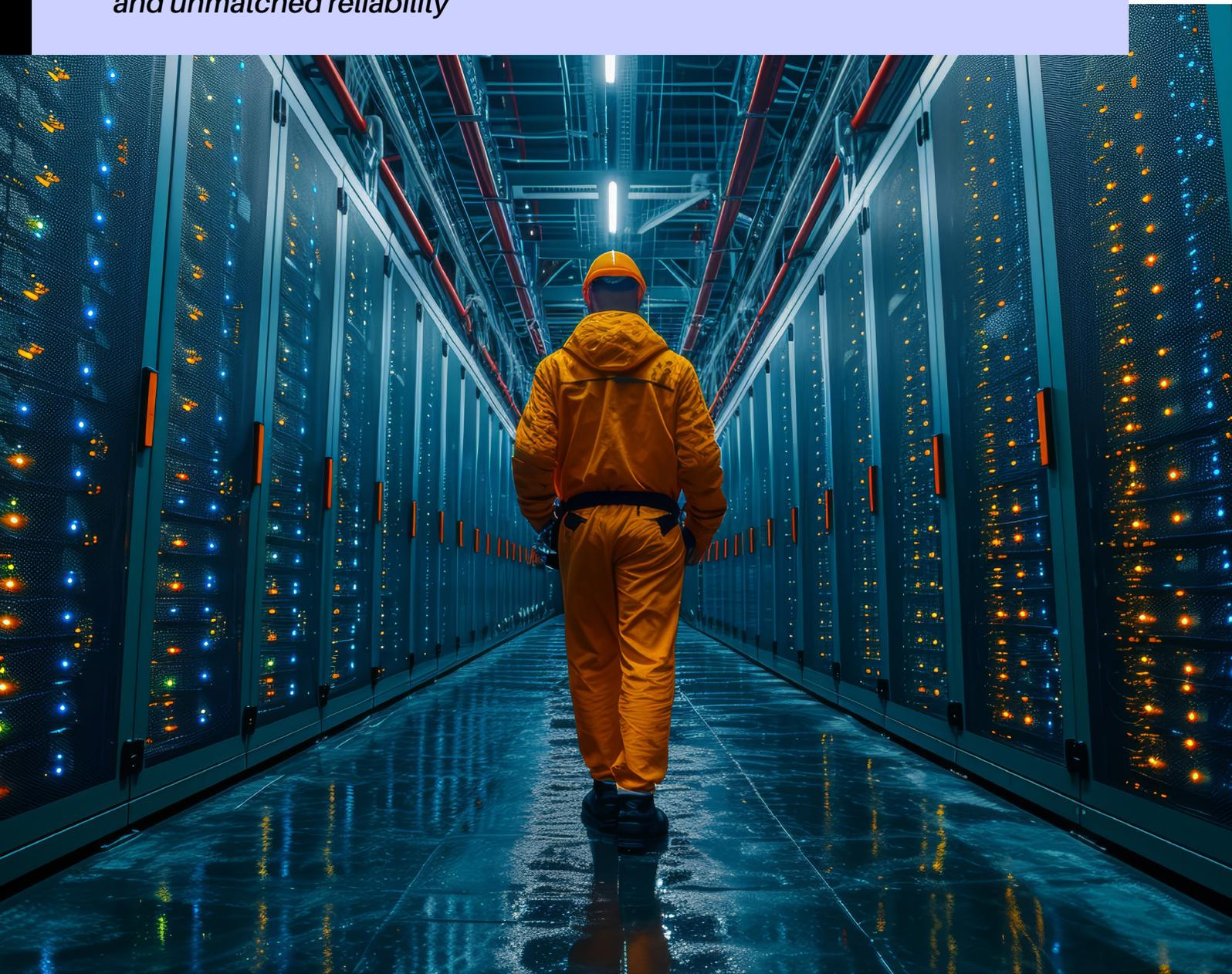


Copeland Variable Speed Solutions for Data Center Application

Optimizing data centers' power utilization effectiveness and maximizing uptime with precise temperature, humidity control and unmatched reliability



COPELAND



Copeland Variable Speed Solutions for Data Center Applications

In today's digital world, data centers are becoming an essential part of life. Data centers are expanding in size with recent advancements in telecommunications, information technology, cloud computing, and AI. These big data centers consume massive amounts of energy thus putting critical focus on air conditioning efficiency to optimize power utilization effectiveness.

Copeland Variable Speed Solutions for data center is designed for continuous hours of operation, delivering best-in-class efficiency and reliability, enabling data center air conditioners to deliver precise temperature and humidity control, and optimize power utilization effectiveness.



Key Features

 Variable Speed Compressor	 Inverter Drive	 Programmable System Controller (iPro)
<ul style="list-style-type: none"> • Designed for continuous hours of operation • Wide operating envelope with higher evaporating temperature • Optimized to deliver best-in-class efficiency • Low side design feature for better liquid handling, oil management and reliability • Wide speed range 20-130 Hz 	<ul style="list-style-type: none"> • Optimized performance <ul style="list-style-type: none"> - perfectly matched with Copeland variable speed scroll compressor • Enhanced start/stop algorithm with comprehensive software testing • Power factor correction capability and low iTHD 	<ul style="list-style-type: none"> • Built-in optimized control logic • Integrated two EXV drivers • Capability for expansion and connection to monitoring systems



Key Benefits



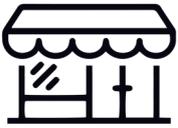
Superior reliability



Market-leading system performance



Helping customers respond faster to market demands



One-stop shop - qualified integrated solution



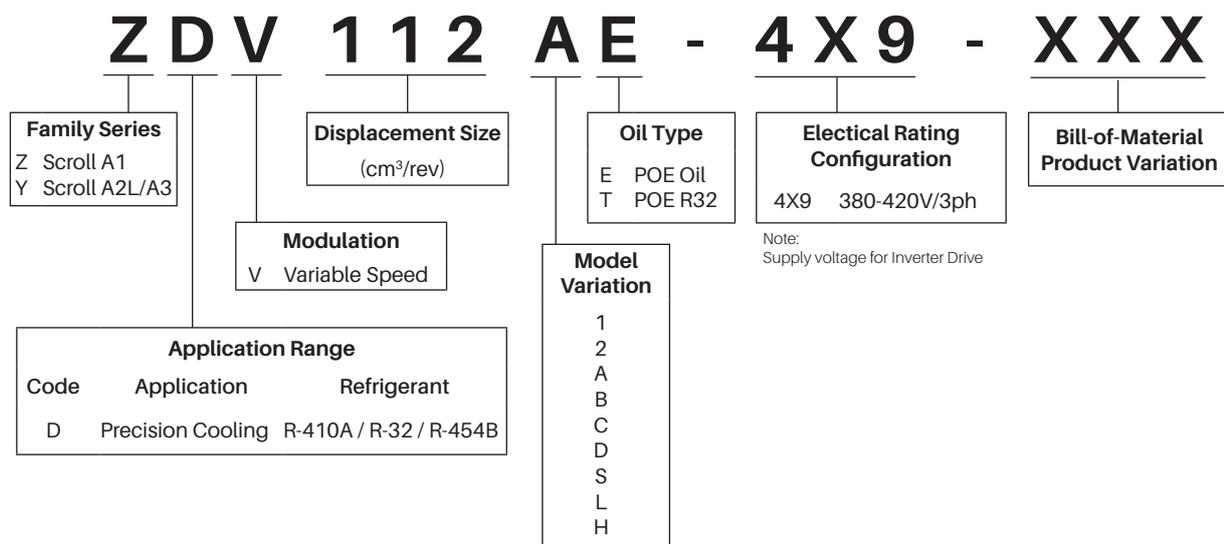
Trusted Copeland brand with decades of cooling expertise



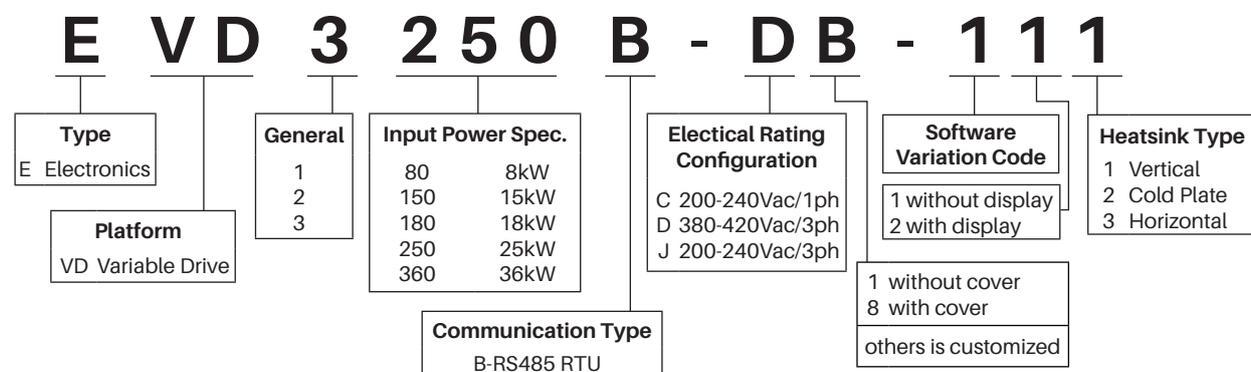


Nomenclature

Variable Speed Scroll Compressors



Inverter Drives



Technical Specifications

Variable Speed Scroll Compressors

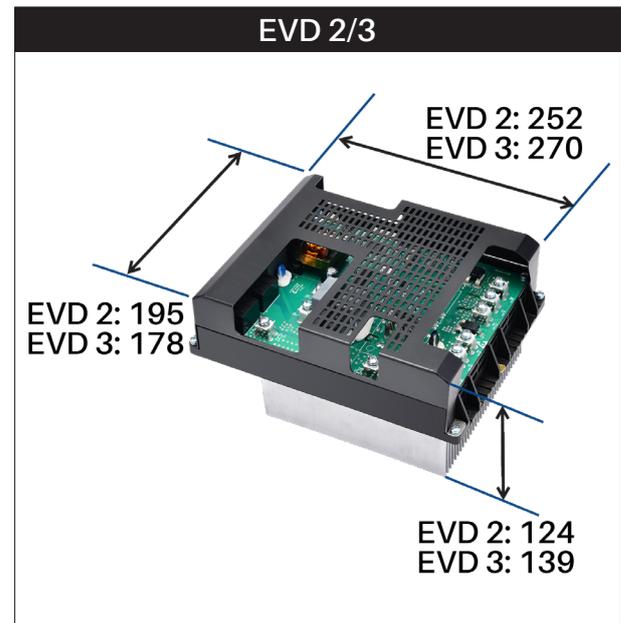
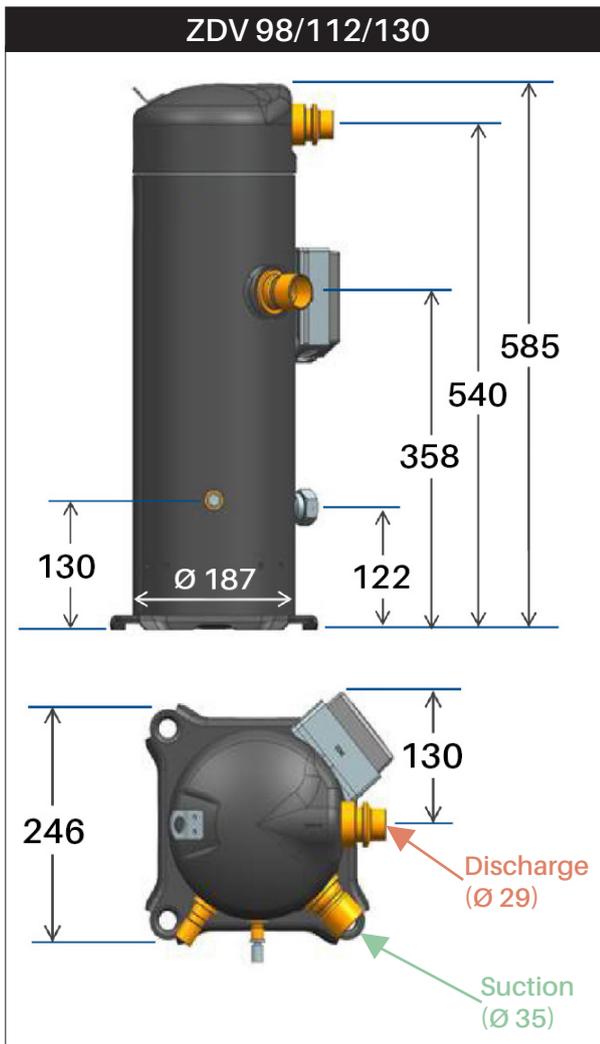
Compressor Model	Refrigerant	Electrical Rating	Displacement (cm ³ /rev)	Speed Range (Hz)	AHRI Condition @ 60Hz		
					Capacity (kW)	Input Power (kW)	COP
ZDV130AE-4X9	R-410A	380/420V, 3ph	130	20 ~ 130	44.3	12.4	3.58
ZDV112AE-4X9			110		37.9	10.7	3.53
ZDV098AE-4X9			98		33.6	9.5	3.54
YDV130AT-4X9	R-32		130	20 ~ 120	47.9	13.4	3.55
YDV112AT-4X9			110		41.4	11.4	3.62
YDV098AT-4X9			98		36.5	10.3	3.55

Inverter Drives

Inverter Drive Model	Drive Size (kW)	Input Voltage	Drive Input/Output Current (Arms)	Certification	Compressor Match
EVD3250B-D8-111	25	340/440V, 3ph	40 / 48	UL	130cc 110cc
EVD3180B-D8-111	18		38 / 38	UL	98cc

Dimensions

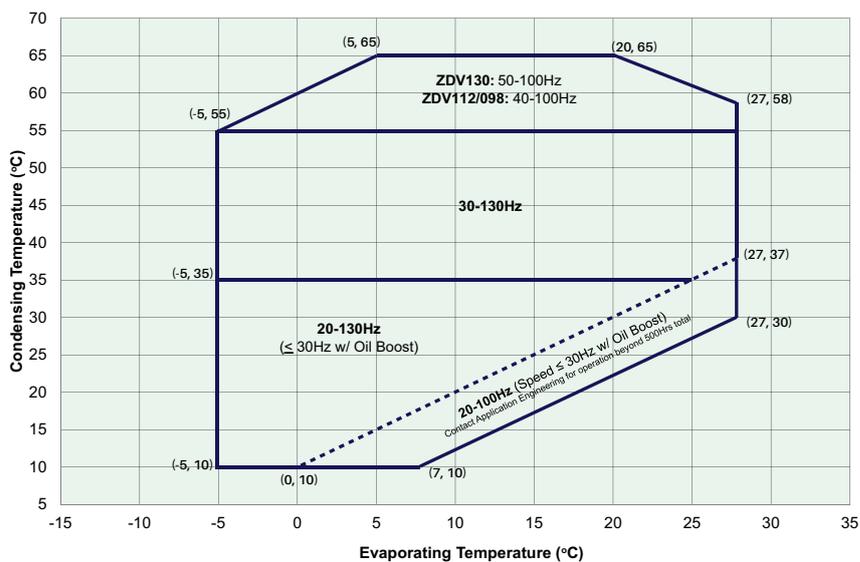
Note: All dimensions in mm



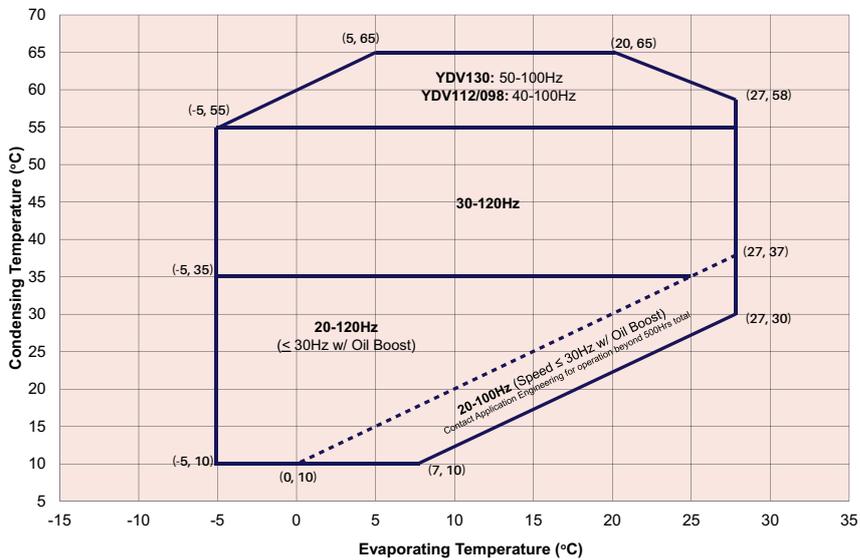


Operating Envelope

ZDV 98/112/130



YDV 98/112/130





Copeland Integrated Solutions Package for Data Center

- Compressor
- Drive board
- Capacitor board
- Filter board
- Choke
- Controller
- HMI
- Electronic expansion valve
- Electronic expansion valve coil
- High pressure transducer
- Low pressure transducer
- High temperature sensor
- Low temperature sensor

EVD Drive

- Optimized control to provide optimum performance and sound
- Perfectly matched with compressor
- Build-in Protection To Enhance Package Reliability



Variable Speed Scroll Compressor

- Superior reliability
- High COP and AEER
- Low running sound
- Broad operation envelope



Integrated Solutions



DX3 EXV

- Unipolar stepper motor driven for 500steps
- Bi-flow design
- High reliability, 250k full cycles
- IP65/IP67 protection



IPro-lite Controller

- Build-in 2 EXV drives
- Optimized control logic for precision cooling to provide best performance and reliability
- Programable controller to address various needs and late customization
- 7" touch HMI available



HP/LP/HT/LT Sensor

- +/- 1% accuracy
- IP67 protection





About Copeland

Copeland is a global leader in sustainable heating, cooling, refrigeration and industrial solutions. We help commercial, industrial, refrigeration and residential customers reduce their carbon emissions and improve energy efficiency. We address issues like climate change, growing populations, electricity demands and complex global supply chains with innovations that advance the energy transition, accelerate the adoption of climate friendly low GWP (Global Warming Potential) and natural refrigerants, and safeguard the world's most critical goods through an efficient and sustainable cold chain. We have over 18,000 employees, with feet on the ground in 50 countries - a global presence that makes it possible to serve customers wherever they are in the world and meet challenges with scale and speed. Our industry-leading brands and diversified portfolio deliver innovation and technology proven in over 200 million installations worldwide. Together, we create sustainable solutions that improve lives and protect the planet today and for future generations.

To learn more, visit [copeland.com](https://www.copeland.com)

Asia 01 00 Issued 09/2024 ©2025 Copeland LP.

COPELAND