

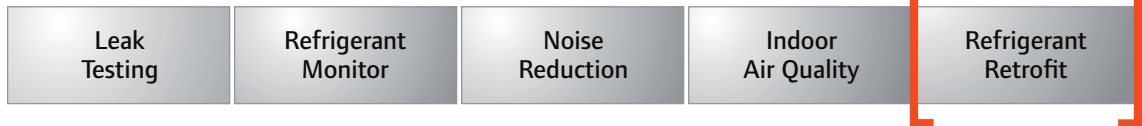


HCFC 22 Refrigerant Retrofit

Trane Care Services



Trane Care customized service solutions for building owners address operating performance, energy efficiency and environmental concerns. Trane refrigerant retrofit is the key to upgrading HCFC 22 equipment and maintaining optimum performance and efficiency.



Complying with international ozone regulations

In the European Union

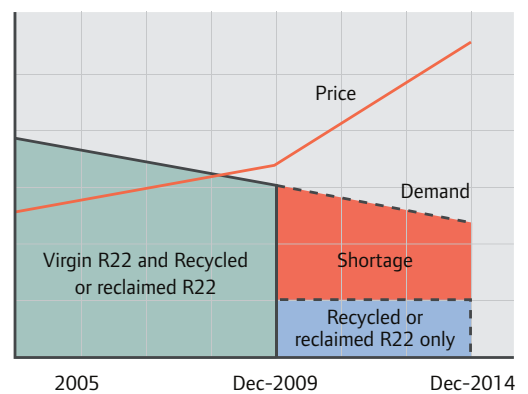
The phase-out of ozone depleting substances, including HCFC refrigerants, is controlled under the EU Ozone Regulation (1005/2009/EC). There are two mandatory dates related to the use of HCFC refrigerants to service existing refrigeration and air-conditioning (RAC) equipment:

- From Jan 1, 2010 it is illegal to use virgin HCFCs to service RAC equipment.
- From Jan 1, 2015 it will be illegal to use recycled or reclaimed HCFCs to service RAC equipment. It is also illegal to stockpile and use any supplies of virgin HCFCs after Dec 31, 2009.

Outside the European Union

For developing countries the production and use of virgin HCFCs will be allowed for servicing existing equipment until January 1 2040, and can be used in new equipment until 2030.

HCFC 22 Availability versus Price



Availability and price (EU only)

HCFC 22 production stopped at the end of 2009. Recycled or reclaimed refrigerant is available but not sufficient, consequently a shortage of HCFC 22 is inevitable and can lead to both unplanned downtime and aggressive price rises.

The limited availability will also increase the risk that certain companies might offer “polluted” or illegally imported virgin HCFC 22. It is, of course, illegal to use such refrigerants and doing so can put your business at risk.

Compliance to global protocols

Trane has always respected the main international environmental agreements and has operated a policy of capturing all refrigerants used in service.

Trane leads the industry in recovering service refrigerants for re-use and environmental conservation.



Retrofit solutions for optimum performance and reliability

Options for HCFC 22 replacement include:

- Retrofit to an HFC refrigerant. This can be an attractive option, depending on equipment type, age and working conditions. Only Trane has the necessary computer based selection tools to do the retrofit properly and ensure the results.
- Keep operating your HCFC equipment after 2015. Trane can advise you on refrigerant containment strategies.
- Replace your HCFC equipment before 2015 with equipment using non ozone-depleting HFCs.

Trane Engineered Retrofit

A Trane engineered retrofit, factory tested and qualified, optimizes your chiller to meet your current operation needs. Performed on site it will restore your chiller to its original state, allowing your system to run at peak performance with ozone friendly refrigerants (R134a, R404A, R407C).

Chiller reliability is achieved by providing materials tested in Trane labs for their compatibility to the alternate refrigerant. This retrofit involves oil changes, rinsing of circuits, adjustment or change of expansion devices, gaskets, unit controls and other modifications.

This retrofit including the optimal selection of refrigerant and oil ensures both energy savings and extended chiller life without the additional costs of a full chiller replacement, this also contributes to environmental protection.

Trane Soft Retrofit

A soft retrofit can act as a bridge to either an engineered retrofit or equipment replacement if fast action is needed due to breakdown or refrigerant loss. In such cases, Trane can provide an economical solution using an alternative refrigerant. The soft retrofit depends greatly on the type of chiller and heat exchangers, running conditions, levels of expected performance and climatic conditions.



The total ban, in January 2015 may seem a long way in the future at this stage, however in terms of financial planning it is a relatively short time. It is therefore important that a refrigerant management plan is developed to transition away from both an environmental and operational point of view.



Trane Care Services

Trane Care offers an extensive array of upgrade products to answer our customers' top business priorities. Because Trane service experts will analyze your objectives, you can trust they will make the best recommendations to meet your building needs.

With Trane Care, let us show you how to enhance your cooling and heating system to like-new performance. Trane Care reliability services reduce the risk of breakdowns, improve operation and extend equipment life.



Reliability



Energy

Trane Care proposes cost effective ways to optimize the energy efficiency of your existing system and generate immediate savings.



Environment

Trane Care service experts can advise building owners and managers on how to manage complex issues such as building carbon footprint, occupational health, comfort, safety and compliance with national and local legislation.

Call on Trane

Call on Trane today and get the expertise of a global leader and its experienced service professionals and resources. With more than 120 locations in Europe, Middle East, Africa and India, Trane has one of the most extensive service networks in the industry.

Our local technicians have:

- Knowledge on the history of your equipment and controls
- In-depth expertise in servicing your equipment and controls
- Access to the latest technology and support

Call us, let's talk.



Trane optimizes the performance of homes and buildings around the world. A business of Ingersoll Rand, the leader in creating and sustaining safe, comfortable and energy efficient environments, Trane offers a broad portfolio of advanced controls and HVAC systems, comprehensive building services, and parts. For more information, visit www.Trane.com.

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.

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