

Copeland™ Scroll

Variable speed compressors
for commercial HVAC applications



Product brochure

COPELAND™


EMERSON™

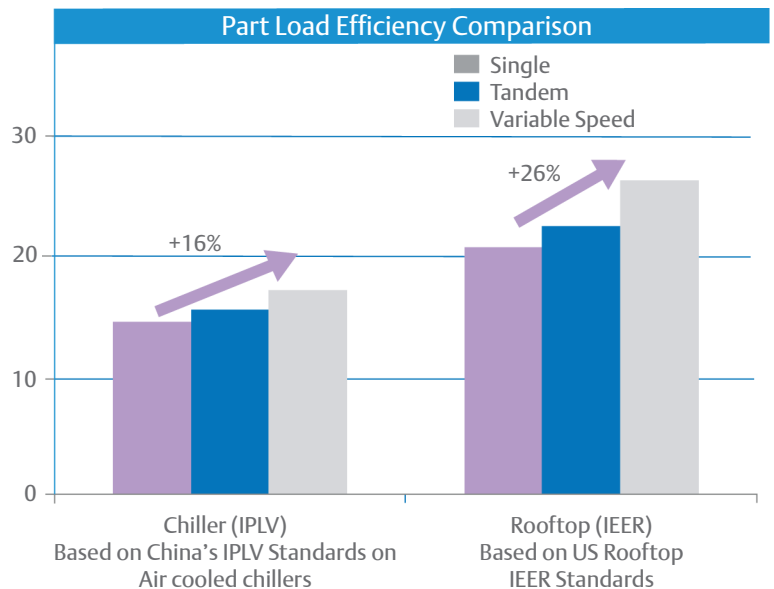
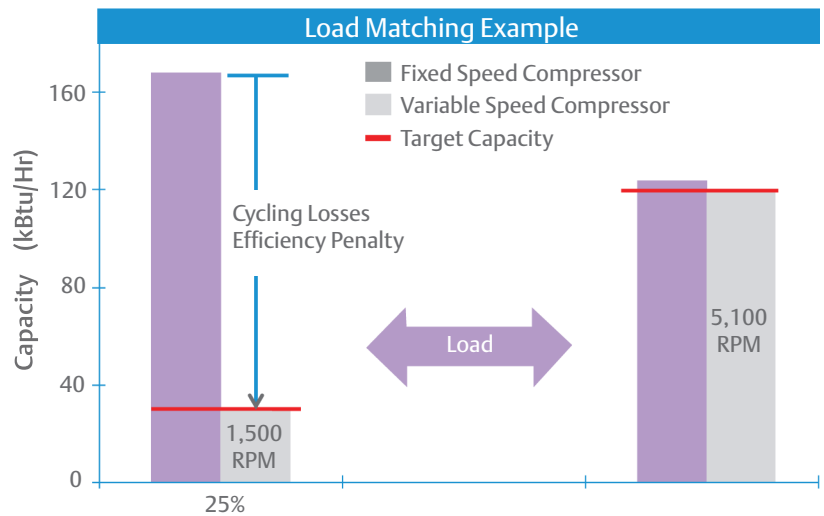
Superior efficiency, control and reliability

The latest innovation of Copeland™ scroll variable speed technology - for maximum commercial HVAC system performance

Breakthrough Efficiency

Emerson's Copeland scroll variable speed compressors are designed to deliver maximum cooling and heating efficiency when you need it most. Whether designing for a roof-top unit in Australia or the United States or an air-cooled chiller in Europe or Asia, our latest variable speed compressor technology allows systems manufacturers and building owners to achieve superior performance, including:

- **Expansive 1,000-7,200 RPM speed** range for enhanced light load efficiency and dehumidification
- **Highest part load efficiency** in its class enabling significant energy savings and standards compliance
- **Capability to 'tandemize'** for maximum flexibility in system design
- **Both compressor and drive are UL 60730 approved** for reduced design time, cost, and speed to market.



The unmatched efficiency of Copeland scroll variable speed enables maximum efficiency



Proven Copeland scroll platform

- Enhanced and optimized for variable speed

- Optimized scroll elements for variable speed performance
- Low oil circulation compressor plus scroll oil injection for low speed performance and reliability
- BPM motor technology for highest efficiency
- Sound reduction technology for reversible chiller transition and defrost.



Expansive control

The Copeland scroll variable speed design enables system manufacturers, building owners, and contractors alike to experience a new level of control, thanks to the following enhancement:

- Expanded operating envelope providing the greatest flexibility in design and desired condition
- Low turn-down to 1,000 RPM reduces cycling for better dehumidification and light load efficiency
- Enables precise temperature and humidity control across a wide range of conditions
- Proactive envelope control and resonance avoidance
- Drive controls motor stator heating thereby eliminating the need for a crankcase heater.



The latest in technology and value

Emerson's compressor and motor control drive technology provide enhanced system performance and value.



Key motor drive features

- Drive with optimized permanent magnet motor control for maximum performance and reliability
- Dedicated compressor menu structure and parameters for quick and easy set-up
- Option range of multi-language click in LCD keypads available for rapid set-up and superior diagnostics
- RS485 Modbus ® communications as standards
- Slot for smartcard/SD card for parameter cloning, storage back up, and restore
- Compact aluminum chassis allows flexible mounting, with built-in high performance extruded heat sink
- System integration module slots for I/O, ethernet, and automation controller options

See for yourself

Efficiency. Control. Reliability. To learn more about Copeland scroll variable speed compressors and how they can improve your business results visit EmersonClimate.com/CommercialScroll.

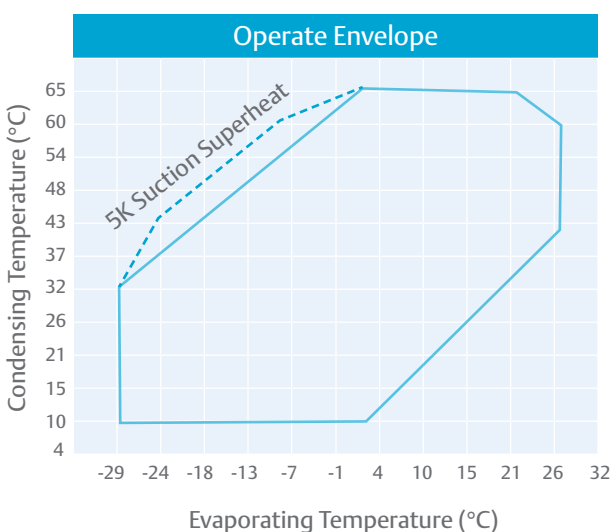


Comprehensive protection and reliability

Copeland™ scroll variable speed compressors take reliability to a new level with the integration of CoreSense technology. These active protection algorithms incorporated into the motor control drive, safeguard the compressor and drive from many adverse operating conditions. The types of protection features include:

- Motor scroll temperature protection
- Locked rotor detection
- Phase protection and correction
- Maximum operating current detection
- Discharge line temperature protection
- Anti-short cycling

This builds upon the reliability and proven performance from 25 years of scroll experience and more than 100 million installations around the world.



Based on : 11.1K SH, 8.3K SC 35.0 °C Ambient (Solid Line Boundaries)
Refer to application engineering bulletin for details on the speed range throughout the operating envelope.

Compressor Model	ZPV0662E-4E9	ZPV0662E-5E9	ZPV0962E-4E9/5E9
Displacement	66cc		96cc
Speed Range	1,000-7,200 RPM		1,200-7,200 RPM
Voltage Range	380-575V	200-240V	380-575V/200-240V

Drive Model	EVC1150B-K1-114	EVC1150B-L1-114	EVC1150B-J1-11	EVC1185B-K1/L1/J1
Voltage Range	380-480V	460-575V	200-240V	380-480V/500-575V/200-240V
Drive Size	15kW			18.5kW

Performance	At 5400 RPM	ZPV0962E-4E9/5E9
Capacity (Btu/Hr)	130,700	195,300
COP	4.1	4.1
Sound Power (dBA)	83	86

Performance based on evaporating temperature : 10 °C, Condensing Temperature : 50 °C
Ambient Temperature: 35 °C

The data shown above is preliminary and subject to change without notice
Model ZPV096 is expected to be launched in late 2017

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