

## OEM Epta Offers Monitoring Platform for Its CO<sub>2</sub> Systems

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Italian OEM Epta's new SwitchON platform, which was previewed at the Chillventa exhibition, offers performance monitoring and digital diagnostics for various elements of its transcritical CO<sub>2</sub> (R744) refrigeration systems, including the pack controller, inverter drives and oil injectors.

The platform was discussed in an interview with Vanessa Curti, Epta's Communications Manager, and Stefano Trabucchi, Innovation Center Engineer, at Chillventa, held in Nuremberg, Germany, October 11–13.

"The best efficiency comes from offering complete service solutions," said Curti. "It's not only the right product or the right refrigeration system but also the service to maintain [it] in the proper way, to monitor performance, to set the right parameters in order to get the best solution. There is no product without services."

Most OEMs rely on component manufacturers like Carel, Emerson and Danfoss to provide monitoring systems rather than provide them themselves.

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"As the OEM, we're putting together different pieces and we want to make those pieces work with each other," said Trabucchi. "We want to create synergies and relations and links between all these elements."

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He added that until now, the main goal of system monitoring was "just to keep a system up and running," but, according to Epta, its new SwitchON technology "overcomes the limitation of current monitoring tools."

By harvesting all the data available, the online platform, which can be accessed remotely, provides a detailed view of the system to ensure it is working efficiently, reliably and safely, explained Trabucchi.

The SwitchON platform, which is currently being tested in the field, monitors the status of devices, tracks operational performance based on set parameters and diagnoses problems if they arise.

"SwitchON offers remote access to the pack for detailed visibility of its operating parameters," said the manufacturer. "[It] provides a real-time estimate of the pack's cooling capacity and consumption, ensuring maximum efficiency, [and its] advanced functionalities together with predictive maintenance algorithms help to ensure high reliability and safety."

The technology also detects real-time anomalies in the monitored system, alerting attention to the necessary component. SwitchON then supports technicians in "troubleshooting" the problem with its "intuitive, structured and effective guide to solving malfunctions," said Epta.

According to Trabucchi, the technology results in "lower intervention time, lower costs [and] less travel time for technicians." Epta added that using SwitchON leads to "reduced reaction time to restore the system to optimum condition."

Epta also showcased its new LineON service, which is designed to provide the retail, hospitality and food and beverage sectors with a "digital solution" dedicated to plug-in refrigeration units, such as its [Costan propane \(R290\) cabinets](#).

### **Modularity for transcritical CO<sub>2</sub>**

A number of Epta's CO<sub>2</sub> products were also on display at Chillventa, including its new Eco<sub>2</sub>Middle transcritical pack, which joins the manufacturer's existing [Eco<sub>2</sub>Small](#) and [Eco<sub>2</sub>Large](#) models.

According to Epta, the new model is designed for medium-sized stores and can be customized according to the needs of the end user thanks to the modularity of its components.



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The pack is available with up to four compressors for medium temperature and up to three compressors for low temperature, making it suitable for a wide range of applications, said Epta. It can provide between 50kW (14TR) and 165kW (47TR) cooling capacity for MT and between 12kW (3.4TR) and 60kW (17TR) cooling capacity for LT.

As with the small and large models, the Eco<sub>2</sub>Medium has high levels of standardization, which allows for the integration of various additional components during production, such as heat recovery or Epta's patented FTE 2.0 (Full Transcritical Efficiency) and ETE (Extreme Transcritical Efficiency) technologies.

Its FTE 2.0 and ETE products are designed to boost the efficiency of transcritical CO<sub>2</sub> systems in climates with higher ambient temperatures. According to a recent study, Epta's technologies result in a 15–23% decrease in energy consumption over traditional CO<sub>2</sub> systems.