

## Sustainable cooling solutions:

# IceCool International BV, first manufacturer to deploy Solstice® L40X on a large scale at Feihl Bäcker

### CATEGORY:

Commercial Refrigeration

### THE CONTEXT:

Shortly after the entry into force of the EU F-Gas Regulation, the German Bakery Feihl decided, in 2016, to build a new facility in Neumarkt to expand their production site. Using a refrigeration system operating with a low global warming potential (GWP) refrigerant was a priority for the Bakery, given that the HFC phase-down particularly impacts refrigerants with a high GWP. Feihl Bakery tasked the company IceCool to develop and install an eco-efficient refrigeration system. After the presentation of several alternatives, Feihl decided to use a Solstice® L40X (R-455A) system.

### SUSTAINABLE COOLING SOLUTION:

- System with 16 independent condensing units installed outside the building with a total cooling capacity of 320 kW. In total, 480 kg of R-455A were charged into the different units that supply two freezers with an evaporation temperature at -42°C, three freezers at - 28°C and 11 cooling installations at -8 °C / -10 °C.
- Due to the A2L (low flammability) classification of R-455A, IceCool was in contact with local authorities and worked closely with the certification body TÜV and Energie Consult Holland to carry out the project and meet the requirements of the regulations in force.
- The installation is equipped with evaporators and condensers specifically selected by the manufacturer Güntner, to allow for the temperature glide of R-455A to be managed without any difficulty. The cooling process ensures that the dough rises within 24 hours. This process is carried out at a temperature of +/-0°C and is fully automated.

### BENEFITS:

- Low GWP refrigerant, excellent thermodynamic characteristics and lower installation and operating costs compared to CO2.
- The choice of R-455A has the added advantage of reducing the number of leakage tests to once a year for both freezers and is not necessary for other refrigeration installations with a charge of less than 5 CO2 tonne equivalent.

With a GWP of 148, R-455A meets the requirements of the F-Gas Regulation and offers a long-term solution for new installations. Its low flammability, high energy efficiency, high critical temperature and low critical pressure are significant advantages for freezing and refrigeration applications.



**TOPIC:**

- Energy Efficiency
- Refrigerants

**GENERAL INFORMATION**

**NAME OF THE COMPANY:**  
CLIMALIFE

**CONTACT PERSONS:**  
Emilie Kugener

**HYPERLINK TO LEARN MORE ABOUT SUSTAINABLE COOLING AND HEATING SOLUTIONS:**  
<https://climalife.dehon.com/icecool-international-solstice-l40x-feihl-backer>

The 'climalife' logo is written in a bold, blue, lowercase sans-serif font with a registered trademark symbol.