

New items of Epta at Chillventa 2016



Epta in numbers

Epta is a multinational group specialising in commercial refrigeration that boasts a very strong global competitive position that is well balanced both geographically and in terms of its coverage of different business areas, thanks to its brands Costan, Bonnet Nèvé, George Barker, Eurocryor, Misa, Iarp and Knudsen Kølting. Headquartered in Milan, Epta employs 4,000 people and has a highly extensive global sales network. In 2015 it had a turnover of 767 million euros and a production capacity of 200,000 units. By combining the expertise and unique know-how of each brand with systematic research and development, the Group is able to anticipate the most innovative global trends and help its Customers reach excellent levels of performance in the Retail, Ho.Re.Ca and Food&Beverage sectors.

Core business: complete systems and fully comprehensive post-sales services

The Company has positioned itself in the domestic and international markets as a single partner that is able to produce and commercialise complete systems for refrigeration, thanks to the integration of the product lines offered by its brands, such as: traditional positive and negative temperature refrigerated cabinets, plug-in cabinets, cold rooms and medium and high capacity refrigeration systems. The Group's broad and diversified offer is ideal for Retailers who want to turn to a single partner for the development of structured turnkey projects on a global scale. The offer is completed with Epta Service, an exclusive assistance and post-sales consultancy service that provides personalised maintenance strategies and programmes for Customers.

Epta Service: the quality of a product also depends on excellent Service

In order to be competitive in the market, Retailers aim to achieve the highest level of efficiency in their processes and operational continuity. As such, being able to rely on first-class technical assistance now represents an important aspect of distinction. In this regard, Epta has always offered a total solution that combines complete systems with high functional and energy performances and a broad range of post-sales assistance services. Indeed, Epta Service boasts the best assistance teams: expert technicians who actively support Retailers by offering expert advice, retrofit solutions and telemonitoring programmes with the aim of increasing the value of their businesses. Thanks to this winning mix, Epta Service is able to satisfy every requirement, thus ensuring the highest levels of savings in terms of management costs and full respect for the environment.

Telemonitoring, 24 hours a day, 7 days a week

Epta Telemonitoring is an exclusive distance monitoring service, which is highly flexible and adaptable to individual requirements. It allows Epta Service to connect with stores through a remote access function in order to analyse the parameters of the cabinets, manage alarms and create tailor-made reports for each individual Customer. The Telemonitoring service is operational 24 hours a day, 7 days a week, and ensures predictive diagnostics and prompt interventions in the adjustment of the system parameters in order to guarantee the highest level of energy and operational efficiency.

Closer to Customers all over the world

Epta Service has a highly professional Customer Service team that guarantees high added value. Epta Service is in fact able to respond promptly to every requirement: from the preparation of quotes to technical advice, and from the planning of preventive maintenance, repair and retrofit interventions through to the creation of personalised maintenance programmes.

Retrofitting: for systems that are always in step with the times

Epta Service carries out retrofit interventions on cabinets to make the refrigeration systems compliant with the new F-Gas regulation, while at the same time improving the operating performances of installed devices for a significant level of energy saving. In this regard, Epta Service can replace synthetic refrigerant gases with other gases that have a lower global warming potential (GWP), add doors or screens to the cabinets, and fit new high-performance fans and LED illumination systems.

Maintenance Epta Service: a first-class service

A quick, effective and widespread repair service guaranteed every day by the professionalism and know-how of the Epta Service teams. Team members attend periodic technical refresher courses on the most recent innovations and operate in accordance with the QSE (Quality, Safety and Environment) certification. The teams are able to precisely assess the actual performance of every system, establish the cause of any breakdowns and suggest the best intervention option, for example through the use of the latest digital instruments like Epta App, the monitoring system for alarms and the leakage log book.

F-Gas Regulation: an increasingly green future for Europe

With the adoption of regulation (EU) No 517/2014 of the European Parliament and Council of 16 April 2014 with regard to fluorinated greenhouse gases, that repealed the previous regulation (EC) No 842/2006, the European Union kick-started an ambitious plan with the aim of reducing emissions of hydrofluorocarbons (HFCs). The directive is changing the European economy profoundly and will have major consequences for all the parties involved: producers, importers, distributors, manufacturers, operators, entrepreneurs and consumers.

The legislation, which has been in force since 2015, imposes a large-scale take-up of technologies that are respectful of the issue of climate change by 2030 and, at the same time, promotes a gradual elimination of HFC gases in the refrigeration and air-conditioning sector. Specifically, the regulation establishes supplementary requirements to guarantee aspects such as a lack of gas leaks and suitable handling of the systems at the end of their cycle. Moreover, the Regulation introduces strict bans and a new mechanism that aims to progressively reduce the use of HFCs in the European market. The objective of this Phase Down is to guarantee a gradual elimination of these gases, expressed as CO₂ equivalents (CO₂e), as follows: 7% in 2016, 37% in 2018, 55% in 2021, 69% in 2024, 76% in 2027 and, finally, 79% in 2030¹.

Epta's response

This all represents a challenge for the sector as well an opportunity that Epta has welcomed by developing innovations that can ensure the highest level of energy saving, a reduction of the carbon footprint and conservation of resources. The Group's commitment to the development of solutions that use natural refrigerants and new technologies is proved by the numerous international awards it has won over time. The most recent include the Good Practices Award for Renewable Energies and Sustainable Mobility 20162, the last three editions of the Janus de L'Industrie, Ecocare 2014, Cooling Awards 2006, 2007, 2009 and 2014 and Grand Prix du Froid 2012.

With Epta, stores become green "naturally"

Thanks to its constant investments in Research and Development, Epta's "total solution" has become a must for Retailers who want to make their stores green "naturally". Specifically, to date, 100% of remote cabinets are available in a CO₂ version, a natural refrigerant with a minimal global warming potential (GWP) of 1. Also, more than 50% of plug-in models work with propane R290 gas, which has a high performance coefficient, at both low (+12%) and medium temperatures (+8%) and a limited environmental impact, with a GWP that is approximately 1,300 times lower than R404A. Finally, the main innovations on offer also include the exclusive EPTABLU Waterloop technology with a closed water circuit and CO₂ variable speed compressors that can be integrated with heating and ventilation systems.

Epta's expertise in CO₂: installations for every requirement

Specifically, thanks to the expertise it has acquired over time, Epta guides Customers in the choice and personalisation of eco-compatible systems that are most suited to their requirements, ensuring perfect preservation of foodstuffs and a high level of energy saving. In this regard, Epta offers a complete range of CO₂-based systems that are efficient, highly flexible and designed for installation in any climatic zone and in retail stores of all sizes: from the biggest supermarkets to convenience stores.

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Refrigeration Industry

Transcritical CO₂: more efficient and ecological than the traditional cascade system

The optimisation of transcritical CO₂ systems stands amongst the most ambitious goals that the Group has reached in recent years, and these can now be used in regions with warmer climates, such as Southern Europe and America, as a valid alternative to the traditional cascade systems.

In this regard, it is worth noting the installation of the first transcritical CO₂ systems for the subtropical climate of Latin America, which Epta Argentina recently completed in Buenos Aires for one of the most important Large Scale Retail Operators. Specifically, with the brand Costan, Epta Argentina offered a turnkey solution comprising two transcritical CO₂ systems that were designed on an ad hoc basis, four medium and high temperature compressors and three low temperature compressors.



Another result that is worth noting is the prestigious collaboration with EU FP7 CommONEnergy, a research project promoted by the European Union to transform supermarkets into models of energy efficiency and eco-sustainability through the development of cutting-edge technologies. The Epta system that was developed with the CommONEnergy programme is based on the transcritical CO₂ Epta Eco2Small refrigeration system. This can be integrated with existing building systems to enable heat to be reutilised by exploiting the properties of CO₂ in the perspective of a transition of stores towards Nearly Zero Energy Buildings (nZEB) in accordance with Directive 2010/31/EU. An all-in-one solution of this kind has been installed in the Co-op store in Horwich, United Kingdom with very positive results. Indeed, to date, it has reached, and in some cases exceeded, the performance levels that were forecasted in both the simulation and prototype phase. On an annual basis it is expected that it could generate an additional energy saving of 21% and a 57% reduction in the TEWI (total equivalent warming impact) index compared with equivalent traditional systems that use HFC refrigerant gases.

EPTABlue, the Waterloop System

EPTABlue Waterloop is an innovative solution that was designed by Epta to respond to the requirements of Retailers to reduce the installation complexity of refrigeration systems, adopt solutions that are compliant with the progressive restrictions introduced by the F-Gas Regulation and obtain a rapid return on their investments.

Specifically, this is a system that, when connected to any refrigeration unit, be it a cabinet or cold room, transforms it from a remote unit in to a plug-in, thanks to the plug and play connection to a closed water circuit. The numerous advantages of EPTABlue include a reduction in energy consumption of up to 25% with increased refrigeration efficiency, a 40% reduction in the TEWI index and a 75% reduction in refrigerant gas load, resulting in an ROI after 8 months³.

These results are now possible through the use of an inverter and an electronic valve that enable the refrigerating capacity to be adapted to the contents of the cabinet and the external conditions, such as the number of people in the retail store, the time of day and the season. This guarantees the utmost respect for the environment. Finally, the EPTABlue Waterloop system can easily be connected to the store's HVAC system, thus allowing it to use the heat emitted by the cabinets for the heating system.

Misa technology for superior quality foodstuffs

Excellent energy efficiency and optimal preservation of foodstuffs: these are the distinctive traits of Misa, which specialises in the production of commercial and industrial refrigeration cold rooms for the Ho.Re.Ca. and Retail sectors. The founding elements of the Company are Quality and Technology, in the sense of technology that ensures the quality and wholesomeness of food, proving Misa's commitment to preserving Food Value. A tangible demonstration of this commitment is the company's Food Safety Programme certification, based on the HACCP (hazard analysis and critical control point) system. The Company voluntarily submitted itself to a process of assessment and control and became the first brand in the sector to receive this certification.

Thanks to continual investments in research and development, with the aim of renewing production processes and the performances of its cold rooms, Misa offers eco-compatible and technologically advanced solutions that also stand out for their high level of flexibility and functionality.

Epta Food Defence... We like food that is fresh and safe

All Misa solutions are treated with the innovative antibacterial system Epta Food Defence, which uses silver ions. The technology was devised to improve the safety of foodstuffs stored within cold rooms and is able to prevent, combat and eliminate numerous types of bacteria, including the best known and most dangerous types. Specifically, the antibacterial properties are applied to the sheet metal that is used to make the cold room for complete and permanent protection, 24 hours a day, 7 days a week for the entire lifecycle.

Finally, the protective film is suitable for contact with foodstuffs and substances for personal use, in compliance with the Ministerial Decree dated 21 March 1973 and its subsequent amendments, as well as European Directives 78/142/EEC, 80/766/EEC, 82/711/EEC, 85/572/EEC, 90/128/EEC, 92/39/EEC.



The refrigeration process accounts for 8% of total energy consumption and generates 2.5% of global CO₂ emissions⁴. With its solutions, Misa demonstrates the value of research combined with a constant focus on the reduction of the environmental impact. In this regard, the improvement of a cold room's energy efficiency is normally associated with an increase in the thickness of the insulating layer. This results in a greater use of polyurethane, which in turn generates 400g of CO₂ for every kilogram that is consumed. However, contrary to the standard practice in the market, Misa reduces the thickness of the walls of its cold rooms with a thinner panel, while maintaining the highest standards of thermal insulation. This extraordinary innovation allows it to cut CO₂ emissions, thus reducing its carbon footprint.

This result was made possible by the patented system for foaming Misa insulating panels (MVS – Misa Vacuum System) that involves adding a vacuum in the injection phase in order to reduce the quantity of polyurethane foam. Misa also uses PascalTM Pro: a revolutionary technology that enables the average density of the panel to be reduced by 1.5m³ per wall, whilst at the same time improving the thermal insulation of the foam. Specifically, the combination of the Misa panels and the PascalTM system allows it to reach a thermal conductivity (λ) value of

0.0205 W/mK, equating to an 11% increase in insulation capacity compared to previous models to promote even greater energy savings.

Plug-in Power: the essence of Iarp

"Plug-in power" is the strategic slogan of Iarp, which specialises in the design and production of self-contained cabinets for the Ho.Re.Ca. industry and multinationals operating in the Food&Beverage sector. It is a slogan that summarises the strengths of the brand: high reliability, excellence and a capacity to innovate. To "switch on" the interest of potential Customers in the products that are on display and enhance the image of its Customer's businesses, Iarp uses an exclusive style that is able to satisfy requirements of versatility and display flexibility of bars, petrol stations, fast food outlets, ice-cream shops and restaurants, in order to actively involve consumers and augment purchase processes. Iarp's exclusive style combines with the utmost attention to quality and the environment, as confirmed by its ISO 9001 and ISO 14001 certifications.

Specifically, in line with its focus on the conservation of resources, Iarp cabinets have been designed to reduce emissions and cut energy consumption, thanks also to the use of natural refrigerants.

InBev and Iarp: a successful collaboration

At Chillventa 2016, Iarp will also be showcasing two of the solutions it produced exclusively for ABInBev Group, one of the major global producers of beer. Specifically, Iarp won the Company's trust thanks to the unique design of its tailor-made solutions. These items of furniture are a prime example of Iarp's talent in producing personalised cabinets as they perfectly reflect the image of the Corona brand and are designed to emphasise the typical yellow colour of this beer. The entire range was created to ensure perfect visibility of beverages in any display context and guarantee, at the same time, the utmost sustainability with the use of green gases Propane R290 and Isobutane R600a, the LED illumination and the highly insulating double glass doors.

Specifically, Iarp offers Mira P, a tall and slender unit created to improve the product display and the visibility of the Corona brand, and Back Bar 40, a compact solution that is ideal for displaying drinks on bar counters. A distinctive element of the plug-in is the exclusive wood effect finishing that was produced thanks to the introduction of the new digital print directly on the sheet of metal. This innovative technology has enabled the texture and colour of light wood to be reproduced, creating a captivating effect that arouses the curiosity of consumers. Finally, an additional winning feature is the choice of the yellow light for the LED, which accentuates the colour of the beverages and creates an added emphasis on the products.

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