

Reference Taco Agro

Maximum flexibility in cooling, drying and freezing



Request by Taco Agro

How can we simultaneously expand the cooling capacity, store leek and have the option to store other vegetables and potatoes?

Taco Agro, the vegetable grower for the food processing industry, asked for cold stores with a big capacity, suitable to store different kinds of vegetables. In response to Taco Agro's request, ENGIE Refrigeration built five sustainable and closed cold stores. The company can now benefit from drying and storing products independently of the outside air. Whereas two cells are suitable for condensation drying, Taco Agro can cool its open-ground vegetables with the other three cold stores. The result? Maximum flexibility!

In the past, Taco only grew potatoes and vegetables. In 2008 the company also started with the storage of products. "At a certain moment, we wanted to expand our cooling capacity. We also wanted to store



leek and have the option to store other vegetables and potatoes", Sander Tacken, Director of Taco Bedrijven, says.

Different products, different storage conditions

Since the optimal storage conditions for potatoes, leek, and other vegetables are very different, ENGIE installed a couple of



programs: one for leek, one for potatoes and one for other vegetables. The most optimal storage conditions are included in these programs, such as the optimum temperature, air humidity, and CO₂ concentration. Taco can now easily set up the right storage conditions if it wants to preserve another product in the cold store.

Combine a standard program with flexibility

Having an automated program does not mean that Tacken no longer has to check

his products. "But we do not want that either. The programs have been set up to ensure that our products are kept in good condition, we will always keep an eye on it and adjust conditions when necessary. After all, the quality of a product heavily depends on the storage conditions at the right time. In my opinion you cannot depend on an automated process only. The combination of a program with the possibility of certain flexibility is ideal for us.

Condensation drying of potatoes

Two cold stores are set up for condensation drying. It turns out to be a great catch: in a cold store with 600 boxes, the new installation extracts up to 2,000 liters of moisture per 24 hours. "We used to dry our potatoes outside before they went into the cold stores. That made us highly dependent on weather conditions.

Thanks to the condensation drying system, we can even put wet potatoes into the cold store. In here we quickly dry the adhering moist from the potatoes. After the drying process, we adjust the storage conditions

to maintain the high quality of the product as long as possible. This way we ensure optimum return."

Expansion

The cooling, freezing and drying installations have been running since November 2017. The natural refrigerant ammonia is a sustainable and future-proof alternative for synthetic refrigerants which were used by the previous and smaller installation. By using residual heat from the cooling process for heating floors and workspaces, Taco's processes became more sustainable as well. Tacken has added a number of options to his initial request for the expansion of his storage cells. In the past year, for instance, ENGIE built a buffer tank with an ice-water cooling system to wash the cultivated vegetables.

Benefit of flexibility

The season has not come to an end yet, but Tacken already calls the ENGIE solution a big success. "The past year, we have immediately benefited from the desired flexibility: although the potato yield was a bit disappointing, we could now use our cold stores to preserve carrots. He is also excited about product quality. "Storing products without weight loss is impossible. However, we realized minimum weight loss and our products remained in good quality, with no significant problems at all. It enables us to wait for the perfect trading moment and to always supply customers with the best quality products.

Sander Tacken,
Director of Taco Bedrijven:

"This results in an optimal return."



ENGIE solution

Five sustainable and closed cold stores for drying and storing independently of the outside air.

More information:

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