

COOL
by

Carrier



COOLNOVATION



Top Tech

- **Microchannel** on Vector 1950. Microchannel heat exchanger coils allow the condenser to be smaller and lighter while being more efficient. Vector 1950 reaches an impressive high capacity with 18 800 Watts, a 4% increase compared to Vector 1850.
- **High capacity** Supra range. Extended with three high capacity models, the Supra range is available up to 12 000 Watts. New fans increase airflow by 24% for quick temperature recovery and improved air management. The use of a 7 mm condenser and smaller compressor improve the units efficiency thanks to lower fuel consumption per Watt delivered.
- **E-Drive** technology on Vector and Pulsor. By removing mechanical transmissions and transforming engine power into electricity through a generator, the units show faster pull-down, precise temperature control within +/- 0.3°C and constant heating capacity.
- **Inverter** on Pulsor. Combined with E-drive and a variable speed hermetic compressor, it provides full refrigeration capacity at low speeds for “constant cold” during transportation.



New Vector 1950 featuring microchannel technology



Top Tips

Having respect for your cold chain ensures your goods are delivered fresh to your customers, everytime and anywhere.

- **Best loading practices:**
 - Before loading: clean and check the equipment, pre-cool the body, set the right temperature
 - Loading: respect correct temperatures, respect airflow, separate goods
 - After loading: stop the unit when opening doors, use door switches
 - Use temperature recorders to monitor the cold chain
 - Follow the temperature with real time monitoring on the web

ECONOVATION



Top Tech

- **Inverter** on Pulsor. The inverter regulates the power delivered to the compressor according to refrigeration needs, the compressor always works within its envelope minimising possible breakdowns. The Pulsor unit enables a 20 percent reduction in fuel consumption during pull down.
- **Economizer** on Vector 1550. Combined with an hermetic compressor, it allows the use of a 1.5 litre diesel engine. This results in up to a 40% increase in refrigeration capacity during pull-down. By delivering adequate capacity according to the refrigeration phases, energy consumption is drastically reduced.
- **E-Drive** technology removes mechanical transmissions and a large number of serviceable parts from the refrigeration cycle, reducing maintenance and downtime. A large UK retailer operating a fleet of 700 Vector-equipped trailers showed 99.4% on-the-road availability.
- **Microchannel** on Vector 1950. It allows the fuel consumption per Watt delivered to be significantly reduced with a 10% reduction in average on the range. The compact design enabled by this new feature shows a 17% reduction in refrigerant charge.



New Pulsor range for constant cold



Top Tips

Keeping your cold chain cost effective is a major challenge. While on the road, it's important to minimise energy consumption while maintaining performance.

- **Prepare transportation :**
 - Make sure boxes are undamaged to avoid cold air to seep out quickly and have the motor run more frequently
 - Use partition walls to cool loads individually and enable return packaging to be kept aside
- **Make the best usage of your refrigeration unit:**
 - Use the built-in standby to reduce energy consumption when parked, or during loading and unloading
 - Use the control system to select the setting adapted to the load transported (Ecofuel, Intellisat, Opticold...)
- **Maintain the unit**
 - Perform preventive maintenance before entering busy periods and intensive usage to ensure your equipment is ready
 - Regularly maintain your refrigeration unit following the number of running hours to avoid breakdown and allow for adjustments

GREENOVATION



Top Tech

- **Night deliveries** with Supra City. Latest addition to the City Line, the Supra City unit's lower noise levels have been achieved thanks to a specific design developed to reduce noise emissions. The unit is Piek compliant.
- **<60 decibels** with Vector City. Available in single temperature with standard nose-mount mounting and in multi-temperature version, the units are certified compliant with Piek standards.
- **Low emissions** on Supra City Z. By removing the diesel engine, the Supra City Z unit relies on the Euro V-compliant truck engine for power and helps to reduce emissions of nitrogen oxide (NOx), carbon monoxide (CO), hydrocarbons and particulate matter.
- **E-Drive** technology on Vector and Pulsor. With fewer parts, E-Drive all-electric technology cuts refrigerant leaks compared to belt-driven systems. Combined with low fuel consumption, Vector 1550 reduces its carbon impact by up to 35% - the equivalent of removing 2.8 tons of CO₂ per unit per year.



New Supra City below 60 decibels



Top 3 Green Issues

- Sustainable development is an important concern for the transport refrigeration industry, with legislation across Europe continually evolving to require more restrictive norms.
- **CO₂ emissions**
 - Local initiatives are emerging for CO₂ emissions from the engines: Energy label in Germany, Energy certificates in France. No European regulation yet.
 - Emissions relating to refrigerants follow the F-Gases regulation. Part of the measures comprise: labeling of equipment, training and certification of personnel and companies, containment and proper recovery.
 - **Noise emissions**
 - The Netherlands created the Piek standards in 2003. Noise levels during night deliveries (from 10:30 p.m. to 7:00 a.m.) must not surpass 60 decibels. Projects have since come to fruition in other countries including France, the UK, Spain and Germany.
 - **Particle emissions**
 - To control particle pollution (nitrogen oxide, carbon and hydrocarbons), Low Emission Zones (LEZ) have been created and enforced in 10 countries in Europe already. Access is restricted for polluting vehicles.

SERVICE



Around-the-Clock Service

- **Service center locator.** Thanks to our service application for smartphones, you can quickly and easily locate and contact your nearest service centre. The ideal tool for maintaining the cold chain of temperature-sensitive products.
- **Expert technicians.** With around 1700 technicians across the largest network with 550 regional centres in Europe, Middle East and Africa, Carrier Transcold is ready to help you maximise uptime.
- **Regular training.** Our technicians are certified and regularly trained in the installation, maintenance and repair of all Carrier Transcold refrigeration products.
- **24/7 assistance.** Call us any time you need assistance. And with a 24 hour, 7 days a week hotline available in 17 languages, we're ready for any emergency, wherever you're located.



New service center locator for smartphones

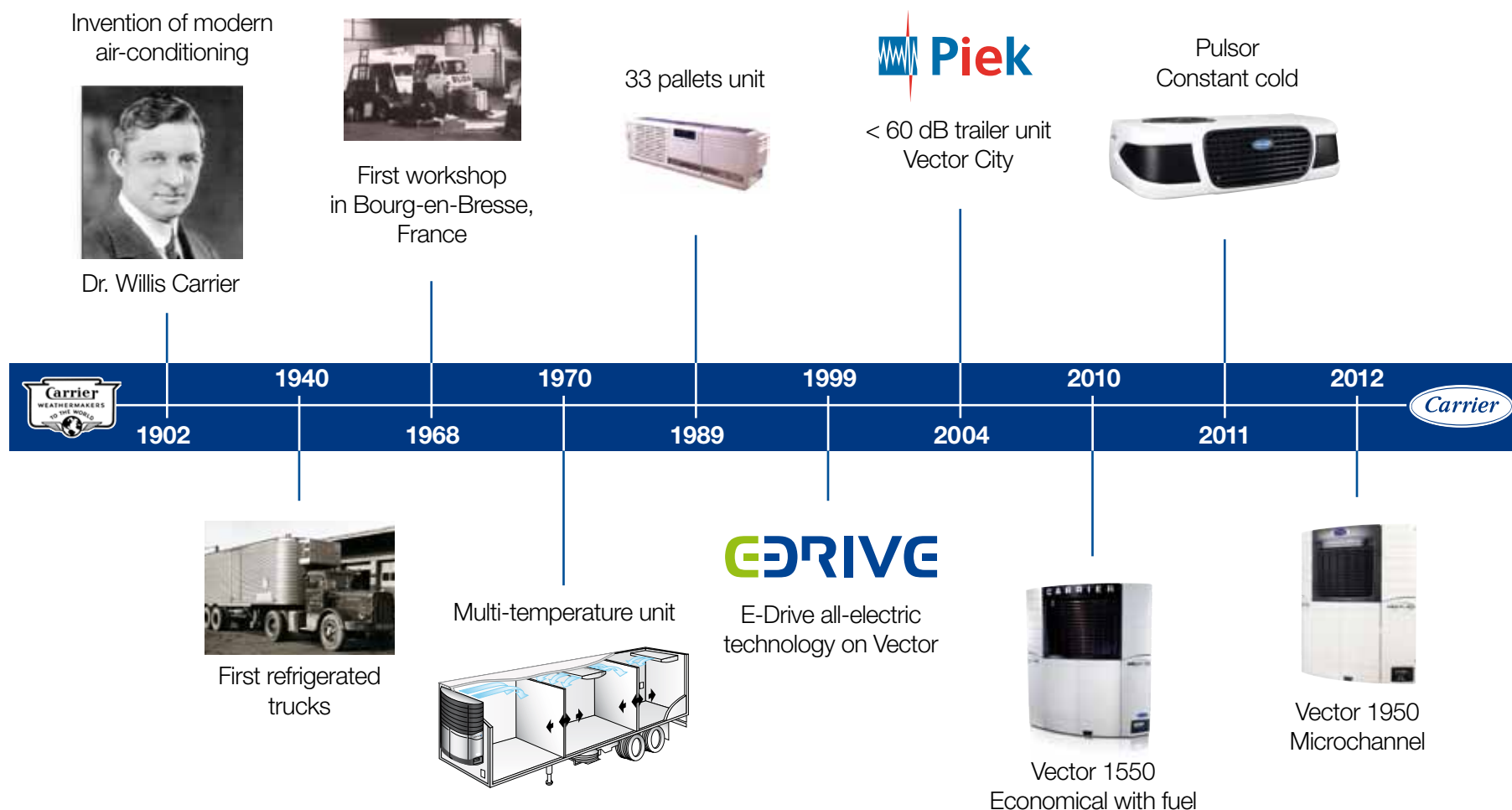


110 years of innovation

Building on The Past. Creating a New Future

It was back in 1902 when Dr Willis Carrier invented modern air conditioning. Since then, the company he created has been consistently innovating in refrigerated technology for buildings, refrigeration and trucks.

From the first multi-temperature unit in 1970 to the super efficient E-Drive technology in 1999 and revolutionary constant cold Pulsor technology in 2011, Carrier Transicold continues to redefine the cold chain. Cool by Carrier.



Discover Cool by Carrier : www.coolbycarrier.com

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