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Climalife Contact

The European magazine for thermal plant professionals



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Tailor-made assistance.

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Editorial



Delphine Martin
Marketing & Communications Manager - Europe

Fluid environment

We are all currently dealing with climate change. It is a reality for all of us. With long-term performance objectives encouraging continuous growth, Climalife is responding to the environmental challenges.

Reducing greenhouse gas emissions is an ambitious target for which measures and procedures have already been developed. However, the battle against climate change requires going further than this to meet our commitments.

What company operating in the thermal plant market does not find itself today – regardless of the process – taking measures to ensure that its system is better sealed, more energy efficient and more respectful of the environment?

Any procedure to improve the performance of a process is based, above all, on an analysis of the existing procedure, change management and economic, regulatory and safety recommendations. From this point of view, Climalife is responding to these new issues by developing equipment and offering you services adapted to your requirements.

Our experts offer optimum production solutions for emission control operations on thermal installations aimed at optimising waste management ; for manufacturing systems tailored to your process; for the management of technical fluids, the operation and their control.

A responsible company for a fluid environment: It's completely possible!

We hope you enjoy this issue!

9th December 2011: no more brazing with cadmium

On 21 May 2011, European regulation no.494/2011 was published to amend Appendix XVII (point 23 paragraph 8) of the regulation (CE) no.1907/2006 (REACH).

This amendment relates to cadmium and its composites and its use in brazing sticks. This new regulation prohibits the use and sale in Europe of filler material for heavy brazing which includes more than 0.01% cadmium from 10 December 2011.

By «heavy brazing» we mean: an assembly procedure using alloys at temperatures greater than 450°C.



The defence sector and aerospace applications are exempt.

As a result of this regulation, Climalife will stop marketing brazing material containing cadmium before the 9th December 2011.

A comprehensive range of cadmium-free brazing material is already available with similar melting ranges.

The Climalife sales teams are available

to help you select a suitable substitute and assist you in this change.

Find out more on:
www.climalife.dehon.com

FRANCE

Publication of the Decree 2011-396 in amendment to the decree 2007-737

- The BSD waste tracking document is now mandatory!

Decree 2011-396 of 13th April 2011 appeared in the official journal of 15 April, it relates to substances depleting the ozone layer and certain fluorinated greenhouse gases, to biocides and the control of chemical products.

For refrigeration and air conditioning applications, the main change is the removal of the exemption relating to the waste tracking documents (BSD). **The BSD is now mandatory for all used refrigerant fluids (article 3).**

It must be «issued by any person who produces the stated waste, any collector of small quantities of this waste, any person who has reconditioned or transformed this waste or any person storing waste, the producer of which is not known and submitting it to a third party».

The BSD Waste Tracking Document form is available from:

www.cerfa.gouv.fr
www.ecologie.gouv.fr (espace professionnel/formulaires/déchets dangereux [professional space/forms/hazardous waste])

- Brazing operations

Additionally, article 4 of this decree requires that the installation is now performed by a company with a certificate of professional competence. However, it is stated that this operation may be performed by a company certified for heavy brazing, soldering or welding operations on condition that its activity is performed by an operator with the requisite professional competence.

Waste recycling; the European regulations are changing!

Interview with Andrea Voigt, Executive Director of EPEE – The European Partnership for Energy and the Environment.

What is the role of EPEE in the recycling of waste in our sector of activity?

Today, EPEE and its members are determined to reduce the impact on the global climate of refrigeration, air conditioning and heating systems by supporting highly energy-efficient, ecologically and economically viable and safe technologies. To achieve this ambitious target, the association is actively involved in the European regulation process in a global way.

The EcoDesign directive and its implementation measures are one of the main priorities today like the F-Gas and its amendment. EPEE is also involved in the European directives linked to energy efficiency, renewable energy and the treatment and destruction of waste, like for example the DEEE directive, the RoHS directive and many others.

There are currently three key regulations being revised:

- **The DEEE**, directive 2002/96/CE of 23rd January 2003 aims to ensure recovery and suitable treatment of the waste from electric and electronic equipment in order to limit the risks to health and the environment.

- **The RoHS** (Restrictions in the use of certain hazardous substances), directive 2002/95/CE relates to hazardous products contained in the DEEEs and the resources to limit them.

Finally, the so-called **F-Gas** European regulation controls the placing on the market and the use and handling of refrigerant fluids.

In the light of the redrafting of these regulations, what is the position of EPEE and what concrete actions are you taking?

Our industry is monitoring developments relating to revision proposals and changes very carefully. For the purposes of this article, it would be too much to list all our actions and positions. However, what I can say in general, and which applies to any legislative text, is the importance of ensuring that the terms used in the directives are clear and readable in order that misunderstandings and multiple interpretations through the member countries can be avoided. An example linked to the F-Gas Regulation: when is refrigerant considered as hazardous waste? Is it when it is removed from the installation, or is it only when it is transported in order to be regenerated or to be destroyed?

This may vary from one country to another. Improved clarity would make things easier for refrigeration, air conditioning and heat pump professionals in Europe. end of interview. →

EPEE, who are we?

The European Partnership for Energy and the Environment (EPEE) represents the refrigeration, air conditioning and heat pump industries on a European level.

Established in 2000 when the F-Gas regulations were implemented, EPEE has its head office in Brussels. The EPEE group consists of 40 member companies and national associations who produce a turnover of more than 30 billion euros and employ more than 200,000 people in Europe.

The members are major players in the industry and include air conditioning unit, heat pump and refrigeration system manufacturers, plus producers and distributors of refrigerant, etc.

In its role as an expert, EPEE supports safe, ecological and economically viable technologies with the objective of ensuring better understanding of the sector within the European Union and to contribute to the development of efficient European policies.

Its main priorities for the future are:

• promoting energy efficiency in the refrigeration, air conditioning and heat pump sectors by supporting European Union policies designed to encourage the use of more efficient products (for example, eco-design, energy labelling, the Energy Performance of Buildings Directive, ecologically-friendly purchasing policies, the promotion of energy from renewable sources, etc.), and leading to a reduction in CO₂.

• emissions - the promotion of the most efficient and durable refrigerants taking into account the impact of refrigerants on the environment, responsible management, an optimum energy performance and safety of use.

For more information, visit the site:
www.epeeglobal.org



European Partnership for Energy
and the Environment

In addition, our members and a majority of other industrial sectors have invested significant resources into ensuring that hazardous substances covered by the RoHS directive (lead, cadmium, etc.) are not contained in equipment.

We are therefore making sure that none of the equipment in our sector of activity is not excluded from the lists of equipment concerned by the directives and the market rules are complied with in order to achieve the environmental and economic targets.

A third important point is to ensure that the

new regulations are properly implemented. The dilemma today is also the lack of control.

In other words...

How do you incentivise our industry to eliminate systems using hazardous substances, to re-use, recycle and recover waste if the authorities do not penalise those we do not play the game?

EPEE is therefore trying to make the people in the committee responsible for monitoring the market and the members of the European parliament aware of the importance of checking

the implementation and the correct application of the various legislation in order that our industry continues to develop and implement the necessary measures to reduce emissions of CO₂.



Andrea Voigt
Executive Director of EPEE

Hungary

Recap of the regulations: procedure for recovering refrigerant

Refrigerant recovered from thermal plants is considered as hazardous waste, so its storage, processing, transport and disposal are subject to the following current regulations:

- The owner of the waste is the owner of the installation and not the refrigeration company (2000. XLIII. tv. 3.§ f).
- Only certified companies can recover refrigerant from installations.
- The owner of the waste can store the recovered refrigerant for one year at his site (98/2001. (VI.15.) Korm.rend. 10§ 2.); it must ensure that this waste is eliminated, at latest, one year after its recovery (2000. XLIII. 13§, 32.§(6)).
- Only companies with a licence for transporting hazardous waste have the right to carry recovered refrigerant (38/2009.(VIII.7) KHEM rend.).
- The disposal of hazardous waste must be carried out by a company with a license for processing this type of waste (EWC code).
- The owner of the waste is legally (2000. XLIII. tv. 13§) obliged to guarantee that the companies involved in the operations have the necessary licences.
- The process is monitored by a waste tracking document („Sz” Kísérőjegy) (98/2001.(VI.15. 14§(4) and 164/2003.(X.18) Korm. rend.).

In whatever country we are established, Climalife – in compliance with the regulations in force– offers you a complete solution: from the provision of specially-designed bottles up to the disposal of the waste, from the recovery from installations to the regeneration service.

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Fitting and connection.

LDT - La Démolition Technique based at Montreuil sous bois (93) – performs asbestos removal, waste removal, demolition, decommissioning and dismantling at sites with major restrictions, particularly sensitive and very urban sites. The office building located at Coudray Monceau (91) has three floors containing staff from the local conurbation town council.

Company: LDT - La Démolition Technique

Activity: Decommissioning - Demolition - Waste removal - Dismantling - Asbestos removal

Location: Montreuil sous bois (93) - France

Date established: 1993

Personnel: 20



TERTIARY

LDT is outsourcing its fluid recovery operations

For an assignment involving waste and asbestos removal from a working office building, the company LDT called upon Climalife as a service provider for the drainage of air conditioning and heating systems.

Against a background of non-structural demolition, LDT is responsible for waste and asbestos removal in this working building.

After an in-depth analysis of the on-site waste M. Daniel Nogueira, Project Manager at LDT, entrusted Climalife with R-22 refrigerant and MEG glycol water (Monoethylene Glycol) recovery operations due to its expertise in the area.

«The environmental issues are at the very core of our activities» explains Daniel Nogueira. «Before even starting the work, we list all the waste and put in place a means of disposal and traceability right up to the recycling stage, which means employing the services of authorised and certified service providers.»

A two-stage operation

The packaging and equipment required for the operation was supplied that morning and was taken away in the evening, no waste remains at the site. Normal activity continues inside the offices while the installation is drained.

Two Climalife technicians manage the site. Draining the glycol water is performed at several points: on the roof for most of the MEG and on the ground floor for each convector fan in

order to ensure all the coolant is recovered. A total volume of 2m3 can easily be recovered using a specific high-speed pump connected via a long hose to 1000 litre containers positioned outside the building.

At the same time, the refrigeration units located on the flat roof of the building are drained and most of the R-22 is recovered in the gaseous phase. The installation having been switched off a long time before the operation. 300 kg of refrigerant was recovered in the designated 27 litre bottles.

In compliance with the regulatory requirements for traceability and non-discharge into the atmosphere, all the fluid from the system is transported to the site at Bry sur Marne for processing with a BSD (Waste Tracking Document) by type of recovered fluid.

The waste and asbestos removal operations were carried out by LTD after this.



Sampling point - Draining efficiency check.

INDUSTRY

Optimising the degassing procedure at DuPont in the Netherlands.

DuPont Netherlands, owner of one of the largest manufacturing sites in Europe of fluorine compounds, is perfecting its filling process. A successful collaboration between DuPont Netherlands and Climalife resulting in a tailor-made solution, based on efficiency and safety.

Climalife degassing technology used at DuPont

DuPont is a global supplier of chemical products in the areas of refrigeration and air conditioning. The «Loading & Blending» production unit - located at Dordrecht- manufactures fluorinated components, packages them in 900 L containers, or 20 m³ Isocontainers and distributes these products worldwide.

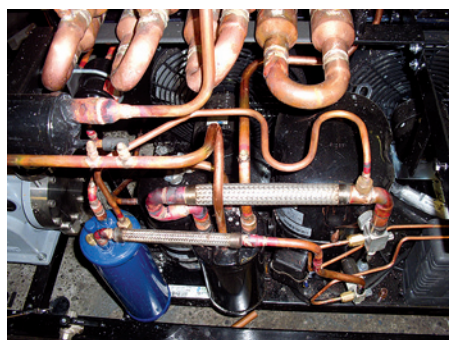
In order to guarantee the quality of its products placed on the market, the content of non-condensable gases (all the components in air) must be checked, in compliance with the ARI specifications.

If the non-condensable gas content is greater than 1.5% after packaging, a degassing operation must be performed rapidly while respecting the environment.



The advantages of Climalife degassing technology:

- Optimum performances: a 3000 W unit can remove non-condensable gases in a 20 m³ ISO container in less than 8 hours.
- Tailor-made.
- Fully automated equipment: stops the degassing operation as per the specifications.



15 years ago, the Climalife engineering team developed degassing equipment for internal use at its industrial sites, with a refrigerating capacity of 400 W. Over the years, the equipment has been developed and perfected with the aim of minimising losses of the product and reducing the environmental impact.

At the same time, there is increasing market demand for this type of equipment, Climalife has therefore decided to develop units for external use, enabling customers to benefit from optimum service

At the start of 2010, the management of DuPont Netherlands became interested in our technology. After an in-depth study of customer requirements, Douglas Irwin, fluorinated products engineer at DuPont Netherlands and Chris Van Der Kelen, Engineering Product Manager at Climalife worked together and developed a bespoke degassing solution with a thermal refrigerating capacity of 3000 W to improve the on-site manufacturing packaging process.

Three months later, the degassing equipment had been installed at the industrial site. With this in mind, ten DuPont personnel were trained by Climalife to use this new technology. After a year's operation, an assessment of the operational performance reveals that the equipment has met all of DuPont's expectations. Thanks to the introduction of this technology, the packaging process was optimised and the investment was rapidly repaid by the time saving resulting from this operation.

As a result of this success, a second project is currently being developed. This involves a degassing unit for flammable refrigerants.



Company: DuPont Netherlands
Activity: Production of refrigerants
Location: Dordrecht manufacturing site, Netherlands
Date established: 1802
Personnel: 58,000 throughout the world

INDUSTRIAL REFRIGERATION

Recovery and regeneration of R-22 for an oil company in Hungary.

The company Climalife, based in Budaors on the outskirts of Budapest, offers a complete treatment solution to an oil company in cooperation with Climalife Belgium. Authorisation and knowledge make all the difference.



In March 2010, the largest oil company in Hungary (refinery) issued a tender for retesting the butane/propane storage tank in Algyő and replacing the refrigeration unit which cooled the storage tank. The customer tendering for the contract contacted Climalife for a proposal for disposing of the R-22 charge which shall be recovered from the system.

or not. Not all recovered fluid can be regenerated, everything depends on its composition.

A mixture of more than one refrigerant means regeneration cannot be performed, disposal is necessary and destruction costs are higher, which is an economic issue when the quantities are large.

de Witte, Sándor Győri and László Juhász, recovered the R-22 refrigerant in the liquid phase using the pneumatic pump. Five containers were filled. They then recovered the rest of the product in the gaseous phase by increasing the pressure above the atmospheric pressure using this recovery machine.

Under this heat and despite the high power of the machine, the men from Climalife must also implement a shading and water spraying system for the containers to prevent an increase in pressure in the packages, which would prevent recovery. Two additional fluid containers were filled. Over two and a half days, more than 5 tonnes were recovered and transported by an approved hazardous waste transporter to Climalife's site in Kakucs.

The traceability of the waste is ensured by the Waste Tracking Document, a copy is sent to the transporter, to Climalife and returned after the fluid is treated at the oil company in compliance with the regulations.

The objective of dismantling the refrigeration installation without R-22 emissions was achieved.

The R-22 was regenerated as per good practice then returned to the market under the name R-22T.

A successful cooperation between the various participants who demonstrated their commitment to protecting the environment with the implementation of an optimum regeneration solution and without the disposal of the fluid as scheduled upstream of the project.



Authorised and certified to treat halogen fluids since the beginning of 2010, Climalife Hungary offers a more comprehensive service. In addition to the recycling of the waste, the solution encompasses the on-site draining/recovery, the provision of specialist materials and containers, the traceability of the fluid, its regeneration and competent staff for implementation.

The oil company accepted this environmentally-friendly solution and entrusted the customer to execute the project working jointly with Climalife.

The first stage involves taking a fluid sample from the installation to determine by chromatographic analysis if the R-22 was contaminated

The chromatographic analysis revealed that the fluid contained in the installation is solely R-22. In July 2010, the operation took place.

To carry out this operation, Climalife called upon its sister company in Belgium to provide a high-speed recovery machine, designed by their engineering department in order to meet the requirements of industrial companies. The quantity of fluid in the installation is difficult to determine accurately on this old system, 10 x 900 litre containers were then supplied to the site plus scales, a pneumatic pump, a mobile air compressor and industrial hoses.

Recovery starts under scorching heat (35°C). The Belgian/Hungarian collaborators - Freddy

Engineering & Services

From the design of the equipment to the implementation of the systems complex maintenance: our experts are here for you!

A specialist in refrigerant fluids for more than a century, Climalife has an engineering and service department whose staff are able to design tailor-made equipment such as recovery stations, charging stations, inversion skids, etc.

Climalife is also the first-choice partner for complex maintenance work from a technical or logistical view point. Our team offers maintenance solutions to improve the energy efficiency of your thermal plants.

Whatever the service, we will guarantee you a single contact able to coordinate all of the operations that need to be carried out. Climalife either takes responsibility for the entire service or intervenes when required in conjunction with your team.

Methods adapted to your requirements!



CONCEPT OF THE GRV (Vacuum Recovery Unit for fluids)

From the design to the manufacture of special systems, Climalife responds to the issues relating to the recovery of refrigerant fluids using the GRV.

The issue is to create a vacuum below the atmospheric pressure and therefore limit greenhouse gas emissions.

Tailor-made, the GRV will meet your requirements by taking into account your safety constraints, your on-site installation, the regulations and your financial constraints.

The GRV enables, in particular:

- to recover, without contamination, the recovered fluid, which may be returned to the installation if its initial quality permits,

- to optimise the manufacturing process for manufacturers/constructors of refrigerating units (repair and recharging of the new unit without removing it from the manufacturing chain),

- - to prevent the shutdown of the cold chain in the event of a leak from an installation - for example, in a supermarket, a rapid intervention with no loss of foodstuffs.

- to reduce system draining and filling time while respecting the environment (e.g.: qualification of refrigerant tanks without any loss of fluid).

The concept of the Climalife GRV encompasses the design, provision of equipment, hoses, the commissioning and training at our industrial sites.



So, how can refrigerant be recovered in record time whilst optimising your process with a zero leak rate?

The GRV is a vacuum recovery unit, which is ideal for this type of operation

The GRV enables recovery at the liquid and gaseous phase of all liquefied gases up to 1 mbar absolute pressure, quickly and efficiently.



New range of mass flowmeter charging stations

Climalife has developed a new multi-function charging station for its OEM customers. These new devices enable the operations described below to be performed automatically and successively from a single connection to the LP and HP outlets on the cold unit.

Sealing tests: pressurise with dry air and/or Nitrogen, Helium up to 80 bar at two setpoints (HP/LP).

Functional tests: bleed the two connection points independently by simulating a programmed leak, if necessary.

Refrigerant charging operation:

- create a vacuum up to the setpoint value,

- fill automatically with an accuracy of +/-1%,

- automatically drain the charging hoses.

It is possible, as an option, to automatically save all test protocol and filling parameters by bar code scanning.

Climalife can adapt its charging stations to any other specific requests.



SKID: A distribution and inversion system

Built from customer specifications, the SKID is a packaging and gas filling machine in the liquid phase, capable of distributing through the network at pressures of between 10 and 40 bar. This may vary according to your requirements.

Distribution is via pumps (one operational and one stand-by) whose output pressure is regulated automatically according to the suction pressure.

The containers are stored on «weighing scales». During the operation, the net weight of each container is displayed so that the remaining capacity can be checked.

Once the operational container is emptied, the PLC automatically switches to the second container without interrupting the liquid phase supply. In the case of installations fitted with remote monitoring: a new container request signal can be sent.

This highly-efficient machine is designed for industrial companies and OEMs to optimise the manufacturing process.

12 litre bottles: three good reasons to choose them!

First distributor to develop solutions relating to the recovery of refrigerants, Climalife offers packaging specially designed for your requirements.

To meet your requirements, Climalife is continually **increasing its stock with more than 10,000 new 12 litre recovery bottles.**

Why choose the 12 litre bottle?

- **cost effective,**
- **small in size,**
- **easy to handle and lighter.**

And do not forget, the 12 l bottle satisfies the requirements of the regulations requiring the recovery of halogen fluids from the first gramme.

«Expert knowledge on the recovery and transfer of refrigerants»

The new brochure on recovery and transfer is a genuine tool for refrigeration, air conditioning and heating technicians. It enables, in a blink of an eye, all of our specialised packaging to be displayed. This document facilitates the choice of packaging for each common fluid and indicates the maximum charge per packaging type depending on the fluid, therefore avoiding any risk of over-filling.

The document also recaps current regulations, the precautions to be taken and the options for regenerating recovered fluids.

Request our brochure form our Climalife sales representative or by e-mail:
contact@climalife.dehon.com

Performax LT:

the best combination to reduce energy consumption and respond to regulatory changes

Against an European political background of reductions in greenhouse gases and energy consumption, Climalife offers you a refrigerant which can achieve these objectives with your installations.

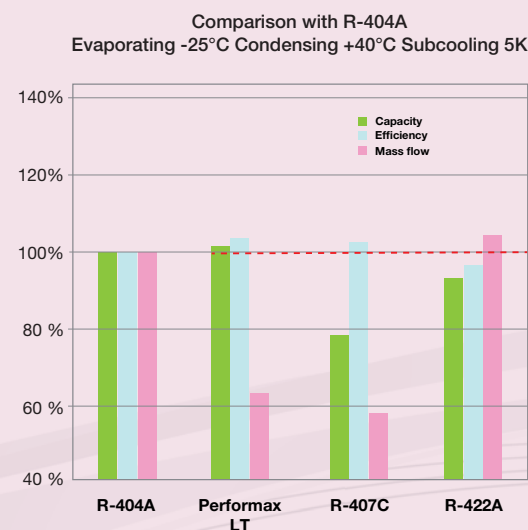
With a GWP of only 1824, (R404A= 3922) **Performax LT** is a new product on the refrigeration market which enables you to reduce your energy bill while reducing your carbon footprint.

Made by R&D Honeywell, this is a HFC fluid designed for commercial and industrial refrigeration applications.

Performax LT can replace R-404A effectively in new and existing installations. It improves the overall efficiency of the system, therefore enabling a reduction in energy consumption and the overall impact on the environment can be reduced. Essential saving in terms of refrigeration for which the energy consumption represents approximately 50% of the impact on the climate.

Choosing Performax LT means:

- improved energy efficiency,
- a reduction in operating costs,
- a reduced carbon footprint.



Dates for your diary!

Belgium

CLIMATECHNO



The industry event in the refrigeration, air conditioning, ventilation and heat pump sector will open its doors on **13th and 14th October 2011** at Brabant Louvain. **The Climalife team** will welcome you at **Stand 084** and introduce its latest environmental innovations: Greenway and Performax LT.

Switzerland

22 Y-Refrigeration Symposium



On **2nd November 2011**, the refrigeration symposium will take place at Yverdon-les-Bains, organised by the ASF (Swiss Refrigeration Association, Romandy section). This event enables the protagonists on the Swiss-Romandy market to meet, exchange and discover the latest technical developments. Salle de la Marive - Quai de Nogent 1. 1400 Yverdon-les-Bains.

Italy

La Mostra Convegno



Climalife shall be present at this international exhibition dedicated to heating, air conditioning and refrigeration professionals. **From 27th to 30th March 2012** at Fiera Milano – **Stand No. F02 Hall 24.**

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Registration newsletter available on 004921507073-12 or infodkf@climalife.dehon.com

France

Cold Energies Exhibition

The next Cold Energies regional exhibitions dedicated to thermodynamics will take place:

- **in Nantes:** on **12th & 13th October 2011**
- **in Toulouse:** **23rd & 24th November 2011**

Pre-register now and obtain your free pass from:
<http://www.energiesfroid.com>

Cold Chain Forum



Climalife will be involved in the 1st Forum expo dedicated to all those involved in the cold chain which will take place on **19th and 20th October 2011** at the Grande Halle de la Villette in Paris.

Interclima



«Interclima+elec», the buildings energy efficiency exhibition will take place on **7th to 10th February 2012** at Porte de Versailles in Paris. Joint the **Climalife team** at **Hall 7.1 Stand F47.**

International

Meet the Galco Climalife team at:

- **AHR EXPO/Chicago** from **21st to 25th January 2012.**
- **ACREX/India** from **23rd to 25th February 2012.**

• **Italia:** dehon service italia - climalife.it@climalife.dehon.com • **Scandinavia:** dehon nordic service - k.nilsson@dehon.se • **Russia:** TeknalyS - info.ru@climalife.com • **Export :** galco - info@galco.be

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Recycling of used technical fluids: an economic and environmental benefit!

Heating

Air Conditioning

Refrigeration



Think about waste recycling facilities for your technical fluids



- > **Regenerating** fluids helps extend the lifecycle of restricted-use fluid-filled equipment.
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- > **Operations on-site** by our qualified teams (collection, dosing, dedicated packaging, pumps, etc).
- > **Industrial sites throughout Europe** authorised and certified for the collection and recycling of waste.



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