



### AIR CONDITIONING

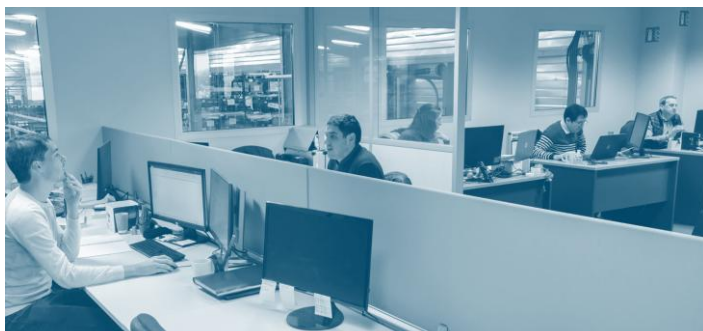


- EXPERTISE
- AIR CONDITIONING PRODUCTS
- COOLING PRODUCTS
- INDUSTRIALIZATION
- SERVICES



### COOLING





### A « cold » EXPERTISE

Since 1989, EURODIFROID has been listening to industrial customers, offering them reliable, efficient, and fast refrigerating solutions.

Our technical sales teams are available to **listen to your needs** and quickly **identify the most suitable solution** (standard product, custom product, required options or accessories, etc.).

Then, based on your feedback:

- We prepare the manufacturing and/or shipping of your device;
- Or, if a more detailed study is required, our engineering team will take over and prepare a technical file to confirm your request before launching production.

As you can see, our job is to provide you with **the right solution to your needs** (technical, cost, and timeframe), and to offer you:

- "Off-the-shelf" solutions that are quickly available;
- Or solutions that are specially tailor-made to specific processes and environments.



### PRODUCT solutions

Do you know all the products we can offer you?



#### AIR CONDITIONING

Cooling the air in a room may seem simple.

However, you still need to consider all the parameters of volume, footprint, configuration, and expected features to find THE right product. Our range is certainly one of the broadest on the market, especially since we offer options and adaptations to meet your needs as closely as possible.



#### COOLING

First, there's the question of "what" to cool?(water, oil, emulsion, preparation, etc.).

Then there are the questions of "how much," "how," "where," and so on! But no need to worry: our solutions are flexible and highly modular, allowing us to adapt to a wide range of business processes.

▶ Follow the leader!

**I want to cool the air in a cabinet**  
( / room / container / rack / bay / shelter...)



**ACTIVE AIR CONDITIONERS**

These devices integrate an active **refrigeration circuit** (with a gas) which "produces" cold

**Side-mounted air conditioners**  
→ « Classic » installation  
[ 0,4 to 25 kW ]  
S **CLX, CLX-EXT**  
+ **CLC, CLC-EXTT, CT-EXTT**

**Top-mounted air conditioners**  
→ For small spaces  
[ 0,4 to 4 kW ]  
S **CTO**  
+ **KB, CB**

**Rack / bay air conditioners**  
→ Ultra compact  
[ 1,5 to 5 kW ]  
S **KCN**  
+ **CIT Split**

**Ductable air conditioners**  
→ Installation with ducts  
[ 1 to 15 kW ]  
S **KR, GR**

**AIR/WATER EXCHANGERS**

These devices will use a **cold water circuit** available at the installation site

**Side-mounted exchangers**  
→ « Classic » installation  
[ 1 to 12 kW ]  
S **TWS**  
+ **KWS**

**Top-mounted exchangers**  
→ For small spaces  
[ 2 to 2,5 kW ]  
S **TFO**  
+ **RFO**

**Rack / bay exchangers**  
→ Ultra compact  
[ 2 kW ]  
+ **ECPO**

**AIR/AIR EXCHANGERS**

These devices will use the **ambient air as a source of cold**

**Side-mounted exchangers**  
→ « Classic » installation  
[ 2,2 to 8 kW ]  
S **CSA**

ACCESSORIES

**FANS**

These optional accessories will improve the **extraction of hot air**

**Side-mounted fans**  
→ Suction fans  
[ 25 to 500 l/mn ]  
S **KVA**

**Top-mounted fans**  
→ Blowing fans  
[ 60 to 100 l/mn ]  
S **TEA**

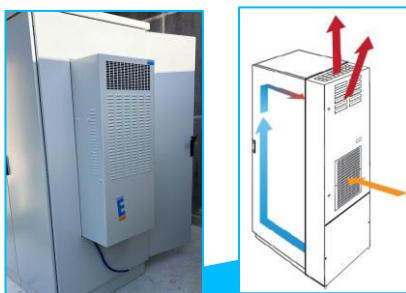
S **STANDARD** = devices available in **short time**, with **predefined characteristics and options**  
+ **SPECIFIC** = devices **tailored to your needs**, to the exact **characteristics of your specifications**

Your configuration not listed in this diagram? Contact us: our teams are here to help!

## Examples of OPTIONS and ADAPTATIONS to your need:

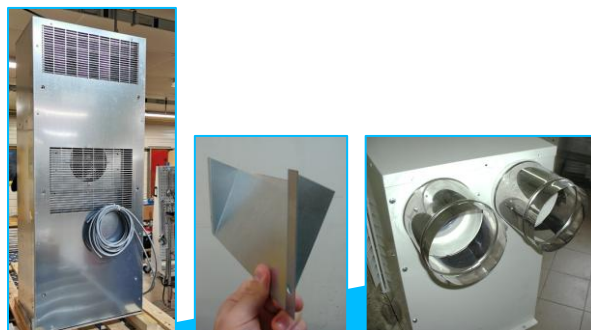
## Outdoor installation

- ▶ Does your air conditioner absolutely have to be installed outdoors? (under cover, through walls, in a shelter, in a container, etc.) We offer devices in the "EXTT" version, specially designed to operate reliably in potentially difficult climatic conditions. On request, we can also strengthen the **IP protection rating** (resistance to solid or liquid bodies) of your device.



## Severe environment

- ▶ **Stainless steel protection:** to withstand aggressive or corrosive environments, we offer versions with **stainless steel bodies** on most of our air conditioners and exchangers;
- ▶ **High ambient temperatures** (+50°C, +60°C, beyond?). We will size the device and its components to ensure its proper functioning, according to your requirements.



## Communication

- ▶ Do you need to **monitor** or operate your device, even **remotely**? Do you want more precise information? The communication capabilities of our devices are constantly being enhanced with new solutions, ranging from simple remote on/off to more sophisticated data exchange protocols (Modbus RS485 or TCP/IP).



## Ergonomics and Mobility

- ▶ Need your device to stay **mobile** and easy to move around your site? Among our options, we can:
  - Provide **adaptation kits** to facilitate installation and assembly;
  - Provide a **quick electrical connection** (Harting type plug) to facilitate handling;
  - Or adapt **casters** (directly to the chassis, or via a transport tray).



## Controlling

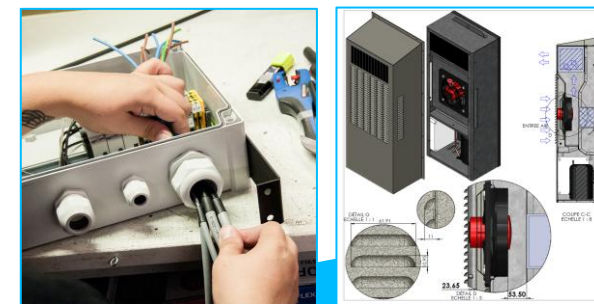
- ▶ We offer different **controlling configurations**:
  - Differential;
  - On outlet temperature;
  - On remote temperature;
  - On incoming signals;
  - In redundancy;
  - By remote controller;
  - etc.
- ▶ As well as many **controlling solutions**:
  - By autonomous electronic regulator;
  - By communicating PLC (Programmable Logic Controller);
  - Via a PLC or external regulator (provision of a functional analysis for interfacing with the customer environment).



## Other needs

These options and configurations are not exhaustive; we can offer you numerous adaptations, such as:


- Special paint;
- Special electrical voltage;
- Specific chassis, size, or configuration;
- Low noise level;
- And many more!





**I want to cool a liquid**  
(water / oil / emulsion / gas...)



**ACTIVE COOLERS**

These devices integrate an active **refrigeration circuit** (with a gas ) which "produces" cold

-  **Coolers**  
→ A single principle, with multiple possible configurations  
[ 0,2 to 280 kW ]
- S **RFC, TRA**
- + **RFC, RFI**
- + **LABO** (special laboratories config.)
- + **ERI** (integration to your frame)

-  « **submerged coil** » coolers  
→ For tanks (oil, emulsion...)  
[ 3 to 15 kW ]
- S **SCI**
- + **SC, RSC**

**AIR/WATER EXCHANGERS**

These devices will use **ambient air** to cool a hydraulic circuit

- Air/water exchangers**  
→ The « full » solution (exchanger, fan, pump, tank)  
[ 0,7 to 10 kW ]
- + **AERO**

- Air/water exchangers**  
→ The « exchange only » solution (exchanger, fan)  
[ 10 to 2000 kW ]
- + **AERO STEFANI**

**WATER/WATER EXCHANGERS**

These devices are particularly dedicated to "end of line" cooling.

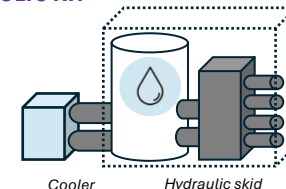
- Echangeur eau/eau**  
→ La solution « classique »  
[ 1 to 200 kW ]
- + **ECH**

ACCESSORIES

**SKID**

A SKID is a module allowing the decoupling of cooling and hydraulic management (water, oil, etc.) (use cases: pooling cooling needs, increasing network inertia, redundancy, modularity, etc.)


- Skid**  
→ For specific hydraulic management  
[ 5 to 80 m3/h ]
- + **HYDRAULIC KIT**
- + **SKID**

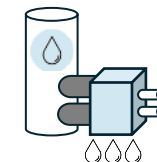


Cooler Hydraulic skid

**GAS DRYERS**

Uses the principle of the active cooler by optimizing the evacuation of condensates (use cases: laboratory, research, etc.)

- Gas dryers** 
- For a « dry » gas  
[ 400 to 1500 l/h ]
- + **SGA**



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## Examples of OPTIONS and ADAPTATIONS to your need:

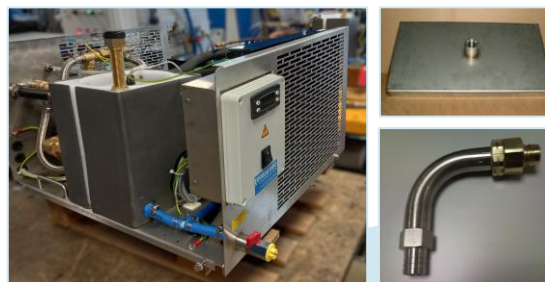
## Water, oil, emulsion...

- ▶ Our coolers are generally designed to cool **water** circuits;
- ▶ However, we offer "**H**" versions on certain ranges, which are then specifically adapted to the cooling of higher viscosity liquids (**oils, emulsions, food preparations, etc.**).



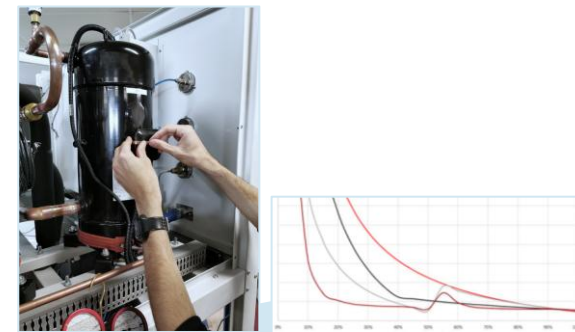
## Severe environment

- ▶ **Stainless steel protection:** to withstand aggressive or corrosive environments, on demand, we can offer versions with **stainless steel parts:** stainless steel plugs, stainless steel tanks...;
- ▶ **High ambient temperatures** (+50°C, +60°C, beyond?). We will size the device and its components to ensure its proper functioning, according to your requirements.



## Energy savings

- ▶ **Water-cooled condenser:** this system **recovers the evacuated heat** and transfers it to a water circuit;
- ▶ **Floating HP:** this option maximizes efficiency depending on the ambient temperature;
- ▶ **Capacity variation:** integrated inverter on the pumps, compressor capacity variation, EC-type fan, etc.



## Low temperature

- ▶ Does your process require **significant cooling** (-20°C, -30°C, -40°C? Even lower? ...).
- ▶ No problem: we can adapt the refrigeration circuit and its gas, the hydraulic circuit and the heat transfer fluid, the regulation... to push the limits of refrigeration!



## Low GWP refrigerant

- ▶ Do you want to comply with or anticipate the implementation schedule for the new **F-gas environmental standards**? We already have everything you need and have been manufacturing devices with **HFO gas** circuits, with very low global warming potential (GWP), for several years now.



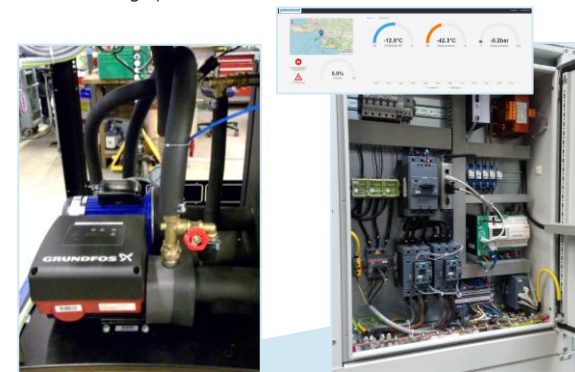
R1234yf

R1234ze

R454c

## Communication

- ▶ Do you need to **monitor** or operate your device, even **remotely**? Do you want more precise information? The communication capabilities of our devices are constantly being enhanced with new solutions, ranging from simple remote on/off to more sophisticated data exchange protocols (Modbus RS485 or TCP/IP, 4G module).



## Examples of OPTIONS and ADAPTATIONS to your need:

## Special frame intergration

- ▶ Does the "cold" solution need to fit into a very **specific device or chassis**? No problem: Some of our ranges are already designed to fit into "Customer" chassis;
- ▶ Do you already have a **component of your refrigeration circuit** (e.g., your specific evaporator, etc.)? We can study any type of adaptation to meet your requirements as closely as possible (size, configuration, interfacing, etc.);



## Special « Laboratories »

- ▶ A **LABO** range specially designed for laboratories/research centers, to meet their specific needs: measurement precision, resistance to corrosive products, low noise level, etc.);
- ▶ Complemented by our **SGA** gas dryer solutions to dehumidify the process and improve instrument reliability;



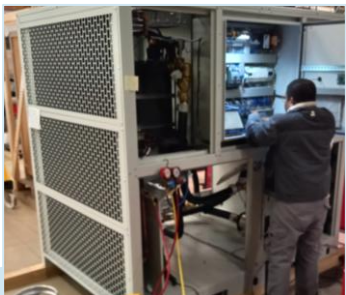
## Hydraulic configuration

- ▶ Multiple **offsets**, multiple **returns**...;
- ▶ T, Q, P\* **instrumentation** and safety devices;
- ▶ T, Q, P\* **motorized** control valve;
- ▶ **Manual** control valve;
- ▶ **Pressurized circuit** vs. open circuit;
- ▶ **High-pressure** hydraulic finishing (crimping, flanges, welds, etc.);
- ▶ **Thermal insulation** adapted to the operating level.



## Thermoregulation

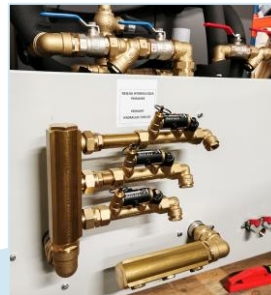
- ▶ Wide **temperature range** (-40°C > +150°C);
- ▶ Combined T, Q, P\* modulation;
- ▶ **Cycling tests** vs. fixed-setpoint tests, ramp settings;
- ▶ **Temperature** control **accuracy** +/- 0.1°C;
- ▶ **Flow** rate control **accuracy** +/- 0.1 l/min;
- ▶ Integrated **heating** management;
- ▶ Various types of **heat transfer fluids**: water, glycol water, lubricating oil, aeronautical oil, Temper, Dynalene, Therminol, etc.



## Other needs

These options and configurations are not exhaustive; we can offer you numerous adaptations, such as:

- Special paint;
- Special electrical voltage;
- Specific chassis, size, or configuration;
- "Defense market" requirements;
- And many more!



\*T = Temperature, Q = Flow, P = Pressure

EURODIFROID,  
is also...



### INDUSTRIALIZING solutions

&



### SERVICING solutions

Beyond a "product," you may be looking for a true **industrial partner** capable of supporting you with **large-scale production** (equipment of machine parks, installation across multiple sites, launch of a new concept, etc.). Being industrialists ourselves, and having achieved rapid and significant growth, we have good experience of ramping up.

Thus, as we already do with some of our clients, we have the **capacity to support you with large-scale production runs**. Our site includes several assembly lines, and our tools allow us to manage all aspects of manufacturing.

We are also available to assist you with:

- **Industrializing an existing device:** our assembly lines are at your disposal!
- **Optimizing your device:** are you using a "cold" solution that you think could be improved? Tell us your objectives (cost, reliability, ease of maintenance, etc.), and we will provide you with an optimization plan (design, assembly, price, etc.);
- Developing **mass production through open orders** (in batches of 5 to 15 pieces per week, or more!): we offer you both visibility and flexibility to support your project.


Becoming a EURODIFROID customer means **access to a whole range of services:**


- **18-month warranty** on all our devices, after delivery;
- **Technical hotline**, for diagnostic help and rapid assistance. Following our discussions, the most effective solution will be proposed to you: intervention at your home (by our technicians or our partners), shipping the device back to our factory (in a dedicated space), sending of spare parts and procedures...;
- **Retrofit** (improvement, upgrade, modification) of your devices, so that they remain adapted to your changing needs;
- **Recovery and destruction** of end-of-life equipment (refrigerants, destruction and recycling of parts, etc.);
- **Spare parts supply** (we physically store nearly 7,000 components on-site!) for maintenance or repair;
- **Rental of additional equipment** to ensure your business continues;
- **Commissioning** to secure installation, connections, adjustments, etc., ensuring your equipment operates at 100% capacity;
- **Training** to support your teams (commissioning, maintenance & preventive maintenance, after-sales servicing and diagnostic assistance, etc.);
- And many other pre- and after-sales services.




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