



For Immediate Release

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Carrier Transicold NEOS™ 100 System Selected by Petit Forestier for Zero Emission All-Electric Vans

WARRINGTON, England, August 20, 2018 — Rental specialist, Petit Forestier, has chosen Carrier Transicold's ultra-slim NEOS™ 100 system as the refrigeration unit for five new all-electric Renault Kangoo vans. [Carrier Transicold](#), which operates in the UK as Carrier Transicold (UK) Limited, is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp. (NYSE: UTX).

The new car-derived refrigerated vans equipped with the all-electric NEOS 100 systems support Petit Forestier's plans for commercially viable solutions to adhere to the UK's tightening emissions legislation, as well as showcase the company's approach to addressing environmental concerns within the industry.

"The all-electric NEOS refrigeration system is the ideal choice for helping us create a genuine zero-emissions electric vehicle with enough range to carry out most urban delivery operations," said Pat Skelly, managing director, Petit Forestier. "The NEOS system also uses a refrigerant with a lower global warming potential (GWP), requiring a smaller charge and exceptional containment."

The roof-mounted, 12-volt NEOS 100 unit is simple to maintain. Its monoblock construction comes pre-charged from the factory with less than 1kg of R134a refrigerant, which has a GWP of 1,430 – which is a 50 per cent lower GWP than R452a and 174 per cent lower than R404a, the two main refrigerants used in the refrigerated transport industry.

The unit's design avoids the need for assembly in the field and the use of open road compressors, which can both increase the risk of gas leakage in operation. The NEOS system also features an ultra-slim profile, helping to improve vehicle aerodynamics and thus range of use.

A key factor for Petit Forestier's selection of the NEOS system was its all-electric architecture, having been designed to run entirely on electric power derived from the vehicle's alternator. As the new, electric Kangoo vans do not use an alternator, the NEOS units are powered by an autonomous lithium-ion power source supplied by Perpetual V2G Systems Ltd.

"Using a standalone power source for the NEOS units provides up to seven hours of cooling power – depending on the use and application of the vehicle – and a range of around 110 miles," continues Skelly. "If we were relying on the vehicle batteries to drive both the van and the fridge, the range plummets to just 60 miles – which wouldn't be sufficient for many applications."

The evolution of lithium-ion battery technology – both for the vans and as the power source for the refrigeration system – was another key factor behind Petit Forestier's specification of these all-electric vehicles. Perpetual's batteries, charged separately through their own charging point, are small, light and clean, meaning they can be incorporated within the vehicle with minimal impact.

Petit Forestier is using one of the five vehicles as a demonstrator, with the remaining four to go onto longer term trials with key customers. Originally intended as the ideal solution for London's Ultra Low Emission Zone (ULEZ), Petit Forestier has also seen keen interest from customers operating in Bristol and Oxford city centres. Petit Forestier plans to add to the initial five small vans over the coming months, with a larger 3.5 tonne electric vehicle and an 18-tonner planned for later this year.

"We want to be at the forefront of more eco-aware refrigerated transport," Skelly said. "This is just one of a number of steps we're taking to position Petit Forestier as early adopters of realistic alternatives to fossil fuels that will help tackle the toxic emissions in our cities. Carrier Transicold and Perpetual's support in making this project a reality has been tremendous. They understand the challenges and want to help us make a real impact."

For more information on Carrier Transicold and its products and services, visit www.carriertransicold.co.uk. Follow Carrier Transicold on Twitter: [@SmartColdChain](https://twitter.com/SmartColdChain).

About Carrier Transicold

Carrier Transicold helps improve transport and shipping of temperature-controlled cargoes with a complete line of equipment and services for refrigerated transport and cold chain visibility. For more than 45 years, Carrier Transicold has been an industry leader, providing customers around the world with advanced, energy-efficient and environmentally sustainable container refrigeration systems and generator sets, direct-drive and diesel truck units, and trailer refrigeration systems. Carrier Transicold is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide. For more information, visit www.carriertransicold.co.uk. Follow Carrier on Twitter: [@SmartColdChain](https://twitter.com/SmartColdChain).

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