

Retail update from Euroshop

One of the world's leading retail trade exhibitions, *Euroshop*, was held in Düsseldorf from 16-20 February, giving a taste of the future of stores and shopping, although attendance was down by more than 20% on Euroshop 2017, due to the Coronavirus.

A varied range of refrigeration and freezer cabinets were on display, with many innovative designs to improve product visibility, energy efficiency, as well as control and monitoring through Apps and the cloud. The use of CO₂ as a refrigerant is increasing rapidly and compressor companies like Bitzer, GEA Bock, Dorin and Frascold all reported substantial sales increases in the last three years, as did rack producers Advansor and Carrier.

Wanzl

One German company diversifying into digitalisation and refrigeration is Wanzl Metallwarenfabrik, Leipzig. Wanzl had a 24/7 concept store on its Euroshop stand which enables shops to be manned during the day, but unmanned at other times. This is achieved by a phone App system which allows entry and processes purchases and payments.

Another German company Würth now operates 20 of its German stores around the clock with

Wanzl technology, with plans for more to follow. The two companies shared a new technology prize awarded at Euroshop by EHI Retail Institute, Cologne.

Last year Wanzl bought a major shareholding in the Slovenian refrigeration cabinet company, WSL Refrigeration doo. Wanzl is using some of WSL's cabinets in another new product development, a shop in a box or container. This can be operated from out-of-town or remote locations or as a short-term retail outlet.

Carrier

Since 2000, more than 13,000 CO₂ units have been produced in Europe by Carrier. Its CO₂OLtec Evo system for supermarkets, launched last year, is energy efficient in all climates with up to 30% annual energy savings when compared with a standard transcritical system. Smaller units are now also available.

Carrier, who held its own press conference at the event, featured a functioning convenience



store powered by a Carrier QuietCO₂OL integral unit on its Euroshop stand, which also provided heating and air conditioning.

David Moon, the new president of Carrier commercial refrigeration, signed an agreement at Euroshop with Metro AG, Düsseldorf, to provide carbon dioxide systems to the majority of its European stores. Metro will begin changing 760 of its cash and carry stores in Europe over the next three years, with high-efficiency remote cabinets, cold room equipment and remote monitoring provided by Carrier.

Carrier provides on-site support for its equipment users with more than 700 technicians located across 24 countries. It has maintenance contracts for 23,000 stores and remote diagnostics and monitoring contracts for 8,000 of these. Carrier launched a new energy management services programme at EuroShop in partnership with EcoEnergy Insights, also part of Carrier.

Carrier's new warehouse refrigeration system, PowerCO₂OL, was launched at Euroshop. It has a refrigeration capacity of up to 1.5 megawatts per rack. It is competitive with ammonia systems of up to five megawatts capacity. PowerCO₂OL has been installed at SNO, Norway's unique year-



Wanzl Metallwarenfabrik's shop in a box.

round indoor ski arena, which opened in January. It is the largest CO₂ transcritical installation in Norway.

Daikin

Daikin and its 2019 acquisition, the Austrian refrigeration company, AHT, shared a stand at Euroshop. AHT's new managing director, Martin Krutz, is an Austrian who has worked for Daikin for over 25 years, most recently as the company's managing director. He sees considerable synergies between AHT and Daikin.

One of AHT's recent innovations is the Kalea refrigeration cabinet, which can be used interchangeably for chilling or as a freezer. Other features include more space, visibility and energy efficiency. AHT has used propane-based refrigeration for over 20 years and 1.2 million of its products are in use globally.

Daikin has developed a Convenipack product for refrigeration, air conditioning, ventilation and heating, which uses CO₂ as the refrigerant. The first prototype was installed in 2019 in a simulated supermarket at the Daikin factory in Ostend, Belgium.

The launch across Europe is planned for this June with two models, one providing 11kW of refrigeration, the other 22kW.

The swing compressor in the product was developed by Daikin and has four global patents pending. The Convenipacks will be made in the



Daikin CO₂ convenipack working in store in Belgium.

Czech Republic and will be much more efficient than the previous model.

As part of the Natural HVACR 4 LIFE project, Daikin Europe is researching with Daikin Germany and Daikin Spain to expand the possibilities of the new Convenipack and increase the refrigeration and cold storage capabilities. The project has €5.1 million of funding with about 40% coming from the EU.

Daikin also revealed its mini VRV product series at Euroshop. The first European sales launches are due in September 2020, with a UK introduction expected by the end of the year.

Epta

The Italian company, Epta, has developed its own patented CO₂ rack to provide refrigeration for its cabinets in hotter climates, first introduced at Euroshop 2017. According to Francesco Mastrapasqua, project leader and quality manager, the technology is much simpler to use than ejector-based, both for start-up and service.

About 400 products have been installed worldwide. Epta is now launching a more efficient and compact second-generation rack, FTE 2.0, unveiled at Euroshop this time. Another new product, with some further modifications, has been designed for use in countries where temperatures exceed 45°C.

Epta has received EU funding since mid-2018 for a three-year project through the Life17 programme to develop these racks. The first phase was R&D and testing and three pilot prototypes were installed and tested with users in Italy.

Viessmann

Viessmann Refrigeration has been expanding its sales operations into new countries and has recently acquired service companies in Germany and Norway.

It launched a new remote monitoring tool, Tec2Track, at Euroshop, as well as new refrigeration cabinets. Viessmann completed

the acquisition of the digitalisation and energy management specialists, Athion, Cologne, at the start of this year.

Porkka

Since the introduction of polyisocyanurate (PIR) flame retardant insulation foams, the Finnish company Porkka has been working to incorporate these into panels used in its modular cold rooms. Porkka has now received full fire proof classification for its camlock PIR panels to standard EN14509 in 80mm, 100mm and 150mm thicknesses up to 5000mm lengths. Applications will be targeted at pharma labs and hospitals and first installations have already been made in Finland and the UK.

Danfoss

The new Danfoss ADAP-KOOL case controls system for food retail applications uses a smartphone app that simplifies design, installation, service and use. The solution includes four new products, a case controller platform, electric expansion valve, pressure transmitter and temperature sensor. Danfoss also had a new version of its multi-ejector on show. It has so far provided monitoring systems for over 14,000 stores and 250,000 cabinets and dispensers.

Carel

Carel launched iJ, a new control platform for commercial refrigeration, and RED, a digital services platform at Euroshop. Heos, its control solution semi plug-in and air-cooled plug-in waterloop systems, has been extended to include Heosbox, a new condensing unit, and Heosone, designed for refrigerated units using propane.

Carel's solutions for centralised refrigeration cabinets now also include MPXzero, a new entry level controller, and an advanced version with built-in management of electronic expansion valves. Carel's ejector system, launched at Euroshop 2017, has proved very successful since then, available in seven sizes.