

## PRESS RELEASE

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FOR IMMEDIATE RELEASE **IN THE EMEA MARKET:**

**Marketing contact:**

Daniel Garcia  
Marketing Director  
d.garcia@frigel.com

### **The Evolution of Refrigerants in Chillers. Frigel's Commitment to Safe and Sustainable Cooling Solutions.**

*For the EMEA market*

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#### **Introduction**

The phase-out of high Global Warming Potential (GWP) refrigerants has led to a shift towards alternative gases that meet both environmental and new safety standards. As environmental concerns and regulatory pressures increase, the industry faces significant challenges in selecting the most suitable refrigerants for cooling systems, balancing performance and equipment safety. One of the most discussed topics, when comparing low GWP refrigerants, is the flammability level and the associated regulations.

Frigel, a leading chiller manufacturer based in Florence, Italy, has made a strategic decision in its latest product line, to be launched shortly, offering two distinct refrigerant options: R-513A non-flammable and R290 natural/flammable. This choice reflects our commitment to sustainability, safety, and performance, ensuring that our customers can select the best solution for their needs.

#### **The “Safety” Choice: Non-flammable R-513A**

The large list of advantages of non-flammable over the alternative mildly-flammable refrigerants in chillers, as R454B, are extremely important to understand the choice.

Frigel’s choice: R-513A, is a low-GWP refrigerant, maintaining an A1, non-flammable, safety rating under the ASHRAE 34 Standard. In comparison, R454B maintains an A2L, low flammability, safety rating under the same ASHRAE standards. This fundamental difference in flammability and flame propagation has several implications for the design, operation, and maintenance of chillers.

With this choice, Frigel offers a refrigerant that aligns with current and near term environmental regulations without compromising on safety.

As it is non-flammable, it considerably reduces the risk of fire in the event of leaks or in situations where sparks may occur. This simplifies the design requirements and safety measures that need to be implemented in the installation and operation of chillers.

Another significant advantage is the reduced complexity in maintenance and staff training. When handling a non-flammable refrigerant such as R-513A, technicians do not need special training in handling flammable substances, which can reduce costs and minimize downtime during maintenance.

In terms of performance, although R454B may offer greater energy efficiency in some applications, the difference in performance can be overcome through effective and innovative design.

We may conclude that, chillers using R-513A offer a balance between energy efficiency, safety, and sustainability, making them an attractive option for projects where safety is prioritized without compromising performance.



### **The “Natural” Choice: Propane (R-290)**

Propane, a natural hydrocarbon, presents an alternative with an even much lower GWP than R-513A, making it one of the most environmentally friendly refrigerants available. However, its flammability necessitates rigorous safety measures in the design, manufacturing, and operation of chillers.

Frigel is committed to developing systems that safely accommodate propane, recognizing that the environmental benefits far outweigh the challenges posed by its flammability.

By offering propane as an option, we provide our customers with a truly sustainable choice that supports global efforts to reduce greenhouse gas emissions.

### **The Decision Framework**

Frigel's decision to focus on R-513A and propane was guided by a comprehensive analysis of market demands, regulatory requirements, and technological advancements.

The choice of R-513A reflects our commitment to providing a reliable, non-flammable option that meets current safety standards, while propane represents our dedication to leading the industry in environmental sustainability.

### **Conclusion**

Frigel's latest generation of chillers, to be launched soon, represents a significant step forward in balancing environmental responsibility with safety. By offering both R-513A and propane, we ensure that our customers have access to cutting-edge solutions that meet their specific needs, whether they prioritize safety or sustainability. As we continue to innovate, Frigel remains committed to delivering high-performance chillers that align with our values and the evolving needs of the global market.

### **About Frigel**

Founded in Florence, Italy, Frigel is a pioneer in the chiller manufacturing industry, known for its innovative solutions and commitment to sustainability. With a focus on quality and performance, Frigel is dedicated to providing advanced cooling technologies that meet the highest standards of environmental responsibility and safety.

## ABOUT THE FRIGEL GROUP

Frigel is much more than a manufacturer of cooling and temperature control systems. We are technical consultants with the ability to identify the best solutions, in terms of performance, efficiency, environmental impact and to calculate the return on investment for each individual application.

We offer solutions calibrated to the needs of each customer by studying innovative solutions, carefully designed and fully supported, to obtain the best results which are verifiable in terms of productivity, efficiency, quality and precision. Seven production sites worldwide: Europe (Florence and Padua), America (USA), Asia (Thailand and India). Four commercial branches (Germany, Poland, Italy) and 51 distribution service points (a worldwide network of agents and distributors).

With more than 40 years of experience in industrial refrigeration, filled with innovative solutions and breakthrough technologies, Frigel has built a broad know-how in different industry sectors and a solid position in the refrigeration market. In Frigel, we are experts in refrigeration, but in our technical choices, there is always the premise of combining the improvement in performance with an indispensable reduction of the environmental impact. Sustainability is today a crucial principle of our ability to imagine and innovate. This is in Frigel's DNA.



FRIGEL FIRENZE S.p.A.

[www.frigel.com](http://www.frigel.com) [marketing@frigel.com](mailto:marketing@frigel.com)