

## Press release

*What is a water loop system with BLDC compressors? What are the benefits for commercial refrigeration applications?*

### CAREL PRESENTS THE NEW FRONTIERS FOR NATURAL REFRIGERANTS AT ATMOSPHERE EUROPE

Brugine (Padova), 13 March 2015

CAREL will be taking part in the 6th ATMOSphere Europe, the annual meeting held to discuss the latest technologies involving natural refrigerants in Europe. The hot topic this year is **the use of BLDC compressors in water loop systems**, which radically change the way commercial refrigeration systems are developed.

Exactly what does a water loop system with BLDC compressor involve for commercial refrigeration applications? "These are simple systems in which every cabinet has its own self-contained refrigeration unit with on-board variable-speed compressor", explained **Diego Malimpensa, Business Unit Manager - Retail Solutions**, who will be representing CAREL at ATMOSphere this year. "The compressor is installed in a box either on top of or underneath the cabinet. The heat of condensation generated by the compressor is not directly released into the surrounding environment, but rather is carried outside by a water loop system to a simple dry cooler".

**This solution has numerous benefits for commercial refrigeration systems.** "Above all in terms of **energy savings**", Malimpensa continued. "Each compressor always operates in the best possible conditions, thus saving up to 25% in energy compared to similar on/off systems. The savings do not only involve energy consumption, however, but are also ensured by **simple operation and lower installation and maintenance costs**. Installation flexibility is another important benefit, as the system layout can be changed quite easily. These systems moreover have a **lower refrigerant charge (up to 80% less) and a much lower rate of leakages (up to 96% less)**, a result of using small units that are built and tested in the factory. Finally, these systems can work perfectly in **all types of climate, even with quite high temperatures**".

**CAREL is pioneering this new technology.** Following the positive experiences acquired with standard refrigerants (HFCs), we are now studying and testing new possibilities with propane and CO<sub>2</sub>.

The main benefits of the solution remain unchanged, while the challenges regarding the use of propane mainly involve the handling and operating safety of a flammable refrigerant. With CO<sub>2</sub>, on the other hand, which is inherently affected by warm climates, we can exploit our significant experience with tried-and-tested solutions for traditional remote systems.

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**About CAREL INDUSTRIES S.p.A.**

CAREL is one of the world leaders in control solutions for air-conditioning, refrigeration and heating, and systems for humidification and evaporative cooling. Our products are designed to bring energy savings and reduce the environmental impact of equipment and systems. Our solutions are used in commercial, industrial and residential applications. CAREL has 18 fully-owned subsidiaries and 6 production sites, as well as partners and distributors in a further 75 countries.

For further information, go to [www.carel.com](http://www.carel.com)