optimal system solution for the situation at hand!"