

VMA presents new environmentally-friendly ammonia-based refrigeration system on this World Refrigeration Day

Brussels, 26 June 2023 – World Refrigeration Day

VMA, a subsidiary of the multidisciplinary CFE Group, has developed a new sustainable ammonia-based cooling technology which it is eager to present on the World Refrigeration Day. The present cooling systems are energy-intensive and environmentally harmful. Refrigeration is the second largest source of energy consumption, and the gases used contribute to global warming and damage the ozone layer. Ammonia is a sustainable and powerful alternative with a greater cooling capacity. It is safely applied using modern technologies. Today VMA primarily implements ammonia refrigeration in supermarkets, but plans to roll out the technology to other sectors.

"With the thermometer showing temperatures above 30 degrees for several days now, we are probably more aware than usual of the importance of cooling," says Guy Wynendaele, CEO of VMA. "We use air conditioning to keep our homes and offices cool, refrigerators keep our food from going bad, while large industrial installations ensure that food can be produced in safe conditions and temperature-sensitive medication can be stored properly. But have you ever stopped to consider that the technologies we use for all those appliances and systems actually speed up the global warming process?" Guy goes on.

The aim of World Refrigeration Day is to draw attention to this issue and to give a forum to companies that offer solutions.

Refrigeration is the second largest source of energy consumption

The problem is twofold. First, the current appliances and systems are hugely energy-intensive. On average, the capacity of one and a half nuclear power stations is needed today just to keep the refrigerators, air conditioning units and industrial cooling installations running. Refrigeration is the second largest source of energy consumption in this country after the chemical industry. Secondly, the gases and liquids used today to get or keep the temperature down are very harmful to the environment. Freon is probably the best known refrigerant. This substance is one of the main causes of ozone depletion.

"So if we stick with the conventional refrigeration techniques, we need to keep generating huge amounts of energy, often using fossil fuels which, together with freon, only speed up the global warming process," Dominique Köttgen, Site Manager VMA Refrigeration, concludes.

Ammonia: sustainable and powerful alternative

Ammonia can be used as an alternative to freon and other environmentally harmful refrigerants. In the nineteen fifties and sixties, ammonia was already being used in the first refrigerators. However, ammonia is highly flammable and toxic for humans and animals. The techniques available at the time were inadequate to properly control those hazards, and for that reason the switch was made to freon. *"The modern techniques that VMA Refrigeration has recently developed allow ammonia to be used safely,"* says Dominique Köttgen.

Ammonia has a greater cooling capacity than other refrigerants. Accordingly, less electricity is needed to keep temperatures low. Ammonia is also a substance that occurs naturally. It is found in the manure that farmers use on their fields. The substance breaks down naturally and is therefore 100% green, and should not be confused with the cleaning product ammonium hydroxide, an ammonia derivative that is mixed in gaseous form with water.

Ideal for supermarkets and large companies

Dominique Köttgen: *"In theory, the technology can be used for all small and large-scale cooling applications. VMA is first rolling out ammonia-based refrigeration in the retail industry for cold storage units and refrigerators in shops. So far, VMA has already installed the new cooling technology in dozens of supermarkets."* Last week, VMA delivered its latest project: the fully refurbished AD Delhaize in Soumagne. In this supermarket, VMA installed all sorts of energy-friendly techniques, including fridges that run on ammonia.

VMA intends to serve other industries as well in the future and to scale up the ammonia technology, although the shortage of qualified engineers obliges it to go slowly.

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About World Refrigeration Day

World Refrigeration Day is an annual event that takes place on 26 June to highlight the important role of refrigeration and air conditioning in our daily lives. Its aim is to create awareness of the significance of refrigeration in various sectors, such as food storage, health care and technology. On this day, events and initiatives are organised worldwide to emphasise the benefits of refrigeration, as well as the need for sustainable and energy-efficient solutions. World Refrigeration Day also encourages knowledge sharing and innovation to address the challenges in the field of refrigeration and to create a better future.

About VMA

VMA, a division of the multidisciplinary industrial group CFE (www.cfe.be), has a workforce of 1,050 enthusiastic employees who together realise more than 250 million euros revenue. The Industrial Automation activity is flanked by the Building Technologies segment. It designs, installs and maintains all technologies in buildings and implements building management software to improve user convenience. This segment also monitors and analyses all data such as energy consumption through its VMANAGER business unit (www.vmanager.be) in order to facilitate the necessary energy transition.

About CFE

CFE is a multidisciplinary group active in Belgium, Luxembourg and Poland in four core activities with a significant growth potential that shape tomorrow's world: real estate development, multitechnics, construction & renovation and sustainable investments. With a turnover of 1,200 million euros, more than 3,100 employees and long experience and expertise gathered since its foundation in 1880, the CFE group has the ambition to challenge the status quo and create positive change by providing a successful answer to environmental and societal challenges to ensure the well-being of future generations. The group realises this ambition by putting sustainability, innovation and respect for its employees at the heart of its strategy and by offering its clients total solutions.