

## **Solution Offering For R744 (CO<sub>2</sub>) Applications**

**AACHEN (GERMANY), October 15, 2014** – Emerson Climate Technologies, a business of Emerson (NYSE: EMR) presents new solutions for R744 (CO<sub>2</sub>) applications at Chillventa trade fair in Nuremberg.

Increasing environmental concerns about the potential direct emissions from HFC-based refrigeration systems into the atmosphere have led to the revival of the refrigerant R744 in parts of the European refrigeration market. Emerson Climate Technologies continues to invest in order to serve this increasing demand for natural refrigerants in the refrigeration industry by offering complete solutions for environmentally friendly R744 refrigeration applications. The CO<sub>2</sub> solution offering of Emerson consists of compressors of semi-hermetic reciprocating and scroll technologies, on-board compressor electronics, digital capacity modulation and is completed by flow controls and electronic controllers. With this solution, Emerson ensures high operational performance, safety and increased system uptime of R744 booster and cascade systems.

The range of Copeland Scroll™ compressors for subcritical applications and the semi-hermetic Copeland™ Stream compressors for subcritical and transcritical applications have been developed specifically to leverage the characteristics of R744 refrigeration systems.

Copeland Stream CO<sub>2</sub> compressors are characterized by a design pressure of 90 bar suction and 135 bar discharge. With six medium temperature models, the expanded Stream 4MTL range provides refrigerating capacities between 9 kW and 37 kW\* in R744 transcritical applications. Stream 4MSL range with 6 models covers cooling capacities between 8 to 32 kW\*\* for low temperature applications operating on R744 subcritical. The Stream 4MSL compressors feature high standstill pressure capability to ensure full system resilience in case of operation interruption.

The ZO Copeland Scroll compressors are especially designed to meet the high pressure and severe lubrication requirements encountered in subcritical R744 applications. The range covers refrigeration capacities from 5 to 23 kW nominal cascade system rating conditions\*\* with six standard models ZO21K5E to ZO104KCE and two Copeland Scroll Digital™ models ZOD34 and ZOD104KCE. ZO compressors have a stand still pressures of 30 bar suction and 52 bar discharge.

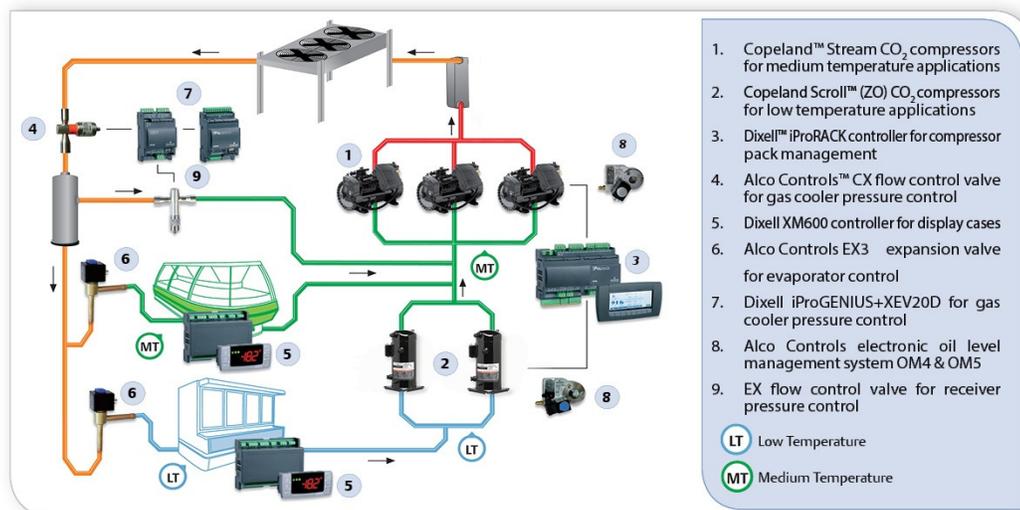
\* Evaporating -10°C, gas cooler exit: 35°C/90bar, suction superheat 10K, subcooling 0K

\*\*LT EN12900: -35°C/-5°C 10K SH

In addition to the CO<sub>2</sub> compressors Emerson Climate Technologies offers a wide range of Emerson and Alco Controls™ branded valves and controls for receiver and evaporator control in subcritical and transcritical applications. The product offering includes EX series high linear electrical flow control valves designed for a maximum operating pressure of 60 bar for subcritical applications and CX series valves designed for a maximum operating pressure of 120 bar for transcritical applications. The Traxoil® OM5 high pressure compressor oil regulator reduces the complexity of oil management system design.

Adding CO<sub>2</sub> electronic controllers from Dixell™, a product brand of Emerson Climate Technologies, completes the compressor and cabinet management of a R744 refrigeration system. The iProRACK programmable controller in combination with the XEV20D from Dixell manages the compressor pack and controls the system's operating point to the optimum efficiency level by managing the gas cooler pressure. The XM600 series controllers are available for the display case control by complete management of pulse or stepper electronic expansion valve.

With this comprehensive CO<sub>2</sub> solution offering, Emerson Climate Technologies supports its customers especially in the food retail sector fulfilling the requirements of all common R744 applications – in terms of efficiency and of environment.



*Refrigerant CO<sub>2</sub> (R744) applied in a refrigeration system for food cooling*

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**About Emerson**

Emerson (NYSE: EMR), based in St. Louis, Missouri (USA), is a global leader in bringing technology and engineering together to provide innovative solutions for customers in industrial, commercial, and consumer markets around the world. The company is comprised of five business segments: Process Management, Industrial Automation, Network Power, Climate Technologies, and Commercial & Residential Solutions. Sales in fiscal 2013 were \$24.7 billion. For more information, visit [www.Emerson.com](http://www.Emerson.com)

**About Emerson Climate Technologies**

Emerson Climate Technologies, a business of Emerson, is the world's leading provider of heating, ventilation, air conditioning and refrigeration solutions for residential, industrial and commercial applications. The group combines best-in-class technology with proven engineering, design, distribution, educational and monitoring services to provide customized, integrated climate control solutions for customers worldwide. Emerson Climate Technologies' innovative solutions, which include industry-leading brands such as Copeland Scroll™, Dixell™ and Alco Controls™, improve human comfort, safeguard food and protect the environment. For more information, visit [www.emersonclimate.eu](http://www.emersonclimate.eu)

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