

Copeland Scroll™

Continuing Innovations in Refrigeration Reliability



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When it comes to selecting scroll compression technology for commercial refrigeration applications, Copeland Scroll is often preferred by equipment manufacturers, service contractors and retail operators. Since its introduction nearly 30 years ago, Copeland Scroll has revolutionized the concept of refrigeration reliability. With one of the widest installed bases in our industry, Copeland Scroll compressors are found throughout the food cold chain and in a wide variety of in-store applications. Wherever food quality and safety are critical to operators for ensuring consumer satisfaction and protecting brand reputations, you'll likely find Copeland Scroll.

The commercial refrigeration industry has changed drastically in recent years. Dynamic regulations and consumer trends are reshaping the retail landscape, and as a result, refrigeration requirements are changing. Operators demand an ever-widening spectrum of applications, from traditional large centralized systems to small walk-in freezers and coolers. Energy efficiency and environmental sustainability are no longer secondary concerns; they're becoming stated business objectives. Businesses everywhere are making digital transformations with technologies that offer connected, predictable approaches to their entire operations — including refrigeration.

For all of these reasons, refrigeration equipment reliability is more critical today than ever before. Supermarket, restaurant and convenience store retailers are fundamentally evolving the ways

they conduct business, and their refrigeration requirements must change with them. That's why research and development of the Copeland Scroll platform continue in earnest today, with innovative technologies that optimize performance and help operators address a variety of emerging challenges:

- Supporting small- to large-store formats
- Complying with food safety and environmental regulations
- Adapting to e-commerce and omnichannel fulfillment requirements
- Integrating with IoT technologies and building management systems
- Achieving energy efficiency and sustainability goals

The Copeland Scroll difference

Copeland Scroll has staked its reputation on superior efficiency, reliability and ease of installation. Today, we're building on that legacy with an expanded horsepower capacity range and flexible options for low-, medium and extended-medium temperature equipment. Let's look at a few of the innovations keeping Copeland Scroll at the forefront of commercial refrigeration applications.

Wide application and temperature range: The Copeland Scroll lineup spans the commercial application range, from the fractional $\frac{3}{4}$ horsepower ZF* KA compressor designed for low temperatures to the 17 horsepower K5 for low- and medium-temperature

applications. Across the lineup, you'll find a variety of solutions within this horsepower range for low-, medium- and extended medium-temperature applications.

Inherently robust design: The fully hermetic Copeland Scroll design is based on up to 70 percent fewer moving parts than semi-hermetic, reciprocating compressors. This smooth, minimalist design: requires no complex suction and discharge valves; is capable of starting under any system load; eliminates many vibration issues; improves liquid and debris handling; is compact and lightweight for easier serviceability.

Energy compliance: Original equipment manufacturers (OEMs) rely on Copeland Scroll technology to help meet the Department of Energy's annual walk-in efficiency factor (AWEF) ratings for walk-in coolers and freezers. Copeland Scroll's inherent efficiency and reliability are the foundation of AWEF-compliant condensing units in leading OEM equipment design strategies.

Alternative, lower-GWP refrigerants: The Copeland Scroll compressor lineup includes many options rated for use with lower-GWP synthetic and natural refrigerant alternatives. We continue to evaluate and test emerging refrigerants to help operators achieve their operational and sustainability goals.

Performance-enhancing technologies: Copeland Scroll leads the industry in performance-enhancing innovations — from digital modulation capabilities to liquid- and vapor-injection options and low condensing operation. These technologies are helping OEMs and operators improve system reliability and capacity while meeting today's demanding regulatory requirements.

Smart diagnostics and protection: Many Copeland Scroll compressors are equipped with on-board CoreSense™ Diagnostics; others can be retrofitted with panel-mounted, remote options. CoreSense provides advanced motor protection, diagnostics, power consumption measurement and communication capabilities. This active protection technology runs on advanced algorithms while providing fault detection histories, helping to enable technicians to quickly diagnose and repair systems.

Product development partnership: Copeland Scroll customers gain access to Emerson's extensive capabilities to support their product development efforts, including: application engineering; design, testing and certification services; innovation center proof-of-concepts; and application development.



Connect to the industry's largest support network

When you select a Copeland Scroll compressor, you'll be backed by a wholesaler network comprised of more than 1,000 Copeland-authorized locations and over 600 certified Copeland technical specialists. And since Copeland Scroll is manufactured in the U.S., when you need customer service, product support or availability, representatives from our American base of operations can quickly deliver the product and technical assistance you need.

Our new Copeland™ Mobile app connects contractors to the Emerson Online Product Information database for on-the-go access to 30 years of Copeland compressor product specifications. This full-featured app allows contractors to cross-reference Copeland Scroll products and quickly troubleshoot and diagnose issues. It also instantly connects them to the wholesaler network to check the availability of local product replacements.

The Copeland Scroll compressor platform is widely recognized as a standard in commercial refrigeration. With so much at stake, protecting your reputation in this competitive market starts by selecting a compressor built on a foundation of reliability with decades of performance enhancements. That's why you'll find the Copeland Scroll name throughout the food cold chain and in retail outlets everywhere. And with a legacy of innovation and an eye toward the future, you can be sure that Copeland Scroll will continue to evolve to meet rapidly changing commercial refrigeration requirements.