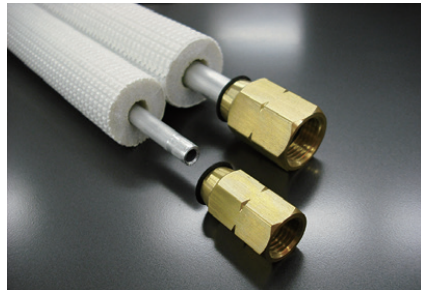


## MARKET NEWS

### Inoac Aims to Sales Expand Aluminum Refrigerant Tubes and Conic Joint

Inoac has a long-standing sales partnership with a major Turkish air conditioner manufacturer for aluminum refrigerant tubes and their special joints, Conic Joint, for air conditioner installing. For over eight years, these aluminum refrigerant tubes and joints have been used in more than 2.5 million air conditioners, and no leaks or other major problems have occurred to date.



Inoac aluminum refrigerant tube and Conic Joint

There are two major advantages to using aluminum refrigerant tubes. The first is that their weight is one-third of that of copper, making them easier to handle. The second is cost benefits. Currently, the London Met-

al Exchange (LME) price of copper is around US\$ 10,000/ton, while aluminum is about one-quarter of the price at US\$ 2,500/ton. Forecasts indicate that the price of copper will rise to US\$ 12,000/ton around the end of the year, and it is expected that the cost benefits will be even greater in the future.

Aluminum is said to have inferior tensile strength and elongation compared with copper, and is said to be difficult to flare, and to pose a risk of galvanic corrosion when connected to copper joints. However, by using Inoac's Conic Joint, a patented special joint, flaring and torque management are no longer necessary, making it possible for anyone to connect aluminum tubes. Also, by attaching an insulating O-ring to avoid direct contact with aluminum and copper, this prevents galvanic corrosion.

These features of the Conic Joint have earned the trust of major Turkish manufacturer, and Inoac has been supplying Conic Joint for aluminum refrigerant tubes to the market for a number of years. This easy-to-handle Conic Joint for aluminum refrigerant tubes was also extremely helpful in installing air conditioners in temporary housing following the huge Turkish earthquake that occurred in February 2023. Currently,

some aluminum refrigerant tubes are being trial-introduced in Europe. Inoac is aiming to further expand sales of their aluminum refrigerant tubes and Conic Joint, and its long track record in Turkey and its ever-expanding cost benefits are key assets.

### Carrier Launches Updated Line of WeatherMaker Rooftop Units

Carrier's award-winning line of WeatherMaker single-packaged rooftop units now come with more environmentally sustainable R454B refrigerant, known commercially as Puron Advance.

The all new Puron Advance 48FE gas heat and 50FE cooling only WeatherMaker models feature Carrier's refrigerant of choice for light commercial and residential applications, Puron Advance. This refrigerant, which has a global warming Potential (GWP) of 466 offers a 75% reduction from R410A and does not have an ozone depleting potential (ODP), was selected, based on the United Nations Montreal Protocol Kigali Agreement phasedown plan, as one of the best solutions to minimize environmental impact while providing longevity.

The new WeatherMaker models include patented EcoBlue vane axial fan technology for improved performance and reliability. This award-winning fan design decreases maintenance and installation costs as compared with prior designs and allows for cabinet sizes to remain the same — simplifying rooftop replacements.



Carrier WeatherMaker single-packaged rooftop units with R454B refrigerant

Carrier's 48/50FE WeatherMaker products are currently offered in 3 to 6 ton sizes with larger tonnages and 50FEQ heat pump models expected mid-year. Carrier will move to an R454B exclusive lineup for light commercial products, including its high efficiency heat pumps, hybrid heat models and high outdoor air systems, by year's end. All products are expected to launch well in advance of the January 1, 2025 Environmental Protection Agency (EPA) regulatory deadline.

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