

Job Report

Fresh fish for the dish – thanks to ARCTOS

Multi temperature refrigeration plant using R404A, air-cooled

For the food and fish industry continuous low temperatures for processing and cooling are very important. In order to meet this demand, reliable refrigeration is necessary. ARCTOS designs, constructs and commissions custom-built refrigeration systems for all applications.

Example: shrimp-peeling factory

Ten processing and storage rooms are maintained at different temperatures by the air-cooled multi temperature R404A refrigeration plant within the temperature range -20°C to $+10^{\circ}\text{C}$. In the various rooms shrimp meat is sorted, packed, stored and shipped. The refrigeration plant is also used for air conditioning.

Due to space restrictions, the refrigeration system is installed in a 40 ft container which is located outside the building avoiding extensive construction work on site.



R404A evaporator in the cooling rooms

Indoor humidity and water vapour from the stored products result in icing of the evaporator fins. This icing reduces their cooling capacity and must be regularly removed. The selected evaporators have an integrated defrosting-on-demand control system integrated. Thus defrosting starts automatically when necessary ensuring optimum cooling of the rooms.



R404A multi temperature refrigeration plant integrated in a 40 ft



Technical data

Refrigerant	R404A
Evaporating temperature	-8°C
Condensing temperature	+45°C
Heat rejection	air-cooled
Cooling capacity Q_0	312 kW
Compressor manufacturer	Bitzer
Compressor type	4 parallel screw compressors
Container	40 ft container
Vessel for the removal of oil	
Integrated control cabinet	