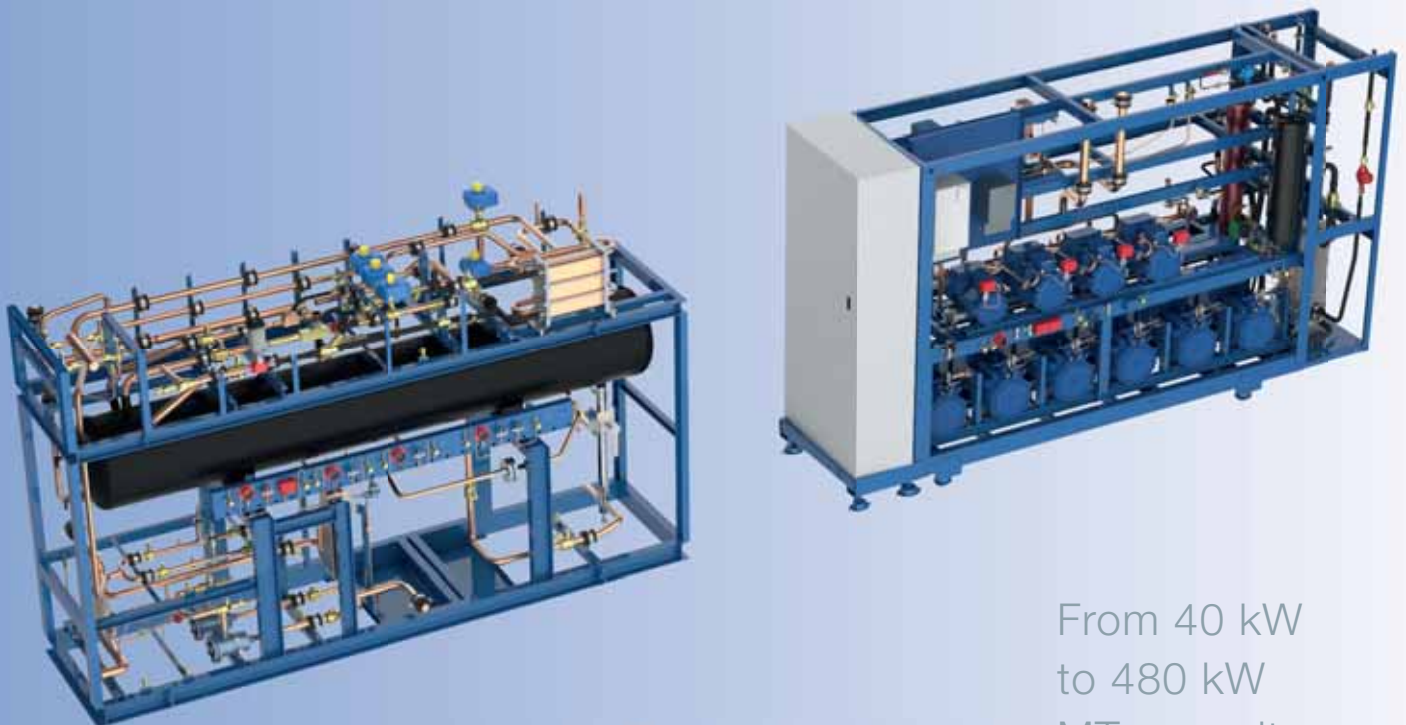




United Technologies

COOLtecEvo[®]



From 40 kW
to 480 kW
MT capacity



Second generation high efficiency CO₂ booster racks with modulating ejector technology

Enhanced-efficiency transcritical CO₂ systems with modulating ejector technology

Latest generation of CO₂ transcritical systems, CO₂OLtecEvo[®] 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.

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

ENVIRONMENTALLY SUSTAINABLE

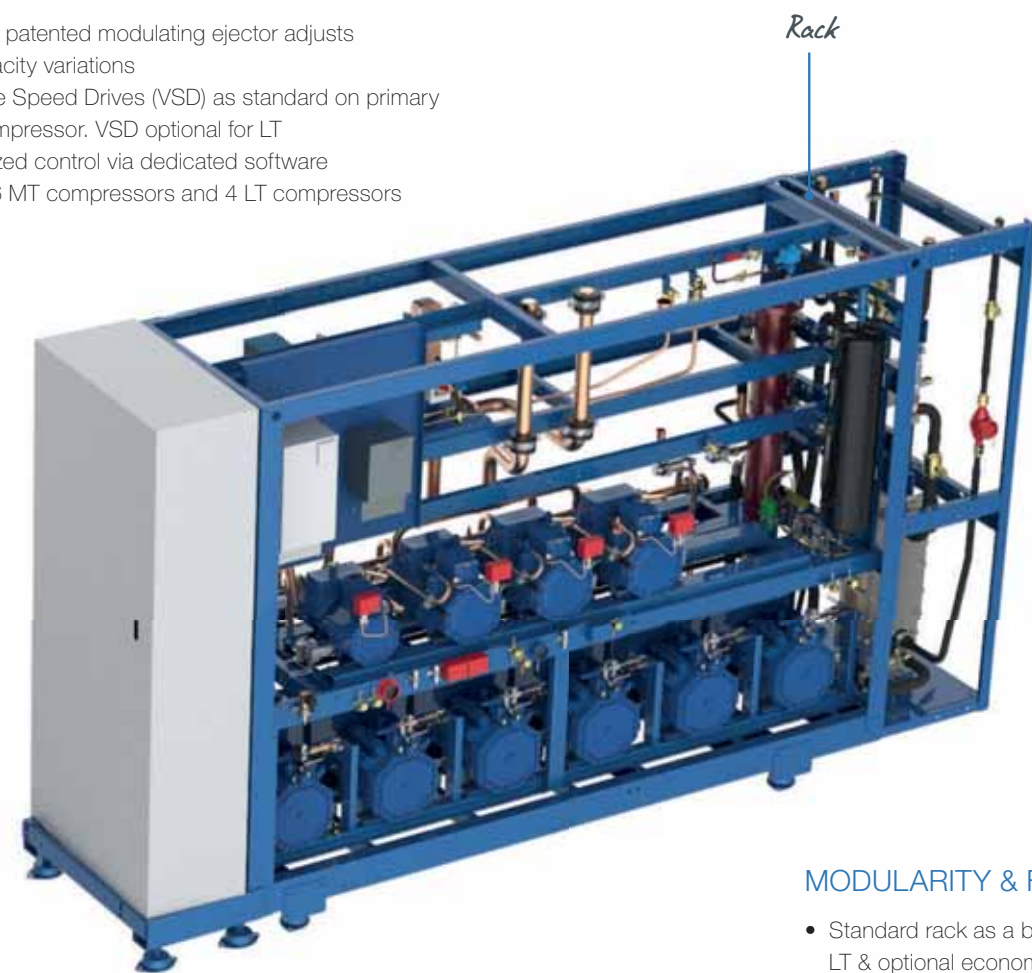
- Using repurposed CO₂: no additional greenhouse gases from refrigerant use
- Not affected by the EU F-Gas Regulation

VARIOUS APPLICATIONS

- Medium and large supermarkets
- Warehouses
- Process cooling

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



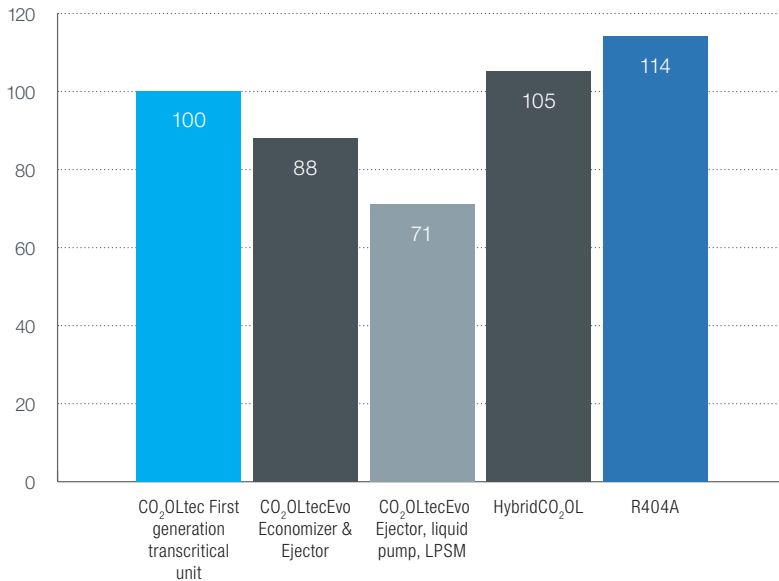
MODULARITY & FLEXIBILITY

- 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

Modulating Vapour Ejector

Smart technology providing maximum energy savings

Mild climate application



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 (10°C avg); HybridCO₂OL = CO₂ 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.

