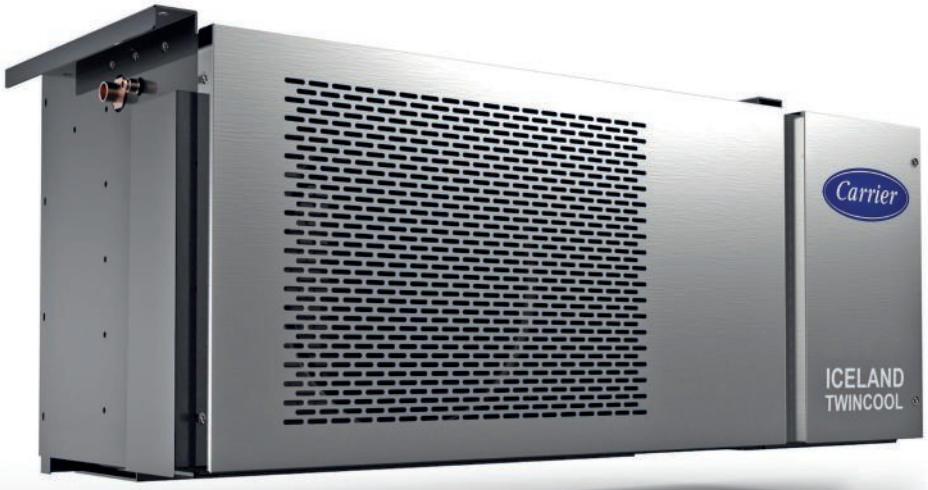
COLD FEAT



Transporting temperature-controlled products is big business and a range of innovations and systems are available to keep goods chilled. By Chris Tindall

Whether it's tulips from Amsterdam or cancer drugs from Roche, some goods transported through a supply chain might as well not have been sent at all, if along the way they are exposed to the wrong temperature conditions.

Now, refrigerated environments are offered at each step of a product's journey, from storage sheds at a farm, to road, rail or sea transport; in trailers of supermarket lorries, the display equipment in supermarkets and then on to the final leg in home delivery vehicles. Developments in this sector have progressed to such a point that human error is now the primary cause of spoilage of temperature-controlled goods. "The systems used throughout the cold chain are now so reliable that breaks very rarely occur from problems with the equipment itself," contends Scott Dargan, Carrier Transicold's northern Europe MD.

Focusing on the road-going segment of journeys, refrigerated transport solutions range from diesel power to compressed natural gas, PTO-driven units and full-electric models.

Having alternatives to diesel is strategically important in today's market, argues Dargan. He says: "Our customers' needs are evolving, whether it's through changing regulations relating to emissions and noise, or heightened focus on the environmental impact of their commercial fleet."

For example, Creed Foodservice recently selected under-mount Iceland units for a dozen new DAF LF vehicles (pictured). They can provide full refrigeration capacity even at idling through a PTO connection to the truck's engine.

Dargan points out that all of these developments would be meaningless without qualified technicians to keep things moving, something the industry is currently struggling with. As a consequence, Carrier Transicold launched its own UK training academy four years ago, which offers a three-year continuing professional development course accredited by the SOE.

Training drivers is one way that transport firm Fowler Welch achieves proper temperature management. Three quarters of the trailer fleet within its temperature-controlled business is dual-temperature specification, which allows a lot of flexibility.

"Our drivers are trained to follow Fowler Welch's robust procedures, which includes a detailed and documented driver debrief, as well as regular temperature checks while goods are in transit," says Maurizio Romano, head of fleet strategy.

"Our refrigeration service and repair arrangements are comprehensive, reliable and responsive, so when we do encounter unplanned events, response times are favourable, and issues are rectified well before temperature deviations are experienced.

"We adopt telematics to track temperatures and to diagnose fault codes remotely, enabling transparency

"We adopt telematics to track temperatures and to diagnose fault codes remotely, enabling transparency in real time"

Maurizio Romano

in real time. Refrigeration trailers are also fitted with status displays that are visible from the driver's seat, showing temperature set point readings while travelling, supporting early corrective action and reducing temperature-related risks. All these elements considerably mitigate potential temperature deviations, allowing for a reliable and smooth-running operation."

Trailer manufacturers are also helping ease the process with telematics technology. For example, German trailer manufacturer Schmitz Cargobull's SmartTrailer concept is based on a new generation of telematics hardware, including sensor technology, and links up tyres, refrigerated trailer, temperature recorder and other elements into a single system. This is designed to warn an operator of a problem before it has occurred. "If you're transporting bananas at five degrees, as soon as it falls to four degrees, the owner or the transport manager will get an instant message." Also, as soon as an error registers on its online portal, one of its 1,800 service partners worldwide is informed.

The Carrier MD adds that its telematics system, and products from sister company Sensitech, monitor the status of products in transit. Should conditions exceed desired parameters, warnings are automatically sent to the driver so that action can be taken to avoid spoiling the load.

In other trailer news, the Chereau Next refrigerated semi-trailer, which debuted at last year's Solutrans show in Lyon, features CAN-Bus multiplexing data communications technology. Multiplexing enables the tractor to receive key information directly from the semi-trailer on the dashboard, such as temperature, group alarms, fuel levels, open door information and tyre pressure.

Overall, temperature-controlled transport relies on a huge number of factors that must be taken into account to ensure an unbroken cold chain. TE

FURTHER INFORMATION

Carrier Transicold academy news: www.is.gd/gopupa

Cold chain temperature range estimates: www.is.gd/oyucef

IATA CEIF certification (for air freight): www.is.gd/munave