

*Refta*<sup>®</sup>

Production catalogue

Unique Cooling Solutions

YOUR  
SUCCESS  
STARTS  
WITH  
REFRA

# | About us

Launched in 1994, Refra is a well-known manufacturer of refrigeration equipment in Europe today. Distinguished by a highly complex and unique offer of refrigeration products, the company can design and manufacture non-standard products, fully customized and completed according to customer requirements.

During the company's 20 years of operation, the Refra brand has established itself as one of the leaders in the European refrigeration market and has implemented many successful and complex projects. With long-term experience, the company's employees can offer impeccable dedication to customers, the most efficient solutions and the highest quality equipment. Refra has projects throughout Europe, Scandinavia and the Middle East.



ESTABLISHED IN 1994  
20 M TURNOVER  
**~30 YEARS OF EXPERIENCE**  
**PARTNERS IN**  
**28+ COUNTRIES**

**2 FACTORIES**  
250+ EMPLOYEES  
22 000 SQUARE METERS  
OF PRODUCTION AREA

## **UNIQUE PRODUCTS**

Refra is recognized as one of the most flexible manufacturers in the market. The non-standard, fully adaptive manufacturing sector is able to produce exceptional products that are fully tailored to the customer's needs.



## I High quality product

With long-term experience, the company's employees can offer impeccable dedication to customers, the most efficient solutions and the highest quality equipment.

“

For an installer, Refra is the best partner because of the various possibilities in terms of selection, customisation, components, etc. Units built on request give multiple advantages in terms of flexibility when installing and during operation. Because of their selection with knowledge and experience, the customer gets a high-end ready-to-use unit that complies with all European legislations & approvals.

**Chris Desmet** | CEO | Heytec

“

The directors of Absolutely Chilled have had an association with Refra for over 15 years and have always found their engineering knowledge and quality of product to be of the highest standard, for instance with their R290 heat pumps.

**Shane McKenzie** | Business Development Director | Absolutely Chilled Ltd





# | Go Green!

With the improvement of technical processes and growing awareness of environmental issues, Refra, like any other progressive business, strives to contribute to the reduction of pollution in the world. **As a result, more attention is being paid to natural refrigerants such as CO<sub>2</sub>, hydrocarbons, ammonia.**

Refra believes that ecological solutions are the future of production therefore, it is very important to lay the right foundation for a better tomorrow.

**In fact, we are proud to be the largest natural refrigeration manufacturer in the Baltic region.** We use only certified parts and ensure safety when producing organic products. We also ensure the energy efficiency of equipment sold in Europe.

Recently, we observed the increase in CO<sub>2</sub> and hydrocarbon product demand, and we are very pleased with these trends. Refra hopes that in the future the majority of the company's production will be made using natural refrigerants.






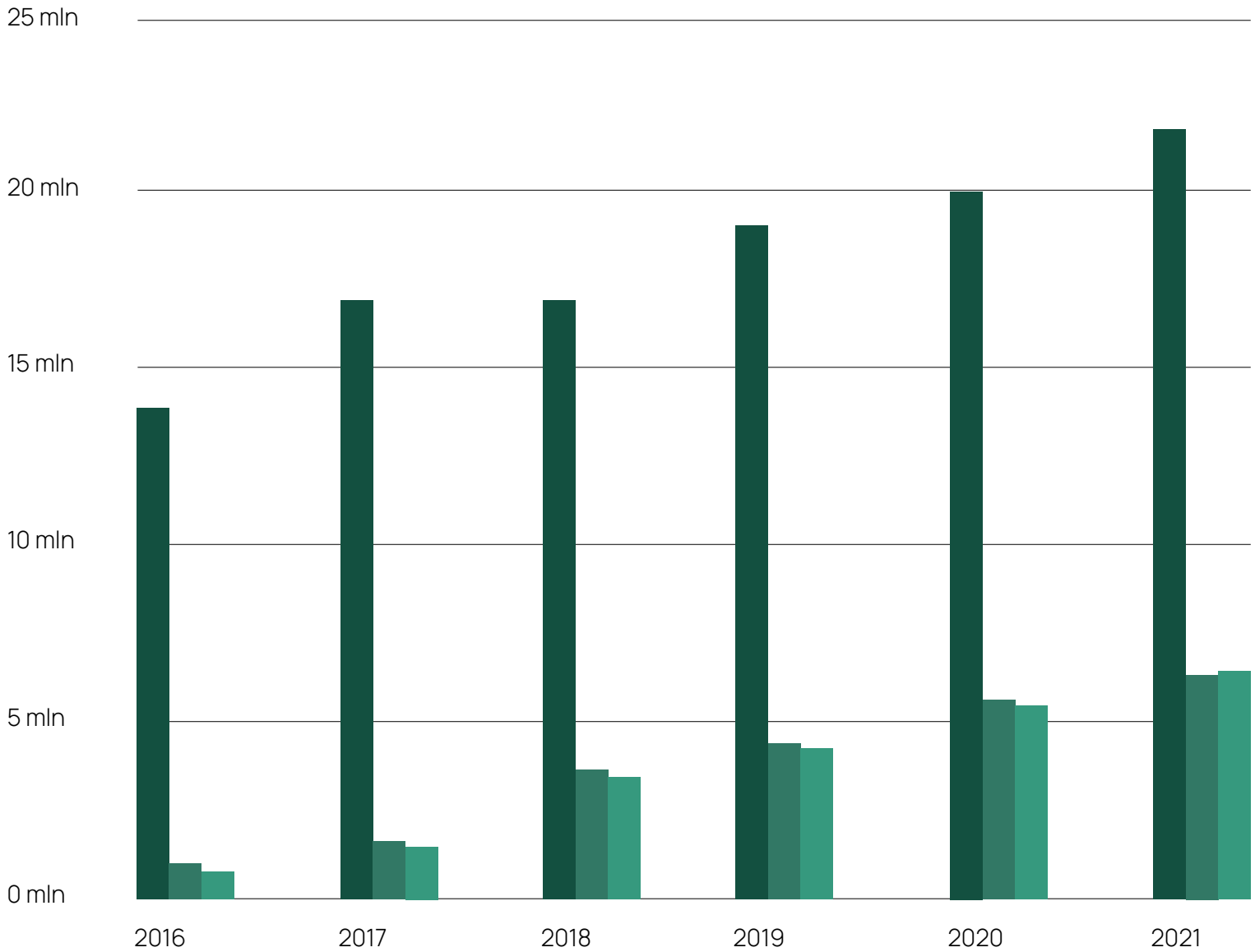
NH3

R744

R290

 Refra, like other progressive businesses, is working to help reduce pollution in the world, so it is paying more and more attention to natural refrigerants. Our green systems are actively replacing old ones with restricted refrigerants and saving our customers a lot of resources every year.

# Sales chart



Refra maintains stable revenue growth and increases turnover each year. The growth is visible both in the total annual turnover and exclusively in the field of CO2 sales.

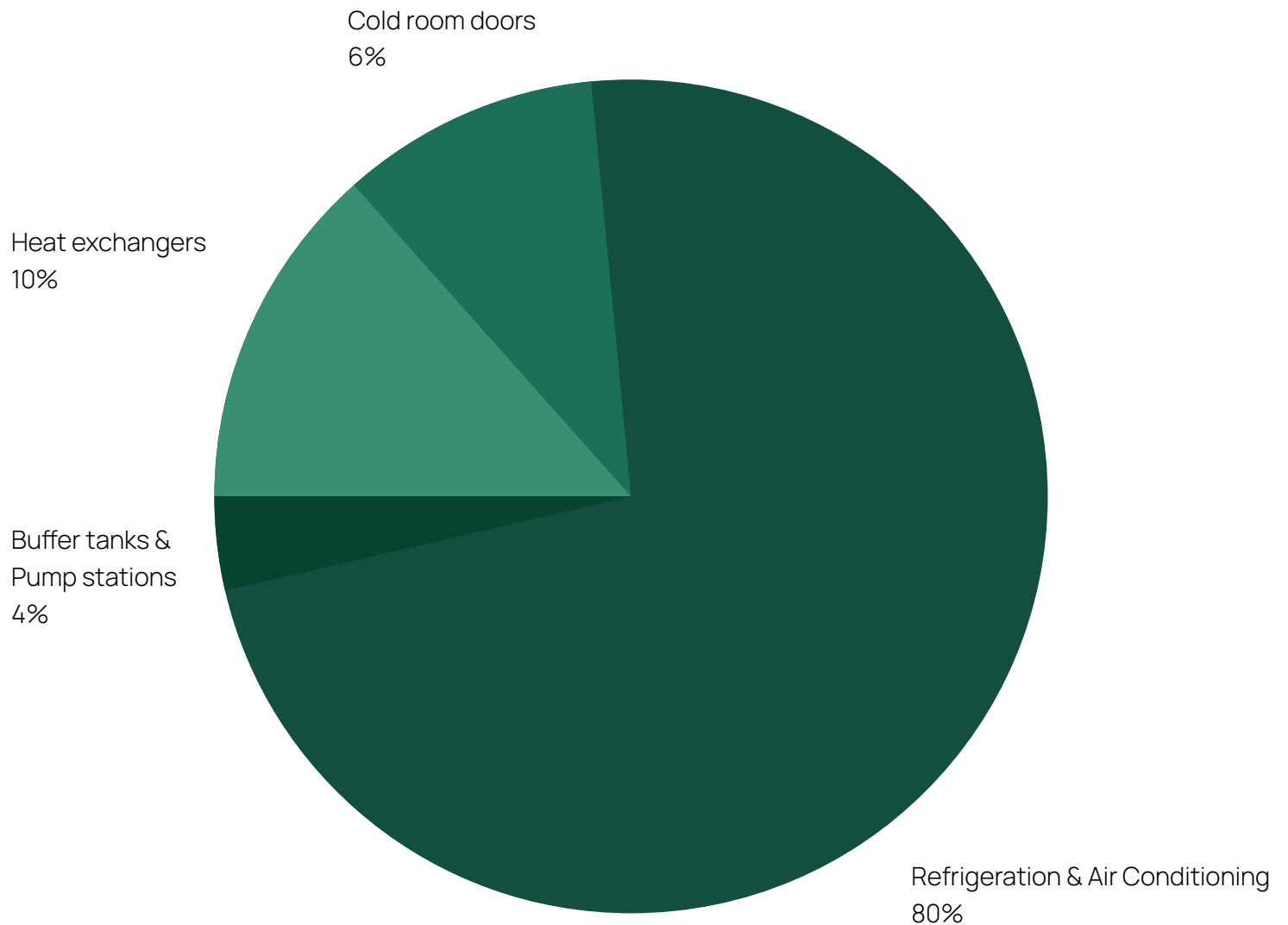




# I High quality product

With long-term experience, the company's employees can offer impeccable dedication to customers, the most efficient solutions and the highest quality equipment. Refra produces not only unique original refrigeration products, but also other types of refrigeration and heating systems. Our products are suitable for a wide range of applications and can serve a wide variety of premises.

## Variety of products



# | Best quality parts

Refra units are manufactured using world-renowned, top quality parts. Distinguished by a highly complex and unique offer of refrigeration products, the company can design and manufacture non-standard products, fully customized and completed according to customer requirements.



# REFRIGERATION

Refra offers a wide range of refrigeration products for both commercial and industrial applications. Many years of experience have allowed us to develop reliable refrigeration products such as chillers, condensing units, CO2 racks, heat pumps, compressor packs and more.



# Chillers

Chillers are used in a variety of applications where chilled liquid is circulated through the building to remove the unwanted heat from the premises and transfer it into the chilled liquid loop. Most often, these units are used for industrial and commercial applications to maintain constant temperature of various devices and equipment, as well as for air conditioning in buildings and factories.

Depending on the principle of operation and heat dissipation, chillers can be divided into air cooled, liquid cooled and condenserless models. Liquid cooled chillers are usually located indoors and use cooling towers or drycoolers, while air cooled chillers are installed outdoors because they need access to a lot of fresh air in order to reject unwanted heat from the building. Condenserless chillers are divided with evaporator and compressor being installed indoors while the remote air cooled condenser is installed outdoors. Such type is needed to meet special project requirements.

Chiller systems differ mostly in size and design, so there are many types of chillers depending on the required temperature or application. Refra produces exceptionally unique chillers, fully tailored to the needs of the customer.

## GREEN SOLUTIONS

To reduce environmental pollution, Refra has developed and released modern propane chillers. All listed chillers can be manufactured using natural refrigerants such as R290, R1270 or R744.

# Air Cooled Chillers

Natural refrigerants available!  
#R290 #R1270 #R774

Choose propane or propylene and contribute to the environment!

## CI Chiller



### DESCRIPTION



Small capacity air-cooled chillers with the cooling power from 20 kW to 60 kW are perfectly suitable for particularly small commercial applications. CI series chillers are a great choice when low power is required, using the smallest possible frame in order to save space. Air-cooled units are among the most popular when choosing chiller systems, making it a well-crafted product that can meet the regular needs of the customer.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Ultra-compact frame construction is assembled with high-quality EC fan motor technology, scroll or reciprocating compressors and a finned tube or microchannel condenser. The galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection and noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

## CH Chiller



### DESCRIPTION



Medium power range air-cooled chillers with a cooling capacity from 40 kW to 190 kW are designed for commercial and industrial buildings with low to medium power demand. One of the main advantages of this unit is the possibility to add two circuits, which will provide maximum operational safety by ensuring continuous system operation in case of emergency. If one circuit is damaged, the other can still use 50% of unit's capacity to service the end user. CH series chillers are perfect for integrating propane and free-cooling systems, resulting in highly ecological refrigeration solutions. A built-in reversible heat pump can be installed for both heating and cooling options and better water circulation.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Compact frame construction is assembled with high-quality EC fan motor technology, finned tube heat exchangers and scroll or reciprocating compressors. CH galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection and noise reduction. An additional 50 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

## CW Chiller



### DESCRIPTION



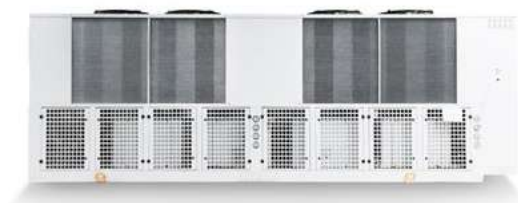
High power air-cooled chillers with the cooling capacity of 70 kW to 800 kW are designed for industrial and commercial buildings with large power demand. Such systems are widely used in various factories, immense supermarkets and warehouses. With high cooling capacity and many possible extra features, CW chillers stand out as one of the most versatile products that Refra can offer.

Special modular assembly system provides extensive power selection options and the ability to integrate a wide range of useful solutions such as a built-in hydraulic module, additional water storage tanks, free cooling or heat recovery options. CW chillers can be made with two to five circuits to ensure continuous system operation in case of emergency – if one circuit is damaged, the others can still use the remaining unit capacity to service the end user.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, finned tube and/or microchannel heat exchangers, scroll, reciprocating or screw compressors. The galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection as well as noise reduction and can be produced up to 13 meters in length. An additional 50 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

## CF Chiller



### DESCRIPTION



Extra large capacity air-cooled chillers with the cooling power of 120 kW to 1400 kW are designed for immense industrial and commercial buildings with high-power demand. CF series chillers are able to provide the highest cooling capacity of all the chillers produced by Refra. The intricate design of the open frame makes it possible to produce a unit with extremely powerful, high-quality parts.

These units can be assembled with a built-in hydraulic module, as well as additional free cooling (possible with hybrid coils) or heat recovery options. Exposed frame construction and special perforated doors provide greater air movement and absorption, so the chiller can operate at high capacity without interruption. Two to four circuits can be added to ensure continuous system operation in case of emergency – if one circuit is damaged, the others can still use the remaining unit capacity to service the end user.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installation.

Open frame construction can be assembled with high-quality EC fan motor technology, finned tube heat exchanger and scroll, screw or reciprocating compressors. When a screw compressor is selected, an additional oil cooling system can be installed to eliminate extra costs associated with it. The galvanized steel and powder coated frame ensures proper protection of the internal unit construction. An additional insulation box can be added to reduce compressor noise to obtain silent operation.



# Liquid Cooled Chillers

Natural refrigerants available!  
#R290 #R1270 #R774

Choose propane or propylene and  
contribute to the environment!

## CB Chiller



### DESCRIPTION



Medium power range liquid-cooled chillers with a cooling capacity from 25kW to 600 kW are designed for a wide range of commercial and industrial refrigeration or air conditioning applications. Designed for indoor installation, CB chillers are manufactured on a compact frame that can be easily transported through standard doors.

CB liquid-cooled chillers are built on a closed, assembled frame and equipped with scroll or reciprocating compressors as well as BPHE condenser and evaporator. An additional 50 mm rock wool insulation can be supplemented for a super silent unit operation. On request, these units can be equipped with a buffer tank of up to 800 liters or a hydraulic module.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

## CS Chiller



### DESCRIPTION



High capacity liquid-cooled chillers with the cooling power from 140 kW to 2 MW are perfectly suitable for medium to large industrial or large commercial applications. These chillers can be integrated with a dual liquid system, where the condenser uses glycol mixture and the evaporator uses water for the refrigeration process. Due to the glycol-free ability, CS chillers are ideal for particularly sensitive equipment that requires refrigeration with clean, distilled water.

CS chillers are assembled on a welded open frame, equipped with maximum 4 screw compressors and shell and tube heat exchangers. Usually stored in special technical rooms and connected to secondary devices such as cooling towers or dry coolers to reject the absorbed heat to an additional fluid loop.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

## CR Chiller



### DESCRIPTION



High capacity liquid-cooled chillers with the cooling power up to 2 MW are designed for immense industrial and commercial buildings with high-power demand. The special design of the walk-in container is ideal for buildings where indoor installation is not possible. These chillers can be placed right next to the building or on the roof, which will not only reduce installation costs, but will also allow easy unit maintenance. Additional options, such as illumination, ventilation and heating can be installed inside the container to make the service of the unit even more convenient.

Modular assembled container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation. On request, these units can be equipped with supplementary hydraulic module inside the container and a dry-cooler on top of it.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installation.

# Condenserless Chillers

 Natural refrigerants available!  
#R290 #R1270 #R774

 Choose propane or propylene and contribute to the environment!

## CB Chiller



### DESCRIPTION



Medium power range condenserless chillers with a cooling capacity from 25kW to 600 kW are designed for a wide range of commercial and industrial refrigeration or air conditioning applications. These chillers are mounted with a separate remote condenser that is built outdoors. The rest of the equipment is installed in a special technical room in the building. Refra can offer a condenserless chiller that can be connected to an existing condenser or a complete system with Refra condensers.

CB chillers are built on a closed, assembled frame and equipped with scroll or reciprocating compressors. These chillers are manufactured on a compact frame that can be easily transported through standard doors. An additional 50 mm rock wool insulation can be supplemented for a super silent unit operation. On request, these units can be equipped with a buffer tank of up to 800 liters or a hydraulic module.

Condenserless chillers are usually chosen when there are sound restrictions in the project. The louder part of the system is built in an isolated room and the quiet condenser is built on the roof. The whole system is connected by a pipeline through which a refrigerant circulates.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

## CS Chiller



### DESCRIPTION



High capacity condenserless chillers with the cooling power from 140 kW to 2 MW are perfectly suitable for medium to large industrial or large commercial applications. These chillers are mounted with a separate remote condenser that is built outdoors. The rest of the equipment is installed in a special technical room in the building. Refra can offer a condenserless chiller that can be connected to an existing condenser or a complete system with Refra condensers.

CS Condenserless chillers are assembled on a welded open frame, equipped with maximum 4 screw compressors and shell and tube heat exchangers. They are usually chosen when there are sound restrictions in the project. The louder part of the system is built in an isolated room and the quiet condenser is built on the roof. The whole system is connected by a pipeline for refrigerant circulation and absorbed heat rejection.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installation.

## CR Chiller



### DESCRIPTION



High capacity condenserless chillers with the cooling power up to 2 MW are designed for immense industrial and commercial buildings with high-power demand. Refra offers condenserless chillers that can be connected to an existing condenser or a complete system with Refra condensers.

Assembled in a special walk-in container this unit is ideal for buildings where indoor installation is not possible. It can be placed outdoors – right next to the building, resulting in reduced installation costs and easy unit maintenance. The condenser can be installed either on top of the container or somewhere else. Additional options, such as illumination, ventilation and heating can be integrated inside the container to make the service of the unit even more convenient. Container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installation.



# Heat Pumps

Natural refrigerants available!  
#R290 #R1270 #R774

Choose propane or propylene and contribute to the environment!

## CI Reversible Chiller

### DESCRIPTION



Small capacity reversible heat pumps with the heating power from 20 kW to 50 kW are designed for small commercial or industrial applications. Manufactured using R290 refrigerant only and full-inverter technology the units are a part of the extremely economical and environmentally friendly Refra product line. These single circuit heat pumps can be used for heating purposes at ambient temperature of -15° or higher as well as for cooling purposes with the capacity of 14 kW to 35 kW. This dual solution is very efficient in terms of price, installation and space, as there is no need to install two separate systems.

Ultra-compact frame construction is assembled with high-quality EC fan motor technology, scroll or reciprocating compressors and a finned tube or microchannel condenser. To prevent ice formation, the frame is equipped with special water drain outlets, which are required to ensure a proper defrosting process. It is also recommended to place the unit on a platform in order to leave some space underneath for water to drain. The galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection and noise reduction. An additional 30 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

## CH Reversible Chiller

### DESCRIPTION



Medium power range reversible heat pumps with the heating power from 50 kW to 180 kW are designed for commercial and industrial buildings with low to medium power demand. Manufactured using R290 refrigerant only and full-inverter technology the units are a part of the extremely economical and environmentally friendly Refra product line. These pumps can be used for heating purposes at ambient temperature of -15° or higher as well as for cooling purposes with the capacity of 35 kW to 126 kW. This dual solution is very efficient in terms of price, installation and space, as there is no need to install two separate systems.

One of the main advantages of this unit is the possibility to add two circuits, which will provide maximum operational safety by ensuring continuous system operation in case of emergency. If one circuit is damaged, the other can still use 50% of unit's capacity to service the end user.

Compact frame construction is assembled with high-quality EC fan motor technology, finned tube heat exchangers and scroll or reciprocating compressors. To ensure proper defrosting process the frame has special water drain gutters with electric heating cables. This solution helps avoid additional platform placement costs as you can install the unit directly on the ground. CH galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection and noise reduction. An additional 50 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.

## CJ Reversible Chiller

### DESCRIPTION



High power reversible heat pumps with the heating power from 100 kW to 400 kW are designed for industrial and commercial buildings with large power demand. Manufactured using R290 refrigerant only and full-inverter technology the units are a part of the extremely economical and environmentally friendly Refra product line. With high cooling capacity and many possible extra features these products are widely used in various factories, immense supermarkets and warehouses. These pumps can be used for heating purposes at ambient temperature of  $-15^{\circ}$  or higher as well as for cooling purposes with the capacity of 70 kW to 280 kW. This dual solution is very efficient in terms of price, installation and space, as there is no need to install two separate systems.

CJ heat pumps can be made with one to three circuits to ensure continuous system operation in case of emergency – if one circuit is damaged, the others can still use the remaining unit capacity to service the end user.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, finned tube and/or microchannel heat exchangers, scroll, reciprocating or screw compressors. Larger, raised coils are set to simplify the defrosting process and allow water to drain freely. The galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection as well as noise reduction and can be produced up to 13 meters in length. An additional 50 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

Refra manufactures modern devices using plug-and-play ideology, making the installation and use of the devices as easy as possible. In this case, the customer can start using the device quickly and easily after installment.



# Free Cooling

Natural refrigerants available!  
#R290 #R1270 #R774

Choose propane or propylene and contribute to the environment!

## CF Module

### DESCRIPTION



Free cooling system consists of a heat exchanger that cools down glycol mixture by using low temperature ambient air. When outdoor temperatures are lower relative to indoor temperatures, the system utilizes the cool outdoor air as a free cooling source. These energy-efficient units are perfect for industrial refrigeration or air conditioning processes, as they help to reduce mechanical energy consumption up to 80% and reduce maintenance costs as well as environmental impact.

Open frame construction can be assembled with high-quality EC fan motor technology, finned tube heat exchanger, 3-way valve and circulation pump. The galvanized steel and powder coated frame ensures proper protection of the internal unit construction.



## CJ Module

### DESCRIPTION



Free cooling system consists of a heat exchanger that cools down glycol mixture by using low temperature ambient air. When outdoor temperatures are lower relative to indoor temperatures, the system utilizes the cool outdoor air as a free cooling source. These energy-efficient units are perfect for industrial refrigeration or air conditioning processes, as they help to reduce mechanical energy consumption up to 80% and reduce maintenance costs as well as environmental impact.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, finned tube heat exchangers, 3-way valve and circulation pump. The galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection.





# CO2 Systems

CO2 refrigeration systems are a solution to cover most refrigeration needs. Refra manufactures both transcritical and subcritical CO2 units which provide medium or/and low temperature refrigeration and heating. It is a perfect option for commercial applications – from small stores to supermarkets or warehouses. Full customization and integration with building management system is possible. This makes refrigeration systems easy to monitor and control. Moreover, technologies like parallel compression, liquid injection, optimization with internal heat exchangers, different capacity regulation solution can be implemented and adapted for each individual rack Refra builds.

## GREEN SOLUTIONS

The systems are made using low GWP solutions that have better efficiencies and capacities, as well as less environmental damage.

# Transcritical systems

**GREEN SOLUTIONS** | This unit is a part of Refra's environmentally friendly product group, as it is made using CO2 refrigerant. Such low GWP solutions are designed to have better efficiencies and capacities, as well as less environmental damage.

## CO2mpact



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Compact systems are designed for small retail shops and can be manufactured for medium temperature cooling. Based on Carel HECU system for complete management of condensing units fitted with BLDC compressors, these products can be adjusted remotely. The serial connection between the condensing unit and the evaporators controlled by MPXPRO represents one of the main features of this solution, contributing to the energy efficiency and reliability of the entire system. The built-in plug and play interface provides the ability to install and set up the unit extremely quickly and easily.

## CO2 Ecopack



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Ecopack is a customizable transcritical rack, designed mainly for commercial application. Built on a low and narrow frame, it is designed for small spaces and easy maintenance. This model can be assembled with maximum 4 MT and 3 LT reciprocating compressors and provide cooling capacity up to 135 kW. Due to its simple, small frame design, this unit is the optimal choice for installing a medium size refrigeration system.

## CO2 Vertical



### DESCRIPTION

### GREEN SOLUTIONS

The CO2 vertical rack is constructed as a single unit on a powder coated steel frame. Vertically built to reduce the footprint, this product has a sufficiently high power potential. This is the unit with the highest power capacity per square meter. Therefore it is ideal for the demands of small food retail stores. Vertical rack system is designed with a well-known refrigeration technologies that have been reliably tested. This frame can be assembled with maximum of 4 compressors and manufactured for medium and low temperature cooling, providing up to 75 kW of refrigeration capacity.

## CO2 Light



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Light is perfectly suitable for small food retail stores or gas stations because of its small scale. It can provide up to 50 kW of cooling capacity, split between medium temperature and low temperature refrigeration. These rack systems are designed with reliable refrigeration technologies that are well tested and proven in the market. Assembled with maximum of 3 compressors on a welded frame, made of powder coated steel.

## CO2 Select



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Select is a customizable transcritical rack, designed for commercial and industrial applications. It is built on a rigid frame, designed for easy maintenance and durability. A special "reach-in" container option for outdoor installation provides convenient installation and efficient unit service. The cooling capacity of this product ranges from 50 kW to 330 kW, meaning that it can be designed for various applications.

## CO2 Industrial



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Industrial is a customizable transcritical rack, designed mainly for industrial application. Special "reach-in" container option for outdoor installation provides convenient and efficient unit service. This type can be assembled with maximum of 6 reciprocating compressors per stage (MT/LT) and provide cooling capacity ranging from 50 kW to 500 kW. This model is assembled with 6-cylinder compressors, resulting in bigger dimensions and larger power supply.



## CO2 Galaxy



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Galaxy units are among the most versatile racks in the transcritical system. Designed on a V-shaped frame, these systems offer a wide power range. Created for industrial applications, the power of these units can reach up to 800 kW.

Due to the wide range of assembly options, the CO2 Galaxy rack comes with an integrated gas cooler. This simplifies installation and equipment selection work and reduces overall costs of the project. Special modular assembly system provides extensive power selection options and the ability to integrate a wide range of useful solutions such as a built-in hydraulic module, additional water storage tanks or heat recovery options.

Comprehensive modular frame construction is assembled with high-quality EC fan motor technology, finned tube heat exchangers and reciprocating compressors. The galvanized steel and powder coated frame with a reliable insulation material ensures proper unit protection as well as noise reduction and can be produced up to 13 meters in length. An additional 50 mm rock wool material can be supplemented for a super silent unit operation with double insulation.

## CO2 Container



### DESCRIPTION

### GREEN SOLUTIONS

CO2 Container is a new generation solution that covers most refrigeration needs. It combines both transcritical and subcritical CO2 systems with a unique AR frame, designed exclusively by Refra. Cooling capacity of this product ranges from 50 kW to 600 kW, meaning that it can be designed for various applications.

The special design of the walk-in container is ideal for buildings where indoor installation is not possible. It can be placed right next to the building or on the roof, which will not only reduce installation costs, but will also allow easy unit maintenance. For maximum safety, the container is equipped with a special leak detector that responds to gas leaks quickly and lets prevent malfunctions. Additional options, such as illumination, ventilation and cooling can be installed inside the container to make the service of the unit even more convenient.

Modular assembled container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation. On request, these units can be equipped with supplementary hydraulic module, additional water storage tanks, heat recovery options inside the container and a gas-cooler on top of it.

# Subcritical systems

## CO2 Cascade



### DESCRIPTION

GREEN SOLUTIONS 

CO2 Cascade units are perfectly suited for high temperature climate. This system consists of two refrigeration systems connected via heat exchanger, where one evaporates, the other condenses. Such combination provides either low temperature refrigeration or both: low and medium temperature refrigeration with different refrigerants. Low temperature units can be designed with CO2 and a flooded system to ensure better heat exchange, while medium temperature units obtain a truly cost-effective and environmentally friendly solution when produced with HFC and HC refrigerants. At high ambient temperatures, conventional refrigeration systems require a large amount of energy, whilst propane works perfectly in such conditions.

## CO2 LT Liquid Cooled



### DESCRIPTION

GREEN SOLUTIONS 

LT Liquid cooled systems are designed to supplement the existing refrigeration arrangement with an already installed chiller. This unit can be cooled by glycol provided from a currently existing chiller and provide additional low temperature cooling. It is perfect for achieving particularly low refrigeration temperatures that can go down to -35 °C degrees. Such solutions are mostly used for warehouse cooling and other industrial applications.

# Condensing Units

Condensing units are designed to satisfy the needs of small air conditioning or commercial cooling applications. These units consist of compressor and condenser and are usually connected with an already existing evaporator. Condensing units are perfectly suitable for the refrigeration of cooling cabinets or cold rooms, air handling units and close control units. Refra units are equipped with high quality compressors that provide the highest annual energy efficiency levels. Refra offers both air cooled and liquid cooled condensing units of various sizes and cooling capacities.

# Air Cooled Units

## R-Case Unit



### DESCRIPTION

Small capacity condensing units, designed for small commercial applications such as convenience stores, petrol forecourts and cold rooms. Assembled with scroll or digital scroll compressors, designed for MT or LT applications. This model is built on a smallest condensing unit frame and provides a cooling capacity from 10kW to 30kW.

Assembled with copper aluminium fin condenser, Copeland compressors with crankcase heater, high efficiency AC/EC axial fans and a liquid receiver. Built in a closed galvanized steel frame with polymer powder coating and additional insulation for silent unit operation. Electric panel includes phase rotation and phase loss monitoring relay, compressor and fan motor overheat protection, contactor and main switch. Additional assembly options are available.

## B-Case Unit



### DESCRIPTION

Small capacity condensing units with the cooling capacity from 15kW to 40kW. Designed on a compact frame, perfectly suitable for small commercial applications such as convenience stores, petrol forecourts, cold rooms and more.

Assembled with copper aluminium fin condenser, Bitzer reciprocating compressors with crankcase heater and high efficiency AC/EC axial fans. Built in a closed steel frame with a polymer powder coating and condenser protection grid. Electric panel includes phase rotation and phase loss monitoring relay, compressor and fan motor overheat protection, contactor and main switch. Additional assembly options are available.



## BM Unit

### DESCRIPTION

Small to medium capacity condensing units, designed for commercial and industrial applications such as food and beverage manufacturers, convenience stores, petrol forecourts and cold rooms. Assembled with reciprocating compressors the units provide a cooling capacity from 12kW to 55kW. These condensing units are an optimal choice for conventional refrigeration systems – affordable, small in size and easy to install. The units can be built outdoors, but additional shelter against rain or snow should be provided.

Assembled with copper aluminium fin condenser, Bitzer or Copeland compressors with crankcase heater, high efficiency AC/EC axial fans and a liquid receiver. Built on an open welded galvanized steel frame with powder coating.



# Liquid Cooled Units

## KU Unit

### DESCRIPTION

Wide range capacity liquid cooled condensing units, designed for commercial and industrial applications with the cooling capacity from 10 kW to 40 kW. These units work on a principle of the heat rejection loop, where condenser heat is dissipated to the environment via water. Rejected heat can be used for additional needs in the same building, which gives these facilities additional economic benefits. These units provide an economical, compact alternative to traditional air-cooled condensing units.

Built on an open welded frame with bent profile and powder coating, these condensing units carry a plate heat exchanger. Can be assembled with 1 to 4 reciprocating or scroll compressors with crankcase heater, a liquid receiver, refrigerant filters and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.



## KS Unit



### DESCRIPTION

Wide range capacity liquid cooled condensing units, designed for commercial and industrial applications with the cooling capacity from 10 kW to 40kW. These units work on a principle of the heat rejection loop, where condenser heat is dissipated to the environment via water. Rejected heat can be used for additional needs in the same building, which gives these facilities additional economic benefits. These units provide an economical, compact alternative to traditional air-cooled condensing units.

Built on an open welded frame with standard profile, this condensing unit is also available in a double-deck construction for higher capacity. Assembled with shell and tube or plate heat exchanger, 1 to 4 scroll or reciprocating compressors and a liquid receiver as well as refrigerant filters and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.

## KB Unit



### DESCRIPTION

Wide range capacity liquid cooled condensing units, designed for commercial and industrial applications with the cooling capacity from 10kW to 40kW. These units work on a principle of the heat rejection loop, where condenser heat is dissipated to the environment via water. Rejected heat can be used for additional needs in the same building, which gives these facilities additional economic benefits. These units provide an economical, compact alternative to traditional air-cooled condensing units.

Built on an assembled frame with covers, this condensing unit can be designed in a variety of ways, depending on intended use. Collected with shell and tube or plate heat exchanger, 1 to 4 reciprocating or scroll compressors and a liquid receiver as well as refrigerant filters and a sight glass. Safety valve and pressure switches are added to increase the security of the unit. An additional 50 mm rock wool insulation can be supplemented for a super silent unit operation.

# Compressor Packs

Compressor packs have emerged as one of the first refrigeration technologies on the market. This is one of the most common solutions used for cooling. Compressor packs are a set of compressors assembled in a single frame to meet your refrigeration needs. Refra offers compressor packs of various capacities assembled on different types of frames, suitable for commercial and industrial applications as well as production area cooling. We offer a choice of scroll, screw or reciprocating compressor types from quality manufacturers such as Bitzer, Dorin, Bock and Copeland. Compressor packs are a particularly popular choice for having an economical, easy to install and maintain system. That's why Refra has a well-crafted product and can offer truly high-quality units.

# Scroll Compressors

## AB Pack

### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 7 kW to 170 kW. Designed for commercial and industrial applications with small to large power demand. Scroll compressor packs are perfectly suitable for the cooling of shops, refrigeration chambers and general air conditioning systems. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.



Built on an assembled frame with covers, this compressor pack can be designed in a variety of ways, depending on intended use. Compressor pack also includes refrigerant filters, a receiver and a sight glass. Safety valve and pressure switches are added to increase the security of the unit. An additional 50 mm rock wool insulation can be supplemented for a super silent unit operation.

## AR Pack

### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 7 kW to 170 kW. Designed for commercial and industrial applications with large power demand. Scroll compressor packs are perfectly suitable for the cooling of shops, refrigeration chambers and general air conditioning systems. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.



Assembled in a special walk-in container, this unit is ideal for buildings where indoor installation is not possible. It can be placed outdoors – right next to the building, resulting in reduced installation costs and easy unit maintenance. Additional options, such as illumination, ventilation and heating can be integrated inside the container to make the service of the unit even more convenient. Container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation.

## AU Pack

### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 7 kW to 170 kW, designed for commercial applications. Scroll compressor packs are perfectly suitable for the cooling of shops, refrigeration chambers and general air conditioning systems. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Assembled on an open welded frame with bent profile, this compressor pack is ideal for small spaces due to its small size. Compressor pack also includes refrigerant filters, a receiver and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.





# Reciprocating Compressors

## AU Pack



### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 25 kW to 500 kW. Designed for commercial applications with a wide range of power demand. Reciprocating compressor packs are perfectly suitable for the cooling of large warehouse areas as well as other industrial buildings. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Assembled on an open welded frame with bent profile, this compressor pack is ideal for small spaces due to its small size. Compressor pack also includes refrigerant filters, a receiver and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.

## AS Pack



### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 25 kW to 500 kW, perfectly suitable for various size applications. Reciprocating compressor packs are perfectly suitable for the cooling of large warehouse areas as well as other industrial buildings. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Assembled on an open welded frame with standard profile, this compressor pack is also available in a double deck construction for higher capacity. Compressor pack also includes refrigerant filters, a receiver and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.

## AB Pack



### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 25 kW to 500 kW. Designed for commercial and industrial applications with small to large power demand. Reciprocating compressor packs are perfectly suitable for the cooling of large warehouse areas as well as other industrial buildings. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Built on an assembled frame with covers, this compressor pack can be designed in a variety of ways, depending on intended use. An additional „reach-in“ container is included for easier unit control options. Compressor pack also includes refrigerant filters, a receiver and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.

## AR Pack



### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 25 kW to 500 kW. Designed for commercial and industrial applications with large power demand. Reciprocating compressor packs are perfectly suitable for the cooling of large warehouse areas as well as other industrial buildings. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Assembled in a special walk-in container, this unit is ideal for buildings where indoor installation is not possible. It can be placed outdoors – right next to the building, resulting in reduced installation costs and easy unit maintenance. Additional options, such as illumination, ventilation and heating can be integrated inside the container to make the service of the unit even more convenient. Container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation.

# Screw Compressors

## AS Pack



### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 50 kW to 900 kW, perfectly suitable for various size applications. Screw compressor packs are perfectly suitable for the cooling of ice rinks, production area or equipment and other industrial applications. Compressor packs can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Assembled on an open welded frame with standard profile, this compressor pack is also available in a double-deck construction for higher capacity. Compressor pack also includes refrigerant filters, a receiver and a sight glass. Safety valve and pressure switches are added to increase the security of the unit.

## AR Pack



### DESCRIPTION

Wide range capacity compressor packs with cooling capacity from 50 kW to 900 kW. Designed for commercial and industrial applications with large power demand. Screw compressor packs are perfectly suitable for the cooling of ice rinks, production area or equipment and other industrial applications. The compressor pack can also be part of a larger refrigeration system. It is possible to choose the compressor pack for an existing condenser or purchase a compressor pack together with Refra condenser for convenience.

Assembled in a special walk-in container, this unit is ideal for buildings where indoor installation is not possible. It can be placed outdoors – right next to the building, resulting in reduced installation costs and easy unit maintenance. Additional options, such as illumination, ventilation and heating can be integrated inside the container to make the service of the unit even more convenient. Container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation.

# WATER SYSTEMS

For your convenience, we also manufacture special water systems that complement our refrigeration equipment or can operate independently as refrigeration units. Refra water systems can be supplied individually or integrated with our refrigeration equipment.

# Buffer Tanks

Buffer tanks are one of the main components of water systems, often being used to provide additional volume, ensure stable temperature and higher flow for heating and cooling setups. Such water systems are becoming increasingly common in commercial and industrial applications due to its cost-effective characteristics and additional energy recovery options. By adding a buffer tank to the refrigeration or heating system, you will be able to constantly maintain the required amount of liquid to service it and avoid technical inconvenience. Refra manufactures cold and hot water buffer tanks and can supply them either individually or bundled with other refrigeration units. The customer can also choose additional features such as heat recovery or combined access.



## Heat recovery systems



### DESCRIPTION

Refra buffer tanks with an integrated heat recovery are an innovative and highly cost-effective systems that are rapidly gaining popularity in commercial sector. A special buffer tank with a built-in double wall heat exchangers acts as an intermediary to collect and utilize excess heat. This system is characterized by the fact that it allows the heat generated by the operation of the refrigeration equipment to be used for other heating purposes in the same building. By installing one system, the customer gets heating and cooling at once, as well as huge savings in energy and equipment costs.

These tanks are available with an anti-legionella kit, which prevents the spread of bacteria and is therefore particularly important for domestic water systems. A special 6 or 9 kW electric element can be added for additional water heating that will heat the water in the tank to the required temperature.

With the possible 300-3000 liters capacity and 6 to 10 bar pressure, these tanks combine hot water storage for both heating support and domestic water heating. The tank is made of carbon S235JR or 304/316L stainless steel, externally insulated with an additional (50-100mm) layer of polyurethane and lined with a high-quality red dermatine fabric. Both vertical and horizontal tank positioning is possible together with threaded, flanged or victaulic joints. This model also has an additional inspection flange for convenient device repair.

## Cold water tanks



### DESCRIPTION

Refra cold water tanks with an operating pressure of 6 to 10 bar are used to increase the amount of liquid in the refrigeration systems and can be produced as system component or a completely separate product. The water tank with possible 300-3000 liters capacity will help to keep a constant cooling cycle, thus stabilizing unit operation and avoiding poor water temperature control.

Cold water tanks can also be used for water flow separation. A built-in separation plate or a blast pipe ensures smooth operation of the unit and maintains consistent water temperature in the system. This feature gives the opportunity to regulate the volume of liquid, used for different circuits.

The tank is made of carbon S235JR or 304/316L stainless steel, externally insulated with an additional layer of ArmaFlex and lined with a high-quality blue dermatine fabric. Both vertical and horizontal tank positioning is possible together with threaded, flanged or victaulic joints.

## Hot water tanks



### DESCRIPTION

Refra manufactures hot water tanks, tailored to various heating systems. With an operating pressure of 6 to 10 bar and the capacity of 300-3000 liters, these water storage and preparation tanks can help maintain the required amount of liquid for service continually and ensure a constant supply of hot water for comfortable consumption.

Refra hot water tanks are available with an anti-legionella kit, which consists of a recirculation pump, heating element and timer. This kit prevents the spread of bacteria and is therefore particularly important for domestic water systems. A special 6 or 9 kW electric element can be added for additional water heating that will heat the water in the tank to the required temperature.

The tank is made of carbon S235JR or 304/316L stainless steel, externally insulated with an additional (50-100mm) layer of polyurethane and lined with a high-quality red dermatine fabric. Both vertical and horizontal tank positioning is possible together with threaded, flanged or victaulic joints.



# Pump stations

Pump stations are a part of refrigeration systems that use water or glycol for industrial and commercial cooling. It is a holding chamber that pumps liquids to a required area when liquid is unable to flow naturally. These machines transport water from one place to another. Refra produces pump stations of various sizes, volumes and applications that are suited for commercial and industrial sectors and are fully customized to meet the requirements of the customer.

## For Water treatment systems



### DESCRIPTION

Refra manufactures pumps stations for water treatment systems of various sizes. These systems are designed for particularly sensitive equipment cooling with water and becoming increasingly popular in robotic factories. Combining the pump station with all kinds of water cleansing filters results in a natural cooling solution with extremely pure water.

Assembled in a special walk-in container, this unit be placed outdoors – right next to the building, resulting in reduced installation costs and easy unit maintenance. Additional options, such as illumination, ventilation and heating can be integrated inside the container to make the service of the unit even more convenient. Container size ranges from 2,4 meters to 13 meters in length and can be insulated with polyurethane foam or 50 mm rock wool material for a super silent unit operation.

## For Heating systems



### DESCRIPTION

Refra pump stations for heating systems are the most versatile in this category. These pump stations are completely exclusive as they are manufactured according to the hydraulic drawings provided by the customer. In this way, the full adaptation of the product to the existing project can be ensured.

Possibility to choose any frame offered by Refra, many additional functions and an unlimited power supply – all of this makes it suitable for any kind of heating system in both commercial and industrial sectors.

## For Waterloop systems



### DESCRIPTION

Refra manufactures pump stations for waterloop systems with the cooling capacity from 30 kw to 250 kW. These systems produce distributed cooling at different temperatures with a single condensing water loop. Together with Refra pump stations, the system creates a fully integrated refrigeration technology that eliminates the need for complex refrigeration systems and greatly simplifies installation work.

Built on a super slim assembled galvanized steel frame with powder coating. Standard selection includes single or dual pump with inverter, glycol tank with filling pump, shut-off valves, control board with controller and necessary control sensors as well as a three-way valve, manometers and a coarse cleaning filter.

Extra features, such as emergency heat exchanger with full controls or bubble filter separator can be combined. An additional heat recovery pump can also be added to extract maximum efficiency from the system. It will use the rejected heat for other heating purposes in the building. The pump station can also be equipped with a dry cooler in one frame.





# Ice banks

Refra Ice banks are an insulated tank with built-in stainless steel coils and air agitation system. The operating technology of these units is based on accumulating cooling capacity using ice and icy water at night time and utilizing this capacity when needed. Proper insulation ensures extremely long ice retention and prevents melting. Refra produces high quality ice banks tailored to customer needs. They can be adapted to direct expansion, liquid or flooded water systems and can be equipped with falling film technology.

## Ice banks with glycol coil



### DESCRIPTION

Refra manufactures liquid ice banks, designed for accumulation of capacity. Such units can be compatible with other refrigeration systems, if the hygienic standards of all units are ensured. The glycol used in the system is usually cooled by a separate chiller.

Made with multiple stainless steel thermal coil batteries, built into a large water reservoir, these units work on the principle of ice formation. The glycol mixture circulating in the coil batteries forces the formation of ice on the pipes, thus cooling the water inside the tank. This technology is capable of cooling particularly large amounts of water with relatively little energy consumption.

## Ice banks with DX coil



### DESCRIPTION

The direct expansion system is popular due to easier installation and reduced system costs. Direct expansion ice banks are usually used for refrigeration of dairy products in medium or large farms, milk collection points, beer or milk factories. Refra manufactures ice banks based on this refrigeration model.

Made with multiple stainless steel coil batteries, built into a large water reservoir, these systems work on the principle of ice formation. The refrigerant circulating in the coil batteries forces the formation of ice on the pipes, thus cooling the water inside the tank. This technology is capable of cooling particularly large amounts of water with relatively little energy consumption.

# HEAT EXCHANGERS

Refra heat exchanger production line is completed with modern automatic machinery and qualified personnel, allowing us to achieve high quality production process with minimum deviations from designed result. At the customer's request, Refra can design and manufacture finned tube heat exchangers for various application so almost any type of heat exchanger is possible with individual design.

# Air Cooled Condensers

A condenser is designed to transfer heat from a working refrigerant to the surrounding air. The condenser relies on the efficient heat transfer that occurs during phase changes. Refra condensers can be designed in a wide capacity range and various frames, making them suitable for small and large commercial or industrial refrigeration systems. We ensure, that the production of condensers meets the quality control system standards of ISO 9001:2015. Designed using grooved copper tubes, aluminum or copper fins and single-phase or three-phase axial fans.

CF

DESCRIPTION

Extensive capacity range air cooled condenser series created for large refrigeration and air conditioning systems. Four heat exchangers and double fan row provide immense heat capacity within limited placement area, making it perfect for saving space while still maintaining high power. This type of unit is perfectly suitable for commercial and industrial buildings with high power demand. Available heat capacity is up to 1,6 mW under nominal conditions (when Tcond is 45°C, Tamb is 30°C and R1234ZE).



W shaped large construction, assembled with inner grooved copper tubes, aluminum or copper fins and AC or EC fan motor technology. Galvanized steel and powder coated frame can be designed in various sizes. The clever frame design also allows for the installation of additional equipment under the condenser.

CM

DESCRIPTION

Wide range capacity air cooled condenser series, perfectly suitable for small and large refrigeration and air conditioning systems used in commercial or industrial buildings with low to high power demand. Due to its lightweight construction and practical weight distribution this product can be installed even on medium-strength rooftops. Available heat capacity is up to 800 kW under nominal conditions (when Tcond is 45°C, Tamb is 30°C and R1234ZE).



Flat shaped simple construction, assembled with inner grooved copper tubes, aluminum or copper fins and AC or EC fan motor technology. The galvanized steel and powder coated frame can be designed in flat or vertical way.

**CV**

## DESCRIPTION

Wide capacity range air cooled condenser series, Created for small and large refrigeration or air conditioning systems used in commercial and industrial buildings with medium and high power demand. CV series units are ideal when high capacities are required in a limited installation space. This unit is Available heat capacity is up to 1,3 mW under nominal conditions (when Tcond is 45°C, Tamb is 30°C and R1234ZE).

V shaped construction, assembled with inner grooved copper tubes, aluminum or copper fins and AC or EC fan motor technology. The galvanized steel and powder coated frame can be designed in various sizes.





# Gas Coolers

Gas coolers are heat rejection heat exchangers in vapour compression refrigeration systems that use carbon dioxide (CO<sub>2</sub>) as refrigerant. Such products are often chosen for cooling high pressure gases and are perfect for CO<sub>2</sub> systems. Refra gascooler series are designed on the same frame as condensers, but with 7,94 x 0,54 mm tubes suited for high pressures in CO<sub>2</sub> transcritical systems – up to 120 bar. Our gas coolers come with EC fans and aluminum or copper fins. Each unit is pressure tested and shipped filled with nitrogen.

## GF



### DESCRIPTION

Large capacity range gas cooler series, created for large transcritical CO<sub>2</sub> systems with high pressure. Double heat exchanger and double fan row provide large heat capacity within limited placement area, making it perfect for saving space while still maintaining high power. This product is perfect for green and climate-friendly solutions and suitable for commercial or industrial buildings with high power demand. Available heat capacity ranges over 1 MW upon nominal conditions (when  $T_{in}$  is 115°C,  $T_{out}$  is 33°C and  $T_{amb}$  is 35°C and pressure is 91,7 bar).

W shaped large construction, assembled with inner 7,94 x 0,54 mm grooved copper tubes, aluminum or copper fins and EC fan motor technology. The clever frame design also allows for the installation of additional equipment under the gas cooler.

## GV



### DESCRIPTION

Wide capacity range gas cooler series, created for small or large transcritical CO<sub>2</sub> systems with high pressure. This product is perfect for green and climate-friendly solutions and is suitable for commercial or industrial buildings with medium power demand. Available heat capacity is up to 1 MW upon nominal conditions (when  $T_{in}$  is 115°C,  $T_{out}$  is 33°C and  $T_{amb}$  is 35°C and pressure is 91,7 bar).

V shaped construction, assembled with inner 7,94 x 0,54 mm grooved copper tubes, aluminum or copper fins and EC fan motor technology. The galvanized steel and powder coated frame can be designed in various sizes.

## GM

## DESCRIPTION

Wide capacity range gas cooler series, created for small and medium transcritical CO<sub>2</sub> systems with high pressure. Due to its lightweight construction and practical weight distribution this product can be installed even on medium-strength rooftops. This product is perfect for green and climate-friendly solutions and suitable for commercial or industrial buildings. Available heat capacity is up to 500 kW upon nominal conditions (when  $T_{in}$  is 115°C,  $T_{out}$  is 33°C and  $T_{amb}$  is 35°C and pressure is 91,7 bar).

Flat shaped simple construction, assembled with inner 7,94 x 0,54 mm copper tubes, aluminum or copper fins and EC fan motor technology. The galvanized steel and powder coated frame can be designed in flat or vertical way.



# Dry Coolers

A dry cooler is a cooling device that uses air to achieve process temperature regulation. Dry coolers can be programmed to operate year-round, even in environments with low temperatures. These systems are often seen in data processing centers or other commercial and institutional buildings, where excess heat needs to be removed. The benefits of choosing dry coolers include easy installation and low operating costs.

DM



DESCRIPTION

Wide capacity range dry cooler series, which can be used in waterloop systems or as a free-cooling option in chillers. This small to medium capacity product is perfect for small and medium commercial buildings and various supermarkets. Available heat capacity is up to 350 kW under nominal conditions (when ETG is 35%, Tin is 45°C, Tout is 40°C and Tamb is 35°C).

Flat shaped simple construction is assembled with smooth copper tubes, aluminum or copper fins and EC/AC fan motor technology. The galvanized steel and powder coated frame can be designed in horizontal or vertical position.

DV



DESCRIPTION

Wide capacity range dry cooler series, created for small to large refrigeration systems with high power demand. Complete with a double heat exchanger and single/double fan row, this product is a super effective solution, which can provide large heat capacity while being installed in limited space area. For these reasons it is a popular choice for medium to large size commercial and industrial buildings. Available heat capacity is up to 550 kW under nominal conditions (when ETG is 35%, Tin is 45°C, Tout is 40°C and Tamb is 35°C). Capacities up to 1.2 mW can be achieved by ordering a modular DV type with more heat exchangers that are tilted to the side and reduced in length.

V shape construction, assembled with smooth copper tubes, aluminum or copper fins and EC/AC fan motor technology. The galvanized steel and powder coated frame can be made in various sizes.

**DF**

DESCRIPTION

High capacity range dry cooler series, perfect for large industrial refrigeration systems. 4 heat exchangers and double fan row can provide especially large heat capacity within limited placement area, making it the unit with the highest power supply per square meter. Available heat capacity ranges over 1 MW under nominal conditions (when ETG is 35%,  $T_{in}$  is 45°C,  $T_{out}$  is 40°C and  $T_{amb}$  is 35°C).

W shaped large construction, assembled with smooth copper tubes, aluminum or copper fins and AC/EC fan motor technology. The clever frame design also allows for the installation of additional equipment under the dry cooler.





# OEM Heat Exchangers

Refra heat exchanger production line is completed with modern automatic machinery and qualified personnel, allowing us to achieve high quality production process with minimum deviations from designed result. At the customer's request, Refra can design and manufacture finned tube heat exchangers for various application so almost any type of heat exchanger is possible with individual design. We use only certified high quality tubes and aluminum or copper sheets for coil production to achieve maximum reliability. All heat exchangers are tested with high pressure and fit PED (Pressure Equipment Directive) – No. 23/1997/EC.

## Evaporator coil (DX)

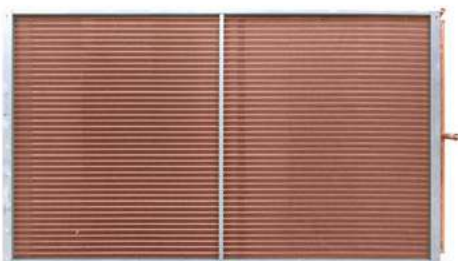


### DESCRIPTION

Refra heat exchangers for evaporators are made of aluminum or copper fins and convert the system's refrigerant liquid to gas. Usually they are used to cool and sometimes dehumidify air. Refra evaporator coils are made using inner grooved or smooth copper tubes, which range from 7 mm to 12,7 mm in diameter. The operating tube pressure reaches 80 or even 120 bar, making evaporator coils perfectly suitable for CO2 systems.

The frame can be made using aluminum, galvanized or stainless steel and can be coated with a special Aqua-Aero anti corrosion protection. Heat exchangers can be manufactured up to 50 kW capacity for both low and medium temperatures.

## Liquid coil



### DESCRIPTION

Refra heat exchangers for liquid can be designed and manufactured to fully meet customer needs. Super flexible options allow Refra engineers to select the optimal circuit arrangement for required capacities, providing the best possible unit performance. The coils can be designed using various diameter smooth copper tubes which extends the power selection options. Assembled with aluminum or copper fins and aluminum, galvanized or stainless steel frame with Aqua-Aero anti corrosion protection. Coils are suited for small to high capacity commercial or industrial refrigeration systems.

## Gas cooler coil



### DESCRIPTION

Refra heat exchangers for gas coolers are made of special K65 copper tubes for high pressures which go up to 120 bar. Such coils are perfect for CO2 systems as they are capable of maintaining the pressure these systems need. Standard units are designed using corrugated fin shape and can be made with aluminum, galvanized or stainless steel frame with Aqua-Aero anti corrosion protection. These products are usually selected and manufactured exclusively according to the customer's wishes.

## Condenser coil



### DESCRIPTION

Refra heat exchangers for condensers are made of copper tubes and convert the system's refrigerant gas to liquid form. Usually they are used for refrigeration equipment as a remote condenser or as a part of a condensing unit. Refra condenser coils are made using inner grooved or smooth copper tubes, which range from 5 mm to 12,7 mm in diameter. The frame can be made using aluminum, galvanized or stainless steel and can be coated with a special Aqua-Aero anti corrosion protection. Heat exchangers can be manufactured from low to high capacities to fully meet customer needs.

# Evaporators

As many refrigeration systems incorporate direct-expansion evaporators, Refra released its own direct-expansion evaporator series, which can be sold separately. Direct-expansion evaporator coils are used in low and medium temperatures refrigeration applications to cool and sometimes dehumidify air.

## EMC



### DESCRIPTION

Wide capacity range EMC series evaporators are the most popular option when choosing evaporator for applications in various supermarkets, cold rooms, warehouses and other premises. They are easy to instal, as well as easy to maintain and clean. Assembled with high quality copper tubes with working pressure up to 32 bars, aluminum fins, AC/EC fans and electric heating elements for defrosting. Fin spacing varies between 3,5 mm and 9,9 mm at Te from +10 oC to -40 oC. These evaporators can also be designed for CO2 systems up to 80 bars on request.

## EMT



### DESCRIPTION

EMT series evaporators are designed with two horizontally arranged coils, which make the frame flat and perfect for large rooms with low ceilings. The evaporator's ability to simultaneously pull and blow air is perfect for large open spaces that require even air distribution. Assembled with high quality copper tubes with working pressure up to 32 bars, aluminum fins, AC/EC fans and electric heating elements for defrosting, this product is ideal for commercial applications in various supermarkets, cold rooms, warehouses and more. Fin spacing varies between 3,5 mm and 9,9 mm at Te from +10 oC to -40 oC. These evaporators can also be designed for CO2 systems up to 80 bars on request.

**EMA**

DESCRIPTION

EMA series evaporators are designed with an extra slim aluminum frame, making it an ideal option for small premises. This compact small capacity evaporator saves space and can be installed in narrow niches. Assembled with high quality copper tubes with working pressure up to 32 bars, aluminum fins, AC/EC fans and electric heating elements for defrosting, this product is ideal for commercial applications in various supermarkets, cold rooms, warehouses and more. Fin spacing varies between 3,5 mm and 9,9 mm at Te from +10 oC to -40 oC. These evaporators can also be designed for CO2 systems up to 80 bars on request.





# COLD ROOM DOORS

Refra produces custom sized cold room doors for refrigerated or frozen food facilities and food production premises. Our products offer superior quality features and are built for unsurpassed energy conservation as well as durability. Thanks to our experience and advanced technology doors are easy to use and effortless to maintain and service.

# Hinged Doors

When thinking about preserving products, one of the first solutions that comes to mind is a cold room. Refra offers one of the most important elements of such premises – cold room doors. Hinged doors can be installed in a range of commercial and industrial premises, because they can be made in various sizes, completely tailored to customer needs. It is also the optimal choice to have the best price-performance ratio. This type of door is best suited for cold rooms that require less frequent access, used for long term storage.

Refra uses a special, high-quality door blade filling technology. The door construction is filled with polyurethane under a heavy press. This way, the polyurethane is distributed completely evenly inside, leaving no gaps and cavities. This prevents cold leakage and the accumulation of bacteria in the premises.

**DP**

## DESCRIPTION

DP series doors are designed for positive temperature cold rooms, that maintain a temperature of 0°C or higher. Injected with 68 mm thickness polyurethane foam these doors can guarantee maximum thermal insulation and protection of premises.

Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Special plastic profile frames help prevent cold leakage and ensure constant cold temperature preservation in the room. Doors are also equipped with a special micro-lift technology and an inside emergency lock.

**DPO**

## DESCRIPTION

DPO series doors are designed for positive temperature cold rooms that maintain a temperature of 0°C or higher. Special door frame is designed for an easy suspended meat-rail use when transporting it in and out of the cold room. Injected with 68 mm thickness polyurethane foam these doors can guarantee maximum thermal insulation and protection of premises.

Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Special plastic profile frames help prevent cold leakage and ensure constant cold temperature preservation in the room. Doors are also equipped with a special micro-lift technology and an inside emergency lock.



**DM**

## DESCRIPTION

DM series doors are designed for negative temperature cold rooms, that can maintain a temperature from 0°C to -40°C. Injected with 92-150 mm thickness polyurethane foam these doors can guarantee maximum thermal insulation and protection of premises. These doors have a parametric sealing gasket with a heating cable that protects the sash rubber from freezing at low temperatures.

Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Special plastic profile frames help prevent cold leakage and ensure constant cold temperature preservation in the room. Doors are also equipped with a special micro-lift technology and an inside emergency lock.



# Sliding Doors

Improper storage can drastically reduce the longevity of fresh produce, meaning more waste and less profit. That's why Refra pays attention to smallest details and produces high-quality doors for cold storage. Sliding doors are one of the most popular choice for cold rooms. Due to the conducive door opening mechanism and design, this type of doors are perfect for narrow corridors and limited space areas. These doors can be manufactured in various sizes and are suitable even for very large premises. Extensive technological possibilities allow the installation of various automatic control solutions, making sliding doors a particularly convenient choice overall.

Refra uses a special, high-quality door blade filling technology. The door construction is filled with polyurethane under a heavy press. This way, the polyurethane is distributed completely evenly inside, leaving no gaps and cavities. This prevents cold leakage and the accumulation of bacteria in the premises.

## SDP



### DESCRIPTION

SDP series doors are designed for positive temperature cold rooms, that maintain a temperature of 0°C or higher. Injected with 68 mm thickness polyurethane foam these doors can guarantee maximum thermal insulation and protection of premises. A special sliding mechanism, made of high-quality aluminum profiles, ensures smooth door movement and convenient access to the premises.

Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Special plastic profile frames help prevent cold leakage and ensure constant cold temperature preservation in the room. Doors are also equipped with a special micro-lift technology and an inside emergency lock.

## SDPO



### DESCRIPTION

SDPO series doors are designed for positive temperature cold rooms, that maintain a temperature of 0°C or higher. Special door frame is designed for an easy suspended meat-rail use when transporting it in and out of the cold room. Injected with 68 mm thickness polyurethane foam these doors can guarantee maximum thermal insulation and protection of premises. A special sliding mechanism, made of high-quality aluminum profiles, ensures smooth door movement and convenient access to the premises.

Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Special plastic profile frames help prevent cold leakage and ensure constant cold temperature preservation in the room. Doors are also equipped with a special micro-lift technology and an inside emergency lock.



## SDM

### DESCRIPTION

SDM series doors are designed for negative temperature cold rooms, that can maintain a temperature from 0°C to -40°C. Injected with 92-150 mm thickness polyurethane foam these doors can guarantee maximum thermal insulation and protection of premises. These doors have a parametric sealing gasket with a heating cable that protects the sash rubber from freezing at low temperatures. A special sliding mechanism, made of high-quality aluminum profiles, ensures smooth door movement and convenient access to the premises.

Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Special plastic profile frames help prevent cold leakage and ensure constant cold temperature preservation in the room. Doors are also equipped with a special micro-lift technology and an inside emergency lock.



# Swinging Doors

Swinging doors are designed for indoor commercial and industrial environments which experience a high volume of people and equipment coming in and out. In fact, many industries can benefit from swinging doors. Refra swinging doors can be manufactured for medium to high volume applications where contact is made with pedestrians, pallet jacks, carts or other types of equipment.

Such doors are vital and typical in retail establishments, supermarkets, restaurants, manufacturing plants, warehouses, healthcare or educational facilities, hotels and many more. Refra pays attention to smallest details and produces high-quality doors, using only reliable parts.

**DF**

## DESCRIPTION

DF series doors are the best option for a quality product at an affordable price. For this reason, this type of door is our best-seller. Standard door surface is made from a painted metal sheet and covered with polyester, but there are possibilities to use stainless steel or fiber glass for better durability. Many different frame types are available and can be made out of a special plastic profile or stainless steel.

The doors are injected with 40 mm thickness polyurethane, using a special high-quality door blade filling technology. DF doors also have protective bumpers, specifically designed to withstand strong impacts. The hinges have a 90° fixation.

**MPD**

## DESCRIPTION

MPD series doors are designed for various industrial and commercial applications. These doors are typically installed as passageways in warehouses, supermarkets and factories to separate premises from temperature changes, humidity, dust, insects, harmful radiation and odors. This is an effective way to insulate the premises without disturbing the movement of people or equipment.

The doors are made from a smooth and flexible 7mm PVC tape which is tensile, impact, UV rays and abrasion resistant. Many different frame types are available and can be made out of a special plastic profile or stainless steel.

**KPD**

## DESCRIPTION

KPD series doors are extremely durable and long lasting. Made from a 15 mm thickness special PE500 plastic, these doors are not only resistant to particularly strong impacts, but at the same time lightweight. The surface has excellent resistance to chemicals, abrasion and a very low moisture absorption.

Many different frame types are available and can be made out of a special plastic profile or stainless steel. The customer can also choose from several door colors to match the interior of the premises. The hinges have a 90° fixation.



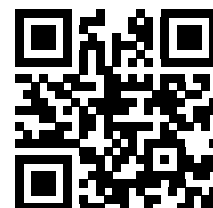


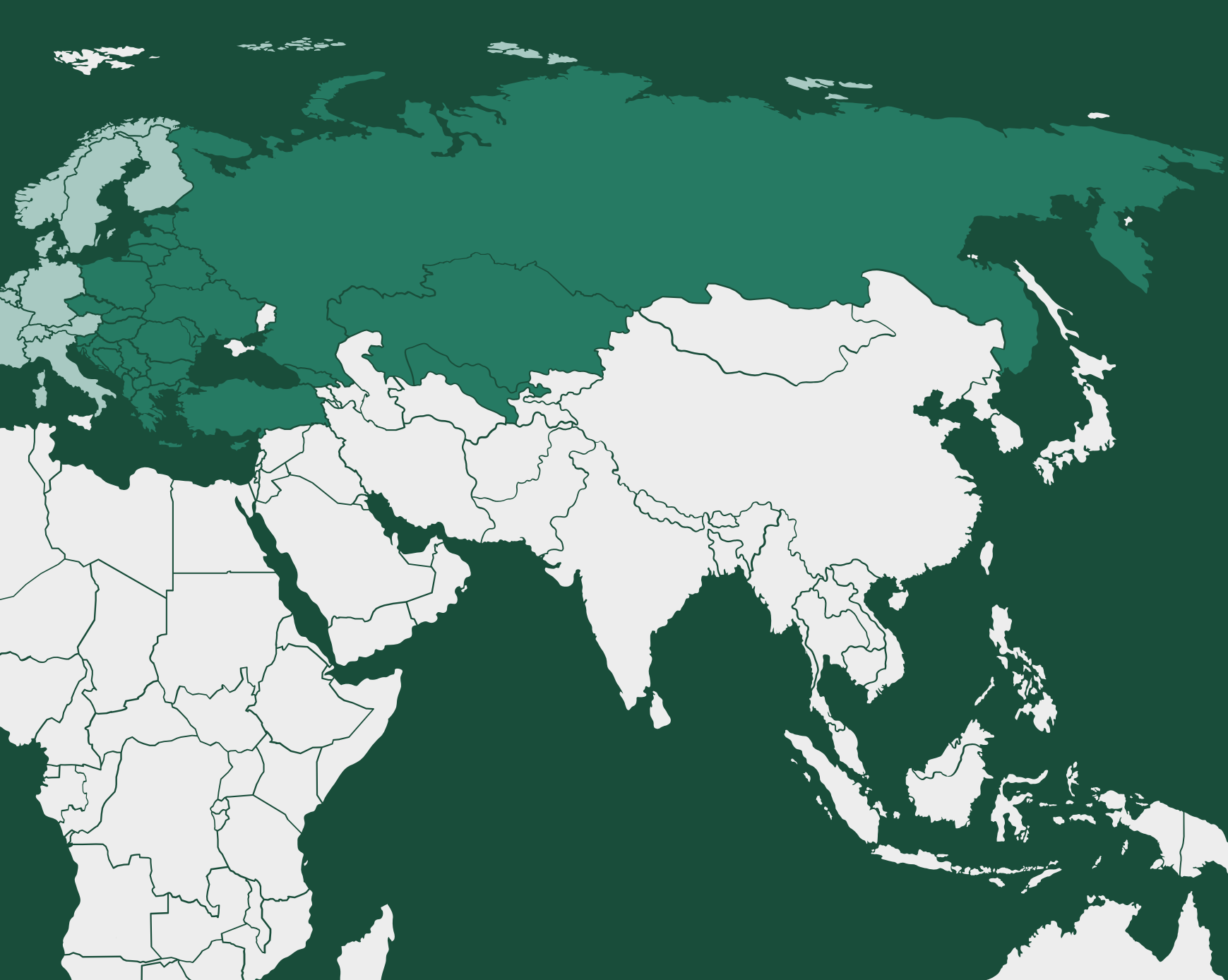
# | Global Recognition

Refra's largest customers and partners are located in Europe, Scandinavia and the Middle East. As sales processes increase, we also receive more and more inquiries from Asia, North and South America, Africa.

Refra has implemented many retail projects across Europe, mainly related to supermarket chains and their warehouses. There is also a growing number of projects to renew old, restricted refrigerant systems by changing them into more efficient CO2 systems.

Browse  
our  
website





## After-Sales Support

Refra team provides assistance throughout and after the sales process. Our relationships with customers are based on long-term cooperation and a responsible approach to customers.

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We can make it simple

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