

Fighting condensation at frozen vegetable producer

Penguin Peas, Belgium



Penguin Peas is based in Flanders, Belgium and is known throughout the world for their frozen vegetables.

Problems with condensation

Penguin Peas has more than 3,000 product lines today, freezing fresh vegetables for culinary preparation.

Penguin approached Munters with two important projects for their sites in Westrozebeke and Langemark. In Langemark, the problem was condensation formation. Here, the fresh vegetables cross in bulk through a tunnel in which the temperature borders -30°C .

At the exit of the tunnel, the temperature is $+10^{\circ}\text{C}$. The difference in temperatures caused condensation on the ceiling, ground, products and packing, with the resulting contamination risk. Another problem was condensation forming on vegetables. Peas froze again during storage in freezing rooms, which caused the peas to weld together in blocks.

Case study

Penguin Peas fights condensation with Munters support.

Advantages:

- Eliminate frost on doors, floors, walls and products
- Increase safety
- Reduce fogging and blinding strip curtains
- Reduce defrosting and prevent condensation
- Increase production capacity



Constant moisture control

Munters solved the problem by placing a desiccant dehumidifier at the exit of the tunnel. This dries room air. Munters brought back the dry air to the coldest place of the room, just above the exit of the freezing tunnel. The installation provides perfectly dry air, making it possible for Pinguin to store vegetables under ideal conditions – without condensation.

Munters installed a second dehumidifier above the outside door. When the door is opened, warm air penetrates the cold space. The Munters dehumidifier prevents the formation of condensation here.

Now Pinguin does not have any wet puddles on the ground, which is much more hygienic. "The advantages of the installation are obvious", explains Koen Dejonghe, at Pinguin. "The ground is no longer slippery from condensation. We also increased the quality of the products. The vegetables no longer freeze together."



Munters dehumidification system fights frost

Another advantage is dry air prevents frost on the refrigerating elements. The investment in the dehumidifiers made it possible to obtain a significantly higher and more constant output from the freezing tunnel. "Before, we had ordinary driers, but they did not have the same effect," said Dejonghe.

At Westrozebeke, Pinguin asked Munters to eliminate frost formation in the freezing rooms. In the workshop, the frozen vegetables were passed along a conveyor belt which carries them through various stages of packing. The conveyor belt passed through warm and cold production areas. Frost forms on the ceiling and ice on the cold store.

Constant moisture control has many advantages for Pinguin. The absence of condensation ensures a dry environment and increases the quality of the products and safety in the factory. But the principal advantage is that Pinguin can maintain a constant freezing temperature.

When there is ice formation on the freezing elements their capacity decreases quickly. "It's not just freezers that we have to protect," continues Koen Dejonghe. "We have also carry out handling in our freezing rooms. Thanks to Munters, we do not have any frost on the machines, conveyors or any other material, which increases output," concluded Dejonghe. Pinguin also decided to fight the formation of frost in its new automatic storage by using Munters.

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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