# The EVAPCO LMP Advantage



# Trusted Expertise & Support

- ▶ EVAPCO LMP specializes in CO₂ modular refrigeration packages, pumping stations, and electrical panels, serving the food and beverage processing and storage, hydroponic, pharmaceutical, and ice rink industries.
- Project engineering services help design complete refrigeration systems based on customer requirements.
- ▶ Start-up and remote assistance include support from expert technicians to ensure system performance, with 24/7 remote connectivity available.

## Purity Package Design

- ▶ Large range of capacity from 15 to 550TR per rack.
- Flexible installation options from indoor racks to outdoor racks with insulated enclosures.
  - ▶ Option design 1: Reach-in with industrial doors with lockable handles and stoppers.
  - Options design 2: Walk-in mechanical room with safety features according to code, ventilation, air conditioning, heating, and gas cooler roof support with catwalk and ladder.
- ▶ Recirculated or DX design compatible with -50F to +50F SST applications.
- ▶ High pressure design (stand still) 1740 psi on high side and 1160 psi on low side.
- Low pressure design 1740 psi on the high side and 650 psi on the low side (requires a backup generator).
- ▶ Bitzer or Dorin compressors.
- ▶ Electric, air, glycol, and hot gas defrost design.
- ▶ Home run, loop, or hybrid circuits.
- Patented reverse latent high pressure hot gas defrost technology feeds from the transcritical compressor discharge, regulates to 970 psi to coils, and returns condensed gas to the flash tank vessel, helping stabilize the liquid level during the transcritical phase.
- Microthermo, CPC, Danfoss, or Allen Bradley control systems are available for seamless integration, AC units are factory mounted to prevent overheating in the panels.
- Superheat control ensures proper oil flow and prevents liquid slugging while maintaining a minimum 36°F compressor superheat.
- ▶ Low-pressure oil management prevents oil miscibility with CO₂, enhances oil separation efficiency, and avoids oil slugging issues.
- ▶ Lead VFD Compressor on each suction group optimizes system efficiency.
- ▶ Flash gas receiver.
- Suction filters and liquid driers feature bypass piping for easy maintenance without system downtime.
- Relief valves and changeover assembly are included (ship loose).
- Fully certified to industry standards, including UL certification for racks, UL508 certification for panels, ASME B31.5 compliance, and IIAR CO<sub>2</sub> compliance.









### **Optional Features**

- Heat reclaim applications improve efficiency and reduce energy costs. The patented Purity Plus dehumidification system offers up to 18°F subcooling, enhances efficiency in high ambient temperatures, and delivers up to 20% energy savings in the transcritical phase. This technology reduces system costs by requiring fewer compressors and a smaller gas cooler, and all components are factory-installed and programmed.
- Additional heat reclaim options include domestic hot water integration, glycol loop compatibility, and CO<sub>2</sub> / air pre-heating solutions.
- Parallel compression, mechanical subcooling, and ejectors are available for further efficiency improvements.
- Start-up kits include POE oil, suction filters, and liquid filters to simplify installation and maintenance



- ► EvapCORE<sup>TM</sup> SelectTech PLC Control (Allen Bradley) ensures advanced system control and optimization and includes ignition SCADA and supervisory system along with integrated documentation.
- XPS insulated piping with a vapor barrier and PVC jacketing provides superior insulation and durability.



- Available in 460V or 230V / 3-Phase / 60Hz configurations.
- Factory-installed components include a main disconnect switch, evaporator fan contactors and fuses, evaporator heater contactors and fuses (if electric defrost), a control transformer, module router, and relays.
- Optional VFD enhances performance and efficiency.
- ▶ The evaporator case controller manages EEV, defrost, and temperature settings, with integrated pressure and temperature sensors.
- Compatible with most SCADA applications.

# Industry-Leading Warranty:

- 1 year warranty on parts only as standard.
- ▶ 2 year warranty on parts only when purchased with an EVAPCO gas cooler.
- 3 year warranty on parts only when purchased with an EVAPCO gas cooler, evaporators and SelectTech controls.









