



# Industrial Refrigeration Solutions



## Industrial solutions for wide-range applications

Our industrial cooling solutions allow a wide range of applications: large rack units with semi-hermetic or screw compressors, using natural refrigerants like ammonia and CO<sub>2</sub>, to serve various applications like refrigerated stores for fruit and vegetables, meat and curated meats, fish, milk, yoghurt, ice cream, logistical centers, clean rooms, catering and other special applications like ice rinks and hockey rinks.



## Refrigerated warehouse

The evolution in the food industry also involves the correct and rational logistics of transportation and distribution. Thanks to the experience we have built up over many years, we are able to provide solutions in the field of large dedicated refrigeration systems.

We offer refrigerated warehouses with temperatures ranging from  $-30^{\circ}$  to  $+24^{\circ}\text{C}$  using ammonia or green gases, in turn-key solution with optimized costs and with minimum energy consumption.

The plants are controlled and programmed by a central system that activates operating times, temperatures, priorities and alarms for a simple, safe and reliable management.

## Pharma warehouse

The healthcare industry need accurate storage conditions for vaccines and medicines and Industrial Refrigeration plays an important role at manufacturing plant and central warehouse level. There are critical temperature ranges for pharma refrigerated warehouses ranging from  $18\text{-}22^{\circ}\text{C}$ ,  $2\text{-}8^{\circ}\text{C}$  and  $-18$  to  $-22^{\circ}\text{C}$  and sometimes freezing rooms @  $-30$  to  $-40^{\circ}\text{C}$  for gelpacs and/or reagents. We provide turn-key solution using green refrigerants and including data logging and remote management with assured energy optimization.



## Catering services

We have a great experience in the whole cold chain applied to the production of prepared foods, starting from the preservation of food until the different stages of processing in hygienic air-conditioned rooms, from the reduction of temperatures to the freezing and from the sterile packaging to final refrigerated automatized logistics platforms for distribution. In plants with higher hygienic standards, we install air clean refrigeration sanitation systems, which can be completely cleaned and sterilised.

Along with the requirements of the products, we also take care of the comfort of the operators with special air diffusion systems that avoid airflow and turbulences.





## Fruit and vegetables

From big fruit and vegetable cold storages to controlled atmosphere solutions like ULO, to the controlled monitoring of fruits and vegetables metabolism by reducing the production of ethylene by the fruit, to the blocking the degradation of chlorophyll (green color), delaying the pectin hydrolysis (hardness of the pulp), and slowing down the demolition of vitamins and acids, we can design differently composed systems with different features according to the required purposes.

## Meats processing

The slaughtering and meat processing centers require powerful and safe systems, without problems resulting from power shortages, gas leaks or malfunctions.

We manufacture ammonia, ecological gases and glycol refrigeration plants, fast blast chilling and freezing tunnels, conservation cooling rooms maintaining the best organoleptic qualities of the meat with weight loss control. In the deboning and packaging areas, washable and sterilizable air conditioning systems are installed with rapid room drying systems for room(s) sanitation.



All these are in compliance with CE and HACCP standards with monitoring and recording of temperature parameters.



## Cured meats processing

Producing and seasoning cured meats according to the best traditions is an art; making plants that best reproduce the ideal drying and seasoning conditions is a profession that we have learned with years of experience.

Our drying, maturing and seasoning systems for cured meats equipped with enthalpy functioning devices (with intelligent use of the outside air), clean rooms for packaging, the high quality of the materials, used and the high level of hygiene of the plants that

can be washed and sanitized easily are appreciated by those who produce high-end cured meats.

All systems are computerized, with customizable cycles and recipes and recording of thermohygrometric parameters.



## Milk and dairy products

The temperature treatment of drinks, and in particular of milk and dairy products requires large quantities of cold at low costs.

We design and manufacture, specifically for this sector, refrigeration plants with ammonia and ecological natural gases with high efficiency and minimum management costs as optimum solutions for the entire production plant.

## Fish and seafood products

It is extremely important to obtain perfect preservation and to keep the original freshness of fish and seafood products.

We produce refrigeration systems for fish and seafood, after freezing tunnels, blast freezers, spiral freezers and cold rooms to store frozen products, conditioning for fish processing rooms with air ventilation and filters. All systems are made of materials that are suitably corrosion-resistant that conform to EC standards.



The choice of delegating the design, implementation and construction of the system to a specialized team follows the company logic to allocate specific skills in order to create customized solutions that fully satisfy customers' requests.



## Maturation of cheeses

The air conditioning of a dairy, including the production and processing rooms, is carried out with highly hygienic systems that can be washed and sanitized and with logical flows of air circulation designed to avoid cross-contamination. The maturation of cheeses has its roots in ancient traditions.

Traditions that we reproduce in compliance with the ideal conditions of maturation and aging for the various types of cheese (fresh, with herbs, goat,

"muffettato" up to Parmesan and "pecorino") avoiding unwanted mold, bacteria, weight loss and waste. On these principles, our Airclean refrigeration systems, which can be washed and sanitized, were developed.





## Process liquids and gas compression

We design and manufacture refrigeration systems for the process fluids cooling with applications in the petrochemical field and for the natural gas compression (Oil & Gas). The equipment is sized and manufactured according to the customer's needs and in compliance with rigorous technical specifications and regulations in force in the installation areas. We pay particular attention to the compression plants installed upstream of gas turbines and dedicated to the production of energy and normally based on screw compression units.

## Ice skating and hockey rinks

We design and manufacture refrigeration and air conditioning systems for arenas and ice stadiums with particular attention to hockey, short-track, figure skating, curling and speed sports. The know-how acquired in over 40 years of experience has allowed the refinement of technologies that make these systems reliable, safe and easy and economical to manage.



The construction of important Olympic Stadiums and Arenas for the World Hockey Championships placed us among the European companies with the most experience in this sector.

The systems are managed through a SCADA system with specially designed and programmed software that allows you to monitor the functionality and parameters of all the equipment even remotely, to supervise the climatic and temperature conditions of the ice and the environment by checking the status and technology plate performance.

The entry into the Daikin world has made it possible to integrate refrigeration and air conditioning to achieve a synergistic installation with significant energy savings.



### Daikin Air Conditioning Saudi Arabia LLC

Riyadh | Sheeha Centre, Sahafa Area, King Abdulaziz Rd  
Jeddah | 6th Floor, Al Taher Tower, Prince Saud Al Faisal St., Al Rawdah  
Dammam | 4th Floor, Al Shatea Business Center, Prince Mohammed bin Fahad St., Ash Shatea District

☎ (Toll-Free) 800-111 0909  
✉ info@daikin-ksa.com  
🌐 www.daikin-ksa.com

### Daikin Middle East and Africa FZE

PO Box 18674, Plot MO0426,  
JAFZA North, Jebel Ali Freezone,  
Dubai

☎ (Toll Free) 800-DAIKIN (324546)  
✉ info@daikinmea.com  
🌐 www.daikinmea.com

### Daikin Air Conditioning Egypt S.A.E.

Post Code 11728, Maadi Nile  
Corniche, The Tower of Foreign  
Countries Workers

☎ +20 2 2526 3164  
✉ info@daikinegypt.com  
🌐 www.daikinegypt.com

### Daikin Trading and Air Conditioning Solutions WLL

PO Box 14130, Office 402, Building  
No 14, Al Saad St., Doha, Qatar

☎ +974 4 406 9700  
✉ info@daikinqatar.com  
🌐 www.daikinqatar.com

### Daikin Nigeria and West Africa Ltd.

Office 332, Regus Mulliner Tower,  
Ikoyi, Lagos

☎ +23 4865421038  
✉ info@daikinafrica.com  
🌐 www.daikinafrica.com

The present publication is drawn up by way of information only and does not constitute an offer binding upon Daikin MEA. Daikin MEA has compiled the content of this publication to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin MEA explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication. All content is copyrighted by Daikin MEA.

### **DAIKIN MIDDLE EAST AND AFRICA FZE**

P.O. Box 18674, Plot MO0426, JAFZA North, Jebel Ali Free Zone, Dubai, UAE | Tel: +971 (0) 4 815 9300 | Fax: +971 (0) 815 9311  
E-mail: [info@daikinmea.com](mailto:info@daikinmea.com) Web: [www.daikinmea.com](http://www.daikinmea.com) Toll Free: 800-DAIKIN (324546)



DMEA21-084