Copeland Commercial HVACR Variable Frequency Drive

EVH Series

The EVH variable frequency drive (VFD) series, covering 1 to 250 HP, has three-phase input options including 575v and expanded control functionality to handle applications requiring more advanced control functionality, such as CO2 and centralized rack applications, advanced chillers and industrial refrigeration.

Reducing energy consumption with drive technology

Food retailers, contractors and refrigeration system manufacturers are investing in modern refrigeration systems to maximize energy efficiency and reduce operational costs. Copeland is a global leader in providing integrated cooling solutions. These include compressors and drives for commercial refrigeration applications – innovative and reliable products that fulfill the needs of today's market.

Variable frequency drives can play a critical role in the performance of a refrigeration system. The motor that drives the compressor typically consumes a high percentage of the electrical energy in a refrigeration system. Using a variable frequency drive, energy consumption can be significantly reduced while also enhancing system performance. The Copeland VFD platforms are designed with software that offers optimal performance when paired with Copeland compressors, including: scroll, semi-hermetic and screw compression technologies. The drive thereby enables the compressor capacity output to match the needs of the system and eliminates unnecessary energy consumption.

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EVH drives

- 1–250 horsepower
- Graphical LCD readout with removable keypad
- Onboard real time clock and daily/weekly timers
- Onboard diagnostics
- Onboard energy savings calculator
- Quick set-up upon power up
- Advanced PC tool allows tailoring to any application
- BACnet MS/TP & IP, Modbus TCP & RTU
- 98%+ efficiency at full speed
- Globally compliant: UL, CE, cUL, VDE, RoHS, Reach, IEC/EN 61800-5-1 &-2, UL508C, IEC61508, EN6206, ISO 13849-1, IEC61800-3 Cat:C2
- Available with and without bypass for induction motor use
- Capable of PMAC compressor control
- Onboard I/O can eliminate the system control in many cases (8DI, 1DO, 2AI, 2AO, 3 relays)

Improve efficiency

- Better load matching
- Less cycling on and off
- Soft start-up (start-up power)
- Faster pulldowns
- Help meet regulations (AWEF)

Precision/accuracy

- Precise temperature control
- Precise humidity control
- Adaptable capacity for weather
- Low noise (controllable noise level)

Improved reliability

- Proactive motor failure prevention
- Motor/compressor as a sensor – improved diagnostics
- Ability to deal with power fluctuations
- Reduces number of start-stops

Operational benefits

- SKU reduction
- Adaptable to many applications
- Reduce food spoilage
- Up sales with quantifiable ROI
- Can negate the need for a motor contactor
- Faster retrofit in many cases

Standard features on all EVH drives include onboard STO option, brake chopper, BACnet MSTP/IP, Modbus RTU/TCP communications, DC link choke, and a removeable display.

Voltage/phase Input & output	Max output Rating range(A)	Max output power ratingrange (kW)	IP rating options	Internal EMI filter options
200–240v 3Ø	4.8–312	.75–90	21/54	Yes/No
380–480v 3Ø	3.3–310	1.1–160	21/54	Yes/No
525–600v 3Ø	4.5–250	2.2–187	21/54	Yes/No

To learn more, visit **copeland.com**

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