LCCU ETP
Electronic Technology Package
The Zero Zone LCCU ETP (liquid-cooled condensing unit electronic technology package) includes a direct current (DC) compressor, an electronic expansion valve (EEV), and a Carel H EOS controller. Multiple controllers can be monitored and linked in a master-slave configuration through a Carel boss supervisory system. This bundled package works as a seamless equipment and control system with a Zero Zone Hybrid™ display case and pump skid.

The LCCU ETP is a low-charge system that uses R-448A (typically less than 8 lbs.) with continuous monitoring and constant product temperature control that can operate both medium and low temperature display cases and walk-ins.

Running Efficiently & Saving Energy

Coordinated Component Control

The controller manages system operation into and out of the evaporator coil to match the actual cooling load. Each variable-speed DC compressor works independently and has a wide modulation range (15-100%), and the EEV controls refrigerant flow based on the cooling capacity.

Reduced Energy Consumption

Each load is allowed to operate at the warmest evaporator temperature, while maintaining optimal product and air temperatures. This minimizes energy usage, even at partial loads.

Savings

- Wide Modulation Range
- Maximum COP at Partial Load
- Smart Defrost Per Case
- Distributed Refrigeration Reduces Refrigerant Charge

Performance

- Stable Temperatures Improve Product Quality
- Efficient Components in Every System
- Quality-Tested for Maximum Reliability

Simplicity

- Glycol/H₂O Loop Replaces Refrigerant Lines
- Factory-Programmed for Ease of Installation
- Fast and Simple On-Site Connections
Easy to Install

When used with a Hybrid™ display case, the pre-charged LCCU ETP condensing unit is shipped loose and connected via refrigerant quick-connect couplings. Electrical connections between the case and condensing unit are made with easy plug-in connectors. Glycol/H₂O hook-up completes the installation.

Easy to Maintain

**Designed for Easier Maintenance & Long-Term Reliability**

- **Low-Charge System**: Less refrigerant, lower costs
- **Refrigeration Circuit**: Tested, reliable, easy to install
- **Component Layout**: Designed for maximum performance and safety
- **System Redundancy**: Maximized merchandising up time

Advanced Monitoring

Equipped with preventive diagnostics, the HEOS controller and boss supervisory system provide detailed metrics for each case through intuitive interfaces. That enables real-time unit performance overview and active COP analysis.

Noise Reduction

Improve your shoppers’ experience with quieter aisles. The LCCU ETP cabinet is insulated for sound reduction, keeping the noise contained in an enclosed unit that does not require an open top for ventilation. The LCCU ETP condensing unit uses rotary compressors, which are quieter than piston compressors. Measured at just 60 decibels, the LCCU ETP condensing unit is quieter than the ambient noise in a typical store (80-90 decibels).

Fresher Product

Retailers report that product stays fresh and retains its color up to 2 days longer thanks to the limited temperature modulation afforded by the LCCU ETP. The controller matches the refrigerant flow to the actual cooling load, ensuring a stable temperature inside the display case or walk-in.
Clean & Environmentally Friendly

Make the safe and smart choice with the Zero Zone LCCU ETP (liquid-cooled condensing unit electronic technology package) and Hybrid™ display case. The low-charge condensing unit uses R-448A, which has a low global warming potential (GWP) of just 1,273. With reduced leak potential, lower energy usage, and increased food quality, the LCCU ETP is a clean and smart choice.

Complete the Package

Complete the LCCU ETP with a Zero Zone pump skid and fluid cooler for the glycol loop. Our pump skids and fluid coolers are durable, dependable, and designed by Zero Zone, the same company that provides your display cases.

Choosing the LCCU ETP from Zero Zone puts you in good hands. Zero Zone builds high-quality refrigerated display cases and systems with you in mind, and the responsive company™ is well known for being just a phone call away. Partner with Zero Zone today!

“Any time we reach out to Zero Zone, they’re Johnny-on-the-spot. They are there to answer any questions and help us out of any pickle we get into. Zero Zone keeps us up and running and helps us keep our shoppers happy.”

~ Refrigeration Manager for a Southwest Retailer