

Copeland variable speed scroll compressors and drives for commercial applications

Superior efficiency, control and reliability.

Breakthrough efficiency

Copeland YAV and YAW variable speed A2L scroll compressors are designed to deliver maximum cooling and heating efficiency when you need it most. Whether designing for a roof-top unit or an air-cooled chiller, our latest variable speed compressor technology allows system manufacturers and building owners to achieve superior performance, including:

- Expansive 900–7,200* RPM speed range for enhanced light load efficiency and dehumidification.
- High part load efficiency enabling significant energy savings and standards compliance
- Capability to build tandems and trios for maximum flexibility in system design ‘paralleling’
- Both compressor and drive are agency approved for reduced design time, cost, and speed to market
- Copeland’s YAW variable-speed platform with vapor injection is designed to boost capacity in cold climates, delivering up to a 25 percent increase that meets the DOE’s 100 percent capacity requirement in 5°F ambient conditions.

* Reference the compressor operating envelope and AE bulletin for low/high speed operation



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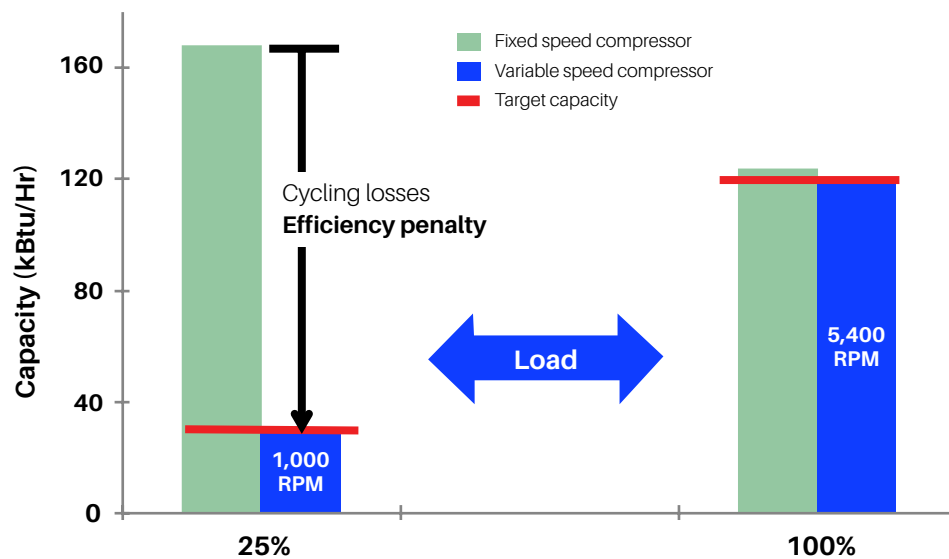
Proven Copeland scroll platform – enhanced and optimized for variable speed

- Optimized scroll elements for variable speed performance
- Low oil circulation for low speed performance and reliability
- BPM motor technology for highest efficiency
- Sound reduction technology for reversible chiller transition and defrost (available on select models)
- Technology to boost efficiency across a range of conditions
- 2-25 ton

Expansive control

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

- Expanded operating envelope providing the greatest flexibility in design and desired condition
- Low turndown to 900 RPM means less cycling for better dehumidification and light load efficiency
- Enables precise temperature and humidity control across a wide range of conditions





The latest in technology and value.

Copeland YAV and YAW compressors and motor control drive technology provides enhanced system performance and value. The Copeland YAV variable-speed scroll compressor is designed to offer premium energy efficiency and reliability for light commercial and commercial air conditioning, heat pump, rooftop and chiller applications. The Copeland YAW variable-speed scroll compressor is designed to support HVAC decarbonization by addressing the heating capacity challenges found in commercial cold climate heat pump (CCHP) and water heating applications. Combining overspeed capabilities and vapor injection, this innovative platform delivers the next generation of performance, comfort and sustainability.

The Copeland YAW variable-speed compressor platform is engineered to deliver the heating capacities and efficiencies required to meet the DOE's strict CCHP standard. Available in tonnage ranges for residential and commercial applications, YAW represents state-of-the-art sustainable compression technology—leveraging the low-global warming potential (GWP) A2L refrigerant R-454B, a variable-speed compressor and drive, and vapor injection technologies.

Copeland's YAW variable-speed platform with vapor injection is designed to boost capacity in cold climates, delivering up to a 25 percent increase that meets the DOE's 100 percent capacity requirement in 5°F ambient conditions. This breakthrough will enable OEMs to accelerate the electrification and decarbonization of space and water heating in North America by developing best-in-class residential and commercial heat pumps and water heaters.

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

Copeland Commercial HVACR Variable Frequency Drive EVM Series

Motor control drive offerings

Copeland offers AC drives to be paired with Copeland variable speed 2–25 ton scroll compressors. These drives have integrated compressor electronics technology and RS485 Modbus communication as a standard. The EVM variable frequency drive (VFD) series, covering ½ to 30 HP, has single- and three-phase input options and is simple to use with Bluetooth® onboard.

Comprehensive protection and reliability

Copeland variable speed scroll compressors take reliability to a new level with the integration of compressor electronics 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:

- Locked rotor detection
- Phase loss detection
- Maximum operating current detection
- Anti-short cycling



See for yourself

Efficiency. Control. Reliability.

To learn more about Copeland variable speed scroll compressors and how they can improve your business results visit [copeland.com](https://www.copeland.com).