



# State-of-the-art cooling for modern cold storage

Hyundai Logistics Centre, South Korea

Case Story



**Alfa Laval's largest-ever industrial refrigeration air cooler order means superior performance and reduced costs for the Hyundai Logistics Osan Centre.**

The logistics centre, which is the size of 28 soccer stadiums, serves as a hub for the 30 smaller logistics centres run by Hyundai Logistics in and around the Korean capital, Seoul. This massive warehouse, logistics and storage centre, which is located in Gyeonggi Province, includes a dedicated facility for storing a variety of frozen foods, in which the temperature crucially

needs to be maintained at -25 degrees Celsius. The logistics centre also has the capacity to store extensive volumes of fruit and vegetables at the required temperature.

## Unique air distribution

In search of the optimal cooling solution for this demanding and ambitious project, Hyundai Logistics turned to Alfa Laval. ByungKook Jeon, Refrigeration Sales Manager at Alfa Laval Korea, who was responsible for the project from Alfa Laval's side, says: "The blow-throw unit coolers we supplied to the Hyundai Logistics Osan Centre have a unique

## Fast facts:

### The challenge:

To supply a refrigeration system for Asia's largest logistics centre that enables the storage of frozen foods at a steady -25 degrees Celsius, plus the refrigeration of large amounts of fruit and vegetables at a specified temperature.

### The solution:

- The installation consists of 184 Alfa Laval THOR blow-through unit coolers
- Delivers regulated air flow up to 65 meters
- Reduced costs for customer
- Visit to European installation showed that Alfa Laval's technical solution was best from performance and quality perspectives
- Local presence ensures fast and professional response.

ability to distribute air evenly throughout a large facility. This is crucial for ensuring reliable refrigeration.

"The diffuser on the Alfa Laval Helpman THOR units – the industrial cooler type we selected for this project – can deliver regulated air flow up to 65 meters away from the cooling unit. This is a key feature when seeking to minimise temperature variations in a cold-storage facility of this magnitude."

#### Reliable partner

The installation of 184 Alfa Laval Helpman THOR units at the Hyundai Logistics Osan Centre represents the largest industrial refrigeration air cooler order to date for Alfa Laval. "Alfa Laval is a partner that can be relied on to take responsibility for the important aspects of refrigeration and frozen storage," says Hyundai Logistics' Utility Manager, OongJoon Lee. "Alfa Laval provided a quick response, along with accurate case analysis. In addition, we can know that we will receive active support from Alfa Laval to provide accurate information about the latest global trends in the market."

#### Better performance, lower costs

ByungKook Jeon says that at first there were a lot of different opinions on how best to build the refrigeration system for Korea's largest logistics centre. He goes on to explain that, while most engineers favoured a refrigeration solution based on a textile duct system – widely accepted as a simple solution for distributing air across large cold-storage facilities – Alfa Laval was convinced that its Helpman system would offer superior performance and reduced cost.

To demonstrate the superior capabilities of the system, Alfa Laval organised a

## Product facts



#### Alfa Laval Helpman THOR

Alfa Laval Helpman THOR is an industrial heavy-duty air cooler with a copper/aluminium coil block and a capacity of 5 to 123 kW. Available in blow-through (B) and draw-through (Z) design, all THOR models have been highly standardised in construction and dimensions, while maintaining flexibility in fin spacings, coil construction and circuiting design.

**Evaporating temperatures:** +5 to -40 °C

**Refrigerants:** all H(C)FC, brine, CO<sub>2</sub>

**Nominal capacities:** 5 - 123 kW (Eurovent SC2, higher on request)

**Air volume:** 4,000 up to 68,000 m<sup>3</sup>/h

trip to Europe where customer representatives were able to witness the performance of the refrigeration solution at three fruit storage centres.

#### Shorter payback time

"Having seen the Alfa Laval coolers at work in three large cold-storage facilities, the customers were satisfied that Alfa Laval could offer the best solution, in terms of both performance and quality," says Jeon. "I also believe our quick technical support, as well as the documentation we provided to show the difference in maintenance costs and payback time when comparing a textile duct product with our solution, played a major part in sealing the deal."

"I recently received a temperature measurement report from the cold storage unit at the Osan Center," he continues. "According to the report, room temperature variations are better than expected and the customers have confirmed that they are satisfied."

## Customer facts:

Hyundai Logistics is the logistics arm of the South Korean Hyundai Group. Established in 1988, the company is headquartered in Seoul, Korea. It offers ground and air transportation, along with South Korean rail and road freight services, international trade management, customs brokerage, consulting and supply chain design, logistics and distribution, cargo containing, shipping, and a variety of financial services.

#### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)