

Clearing condensation to show frozen foods in the best way

Battermann, Germany





Battermann GmbH, a supplier of gourmet frozen food, is particularly focused on first class fish and meat products. Situated between Cologne and Bonn in Germany, Battermann GmbH fulfils the role of a gastronomy partner with fast and exact deliveries, while the customers that prefer to pick up the food products themselves enjoy a highly qualified service from the employees in the new Bornheim facility. To present the products in the most appealing way, all cold and frozen products are accessible for the customers in attractive display cases, and these cases must be crystal clear.

Ice and condensation in the cases was a problem, so Battermann GmbH had to invest in a solution. Munters had the right technology for these specific needs. The business decided to install the Munters IceDry solution, winner of the European FoodTech Award, which is used to prevent ice and condensation forming in the cold store. This technology saves significant energy on the refrigeration system and ensures pristine product viewing in display cases.

Case study:

Benefits achieved by installing Munters ML desiccant dehumidifier

Advantages:

- No ice build-up on doors, ceiling, products and slippery floors
- Clear and appealing display of frozen food products
- 30% reduction of energy consumption on refrigeration system
- The packing is keeping its shape and stability, and labels maintain their readability.



The employees working in the -15°C cold store enjoy safe working conditions with dry floors free of ice, no formations of fog or ice build-ups on doors, products and ceiling.



A challenge to avoid condensation

The display cases for the frozen products opens up directly from the shop into the cold store. With a temperature in the cold store at -15 °C, it would be a challenge to keep the glass doors from getting steamy when the cold air meets with the warmer air from the shop when the doors are open.

Transportation of goods in and out of the cold store is also partly done via the shop, which requires the big automatic door to open several times a day. Battermann GmbH was aware that the humidity around the cold store had to be controlled to avoid problems caused by the difference in temperature and water content in the cold store and in the shop.



Energy efficiency highly prioritized

Having a reputation for optimal energy consumption and efficiency, Munters was asked to provide the most energy efficient solution possible for this new building. Munters designed its award-winning Ice Dry solution for the 2,000 m³ cold store based on a desiccant dehumidifier type ML1100 with a heat recovery unit.

The dehumidifier was placed in the shop area 3.5 m above floor level and adjacent to the automatic door to the cold store. A duct leads into the coldstore and the dry air is exhausted through duct openings placed vertically alongside the automatic door.

The ML1100 dehumidifier has a nominal air flow of 1100 m³/h and is in continuous operation. This series of dehumidifiers is already factory equipped with an internal heat recovery sector to reduce heat for regeneration of the desiccant wheel.

In addition to this energy optimization, this ML1100 solution at Battermann GmbH is equipped with a heat recovery unit between the process air and the supplied dry air. This means the cold process air energy is partly returned to the dry air side, reducing the costs for cooling of the cold store. The saving on the refrigeration system will be equal to 16,000 kW/year, securing a 3 year payback time on the heat recovery unit.

Would you like to find out if Munters has a solution for your company too? If so, please visit our website, www.munters.com/food

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