

# Packaged Low Charge Ammonia **Refrigeration Systems**



evapcold

Commercial HVAC | Industrial Refrigeration | Power Generation | Industrial Process

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## Penthouse Units (LCR-P)



- Very low ammonia charge •
- Walk-in machine room rated as occupied space
- Hot gas or air defrost depending on room temp
- Very energy efficient and reliable 1.2:1 liquid
- Low energy consumption with compressor suction continuously matched to room and negligible piping losses
- Many accessories, including dual compressors for increased redundancy
- Great match for large freezers, coolers, convertible rooms and docks

#### **Capacity Ranges:**

- 15 to 70 TR at (-) 10°F Room 15 to 100 TR at (+) 40°F Room

LCR-P Models	Applications	Features	Principle of Operation
LCR-P Water-Cooled Penthouse	<ul> <li>Applications where energy efficiency is the primary driver.</li> <li>Facilities near regulatory thresholds which require minimum ammonia charge.</li> <li>Sites with low wet-bulb temperatures.</li> </ul>	<ul> <li>Water-cooled units have lowest energy consumption of product line.</li> <li>Very low ammonia charge.</li> </ul>	CODUMS WATER NU CODUMING CODUMING COLONDITIONED SPACE
LCR-P Air-Cooled and Adiabatic Penthouse	<ul> <li>Great solution where no, or limited, field piping is a benefit such as expansions, remote loads or large facilities with many units.</li> <li>Locations where water is limited, unavailable, or expensive.</li> <li>Project schedules that require fastest installation and start-up.</li> </ul>	<ul> <li>Limited or no water usage.</li> <li>True "plug-&amp;-play" functionality.</li> <li>Available with adiabatic pads for increased capacity and improve energy efficiency during peak ambient and loads.</li> </ul>	ENTERING AR ENTERING AR ENTERI

## Split System Units (LCR-S) - Phase 1



- Very low ammonia charge
- Reach in enclosure with ammonia detection and
- Pair with EVAPCO SST ceiling hung or penthouse evaporators
- Hot gas or air defrost depending on room temp
- Very energy efficient and reliable 1.2:1 liquid recirculation rate
- Many accessories, including dual compressors for increased redundancy

- Low energy consumption with compressor suction continuously matched to room and very little piping losses
- Reduced weight compared to LCR-P making it a great solution for retrofits

### Capacity Ranges:

- 15 to 85 TR at (-) 10°F room 15 to 100 TR at (+) 40°F room

LCR-S Models	Applications	Features	Principle of Operation
LCR-S Water-Cooled Split	<ul> <li>Applications where energy efficiency is the primary driver.</li> <li>Facilities near regulatory thresholds which require minimum ammonia charge.</li> <li>Sites with low wet-bulb temperatures.</li> </ul>	<ul> <li>Water-cooled units have lowest energy consumption of product line.</li> </ul>	AMMONIA RETURN
LCR-S Air-Cooled and Adiabatic Split	<ul> <li>Locations where water is limited, unavailable or expensive.</li> <li>Project schedules that require fast installation and start-up.</li> <li>Large facilities with many units.</li> </ul>	<ul> <li>Limited or no water usage.</li> <li>Available with adiabatic pads for increased capacity and improve energy efficiency during peak ambient and loads.</li> </ul>	ENTERING AIR ENTERING AIR AMMONIA BETURN

### Chiller Units (LCR-C)



- Very low ammonia charge •
- All ammonia contained in the package
- Optional reach in enclosure (standard on air-• cooled) with lighting and ammonia detection
- Robust industrial grade construction including stainless steel piping and galvanized structural steel frame and supports
- Many accessories, including dual compressors, chilled fluid pumps and heat reclaim



#### **Capacity Ranges:**

- 20 to 175 TR at 5°F glycol with air-cooled
- 20 to 225 TR at 5°F glycol with water-cooled
- 20 to 250 TR at 22°F glycol with air-cooled
- 20 to 300 TR at 22°F glycol with water-cooled 25 to 280 TR at 44°F water with air-cooled •
- 25 to 400 TR at 44°F water with water-cooled

LCR-C Models	Applications	Features	Principle of Operation
LCR-C Water-Cooled Chiller	<ul> <li>Can be installed outdoors or indoors and mounted on ground or on the roof.</li> <li>Sites with low wet-bulb temperatures</li> <li>Applications where maximum energy efficiency is the primary driver.</li> <li>Maximum capacity per pound of refrigerant.</li> </ul>	<ul> <li>Water-cooled units have lowest energy consumption of product line.</li> <li>NH3 charge usually less than 1 lb/TR.</li> </ul>	
LCR-C Air-Cooled and Adiabatic Chiller	<ul> <li>Locations where water is limited, unavailable or expensive</li> <li>Project schedules that require fast installation and start-up.</li> </ul>	<ul> <li>Limited or no water usage.</li> <li>True "plug-&amp;-play" functionality.</li> <li>Available with adiabatic pads for increased capacity and improve energy efficiency during peak ambient and loads.</li> </ul>	DISCHARGE AIR ENTERING AIR GUTCOL OUT