

Packaging the Future of Refrigeration

All-in-one, modular solution raises the standard of innovation for distributed architectures



By Diego Marafon
Refrigeration Scroll
Product Manager
Emerson

As consumer preferences, corporate sustainability goals and regulations reshape the food retail industry, manufacturers and retailers need a smarter foundation on which to build for the future. Introducing the Copeland™ Indoor Modular Solution, the industry's first all-in-one offering that provides seamless integration of refrigeration equipment with Emerson facility controls — specifically designed for stores deploying distributed architectures and seeking to unlock the full potential of data management.

This groundbreaking innovation combines efficient, quiet, reliable and low-profile Copeland Scroll™ Variable Speed compressors, electronics with ProAct™ Connect+ enterprise management software and lifecycle services for efficient store setup and maintenance.

Optimized for indoor food retail applications using distributed architectures, the Copeland Indoor Modular Solution offers an alternative to traditional centralized systems and remote condensing units. In addition, it is purpose-built with the following features to address the needs of modern store owners/operators:

- Flexibility for fast development cycles and rollout of stores
- Lower-GWP and highly energy-efficient refrigeration for improved operations

End-to-End Refrigeration Solution With Hardware, Software, and Services



Facility Controls



Enterprise Services



Refrigeration Modules



Project Services



Aftermarket

- Low-profile, quiet system for enhanced in-store customer experiences
- Advanced electronics with seamless integration into facility controls for data management
- Enterprise services-enabled platform for remote monitoring to help operators achieve their food quality and safety goals

OEMs benefit from Emerson's superior refrigeration products and ingenuity. Retailers gain exceptional operational insights and support throughout the life of their stores, including systems integration, commissioning, maintenance and aftermarket services.

Pioneering new solutions to emerging challenges

As consumer trends prompt food retailers to rethink store formats, adaptability and square footage are becoming ever-more valuable commodities. Moreover, corporate sustainability goals and regulatory drivers continue to push the industry toward lower-GWP refrigerants. Also, retailers need all the data they can get to promote uninterrupted uptime and prolong the life of their equipment. Yet, as many store owners well know, dealing with multiple vendors can hinder efforts to realize an efficiently operating, fully connected store.

The Copeland Indoor Modular Solution offers a low-cost, small-footprint and low-maintenance option. It is specifically designed to help retailers quickly and successfully deploy distributed architectures.

The innovative pairing of our comprehensive refrigeration portfolios with our proven services expertise provides OEMs and retailers with the right toolset to manage their complex — and increasingly connected — operational challenges:

- **High-caliber performance:** Designed for small spaces, the low-profile condensing unit features the Copeland Scroll Variable Speed compressor for superior reliability, efficiency, variable capacity and quiet operation. Certified brazing, pre-charge, quick-connects and factory testing for runs/leaks are included.
- **Programmable controls:** A control module with a programmable electronic controller and a variable-speed drive comes loaded with software to simplify integration into facility controls. It is factory-certified with poka-yoke connections for easy installation.
- **Rapid setup:** Essential equipment components, such as an electronic expansion valve (EXV), suction pressure

transducer and temperature sensors — sized and tested to the application — provide retailers with everything they need to get up and running quickly.

- **Enterprise-level visibility:** Site Supervisor facility control enables retailers to collect and analyze data from refrigeration, HVAC, lighting and other assets.
- **Real-time access to data:** Connect+ provides real-time access to critical facility and asset information to monitor, triage and respond to issues.
- **Project certainty:** Emerson-authorized technicians bolster retailers' ability to get new stores launched on time and on budget.



Raising the bar on performance

From full-store performance to food quality to the consumer experience, the Copeland Indoor Modular Solution helps retailers meet their most critical operational needs. The new industry standard addresses the “Six S’s” of refrigeration system selection:

- **Sustainable:** Meet market demands for greater energy efficiency and

lower-GWP refrigerants while providing the infrastructure to support future sustainability efforts.

- **Simple:** Minimize installation challenges with plug-in, modular simplicity while eliminating multiple-vendor headaches.
- **Stable:** Achieve refrigeration reliability with advanced electronics and software algorithms that help retailers meet their operational targets with greater certainty.

- **Serviceable:** Support ease of installation while simplifying serviceability with modular design.

- **Secure:** Provide secure access for authorized service personnel and safeguard for operational data in connected infrastructures.

- **Smart:** Access real-time data to minimize the risk of food loss and unnecessary service calls while maximizing energy savings.

Demonstrated value for all stakeholders

When you select the Copeland Indoor Modular Solution, you gain more than a data-driven answer to some of the industry’s most pressing challenges. You also partner with our experts in cold chain technologies, facility optimization and energy management.

We recognize that the challenges facing food retail players are made more complicated by their interconnected nature. That’s why we designed the Copeland Indoor Modular Solution to deliver value across the supply chain.

Equipment manufacturers benefit from the configurability of Copeland products:

- The design enables OEMs to shrink their equipment footprint by offering a low-profile condensing unit.
- The Copeland Scroll’s variable capacity covers multiple equipment sizes.
- Our plug-in module approach accelerates time to market, reducing the burdens of refrigeration system design, testing and certification.

Store owners and operators benefit from using all-Emerson integrated refrigeration assets:

- Variable-capacity compressors help lower operating costs and provide precise refrigeration loads.
- Quiet operation ensures optimal in-store experiences.
- The low-profile design maximizes merchandising space.
- Food quality reports and alarm and setpoint management help operators to prevent food loss.

Enterprise managers can rest assured that stores are built with project certainty, delivered on time and budget:

- Easy-to-deploy, standard refrigeration modules minimize startup complexities and enable scalability for new stores.
- Enterprise visibility provides key insights into store performance, historic trends and outliers.
- The architecture promises to remain economically and environmentally sustainable for the foreseeable future.

Contact us to learn about how the Copeland Indoor Modular Solution can add more certainty to your equipment and operations in a uniquely dynamic industry.