

One company - four refrigerating plants

The company Cooperl is Europe's leading pork producer.



The company in La Rochetoirin needed an additional cutting room.

Line of Business:	Industrial Refrigeration
Application:	Food Cooling, Meat Product Cooling
Country / City:	France / La Rochetoirin
Fluid:	NH ₃ , Glycol, R404A
Product:	Ceiling unit cooler DHF, Wall/ceiling unit cooler GHN, Blast freezer GFN, Drycooler (V-shape) GFD, Condenser AGVH

Sustainability in meat production: This means that the production of pork specialties is not restricted to selecting high-quality meat and to process it according to the best recipes. This concept already starts with the animal feed production and ensures that high-quality standards are observed at every production step: By taking measures for protecting the environment, like water management, by using meat from selected breeding stocks and by working with quality conscious contractors. The meat processing plant in La Rochetoirin, situated north of Grenoble in the region Rhône-Alpes, was to be expanded with an additional cutting room. The company AXIMA was commis-

sioned to provide the refrigerating equipment. The work on site was monitored by engineering company Amiot Froid Conseil and amounted to a total of 1.5 million euros.

The newly equipped cutting room started operating September 2007 and has a refrigerating capacity of 1,310 kW. The units for refrigeration and cooling provided by AXIMA shall improve the air quality in the workrooms, processing, cutting and storage rooms and save energy at the same time.

AXIMA has provided refrigeration equipment for four different installations:

- two installations for refrigeration, with a refrigeration capacity of 1200 kW, with ammonia as refrigerant and glycol as coolant (cooling from -4 to -8 °C). Purpose: Cooling and maintaining the temperature for
 - workrooms between +1 and +4 °C, cutting rooms +1 °C
 - cold rooms between +1 and +8 °C
- one installation with 35 kW for two blast freezing rows that cool the meat to -20 °C, so that a crust is formed on the pieces to prevent evaporation and mass loss. In this installation, R404A is used as refrigerant.
- an installation with a capacity of 75 kW with the refrigerant R404A that cools a freezing tunnel and a cold store (-25 °C).



The drycoolers have been mounted on the roof.

All heat exchangers have been provided by Güntner. This includes all evaporators in the workrooms and cold stores that were mounted in AXIMA casings and equipped with G4 and F8 filters for eliminating microorganisms.



The installed units optimise the air quality in the work and storage rooms.

The air-cooled condensers and drycoolers were also furnished by Güntner. The drycoolers are equipped with a spray system to cover peak loads at ambient temperatures above 31 °C. Air-cooled condensers were chosen to exclude any risk of legionella formation.

To prevent the intrusion of impurities, the air-conditioning plants create an overpressure in several rooms. The ceiling of the workrooms are equipped with textile hoses. The use of this type of distribution hoses ensures



In the storage rooms, slimline unit coolers are in use.

- a homogeneous air distribution and circulation
- better working conditions, because there are no draughts or air-blow noises
- a hygienic environment



Textile hoses provide a draught-free cooling.

A central technical monitoring and control system was implemented for preserving the high hygiene standards. This system ensures that the climatic conditions in the different rooms are strictly observed and it provides additionally for the follow up of the hygiene measures.

AXIMA has installed a heat recovery system for saving energy that uses the waste heat of the compressors and the condensers to heat water for sanitary facilities and for cleaning.

COOPERL HUNAUDAYE

The farmers' cooperative COOPERL HUNAUDAYE is specialised in pork production and slaughtering and has its headquarters in the Lamballe region in Brittany. The company has a turnover of approximately 1 billion euros and employs 2,600 people. The units for refrigeration and cooling provided by AXIMA shall improve the air quality in the processing, cutting and storage rooms and save energy at the same time. In total, a refrigerating capacity of 1310 kW is necessary.