



### Modulating Vapour Ejector Smart technology providing maximum energy savings



For rack only, figures based on annual energy consumption. Projection based on 94m MT cabinets, 38m LT cabinets, 228m3 MT coldroom, 55m3 LT coldroom. Temperature profile: Mild Climate = Berlin (10oC avg); HybridCO<sub>2</sub>OL = CO<sub>2</sub> LT + R134a MT



## Modulating Vapour Ejector Principle and Function

Modulating ejector technology combines the benefits of an expander and an economizer.

This component uses high-pressure energy to pre-compress the MT suction mass flow from suction pressure to a higher level.

All MT compressors can therefore operate in economizer mode, resulting in reduced electrical energy consumption.

The modulating vapour ejector replaces the high pressure valve.

Continued innovation on www.profroid.com



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# **COOL**tecEvo<sup>™</sup>

Second generation high efficiency CO<sub>2</sub> booster racks with modulating ejector technology



From 40 kW to 480 kW MT capacity



## Enhanced-efficiency transcritical CO<sub>2</sub> systems with modulating ejector technology

Latest generation of CO<sub>2</sub> transcritical systems, CO<sub>2</sub>OLtecEvo® provides energy efficient and environmentally sustainable refrigeration, through our patented modulating ejector technology.

To further enhance energy savings, this revolutionary system can also be delivered with optional air conditioning and heating functionality.

#### **ENVIRONMENTALLY SUSTAINABLE**

- Using repurposed CO<sub>2</sub>: no additional greenhouse gases from refrigerant use
- Not affected by the EU F-Gas Regulation

#### **PERFORMANCE & ENERGY OPTIMIZATION**

- Unique patented modulating ejector adjusts to capacity variations
- Variable Speed Drives (VSD) as standard on primary MT compressor. VSD optional for LT
- Optimized control via dedicated software
- Up to 6 MT compressors and 4 LT compressors



#### VARIOUS APPLICATIONS

- Medium and large supermarkets
- Warehouses
- Process cooling

#### **MODULARITY & FLEXIBILITY**

• Standard rack as a base (including MT, LT & optional economizer compressors)

 Add-on high efficiency skid dedicated to the ejectors, pumps, liquid receiver, additional heat exchangers, HP/MP valves and liquid line

• From 2 to 4 ejectors per skid depending on application

#### MAXIMIZED ANNUAL ENERGY SAVINGS WITH ADDITIONAL OPTIONAL **TECHNOLOGIES:**

• Economizer cycle to improve the efficiency of the gas compression in medium pressure

• LSPM compressor motors reduce annual compressor energy consumption vs standard technology

• Heat recovery (up to 100% of the heat rejection)

• Liquid Pump to allow the refrigeration system to operate with semi-flooded evaporators at a higher evaporating temperature all year round

#### Heat pump and/or air conditioning functions