

Job Report

ARCTOS supplies refrigeration for freezer factories

NH₃ deep freeze stockroom

Freezing food has always been a method of preserving food. Nowadays this method is used more and more as it enables consumers to eat their favourite food at home at any time.

Both as deep frozen fresh food or ready-to-serve meals, frozen food has become a regular and essential part of our eating culture.

ARCTOS offers the appropriate technology, be it in pre-cooling and freezing of fresh-made meals, fresh fruit, meat, fish or vegetables for interim or final storage of the products in appropriate deep stores.

Do not hesitate to contact ARCTOS for further information.



Example NH₃ refrigeration systems: Freezing and deep freeze storage of fish

In the fish processing industry, fast and continuous deep freezing and storage play an important role as marine food is very prone to go bad or lose quality.

The refrigeration plant supplies a cold store (5°C), two deep freeze stores (-20°C) and six plate freezers (-38°C).

In the cold store fresh fish is stored and filleted. In the plate freezers the prepared fish is frozen in blocks which are stored in the deep freeze store ready for distribution or sale.

What are plate, continuous-flow or helix freezers used for?

Freezers are used for quick freezing of products, also known as shock-freezing. This method of freezing is carried out within minutes and keeps the cell structure of the product intact, as only minute ice crystals are formed in the product. So immediate shock freezing, in the packing, ensures a high quality product.

Plate freezers are available in standard design or custom-made for individual requirements. They can be either horizontal or vertical.



Above:
NH₃ liquid separator outside the
factory building



right:
DUO screw compressor unit (in front)
two reciprocating compressors (behind) in
the plant room

Technical data

Refrigerant	NH ₃ (R717)
Refrigerant charge	5500 kg
NH ₃ evaporating temperature	-40°C / -10°C
NH ₃ condensing temperature	+32°C
Cooling capacity Q ₀	500 kW
Compressor manufacturer	GEA Grasso
Compressor type (low pressure side)	DUO screw compressor unit
Compressor type (high pressure side)	reciprocating compressor