

Copeland™ Scroll

Variable speed compressors
for residential air conditioning applications



COPELAND™


EMERSON™

Copeland™ Scroll Variable Speed Compressor

The Copeland scroll variable speed compressors are designed with innovative technologies to provide the ultimate in energy efficiency and quiet operation for consistent comfort.

The Copeland scroll variable speed compressor are optimized for SEER and APF. Also enhanced vapor injection design is available for all variable speed compressors to achieve higher heating capacity and energy efficiency as well as more reliable heating system operation at -25 °C ambient temperature.

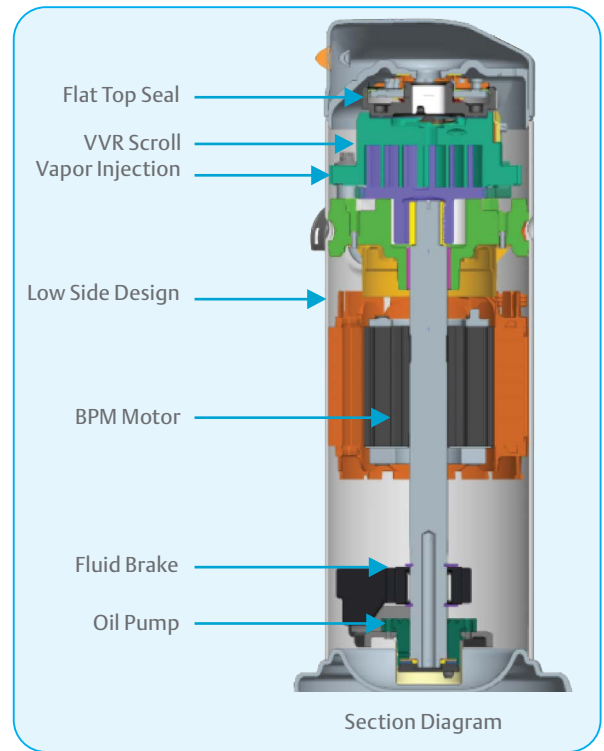
The Copeland scroll variable speed compressors build upon reliability and proven performance from 25 years of Emerson’s scroll experience and more than 100 million Copeland scroll installations around the world.

Benefits

- High full and part load efficiency
- Low sound and vibration
- Copeland scroll axial and radial compliance for superior reliability
- Wide applications for VRF, PAC, water heating and floor heating systems

Key Features

- Variable volume ratio (VVR) : enhanced low pressure ratio COP
- High efficiency Emerson BPM motor
- Enhanced vapor injection (EVI): optional
- Low side design: proven reliability
- Fluid brake: drive protection for power failure
- Positive displacement oil pump: providing reliable lubrication
- 3.4mm thicker shell for sound reduction



Product Line-up

System Size	7.2kW	10kW	12kW	14kW	16kW	18kW	20kW	22kW	25kW
VRF Application						6-8hp 50cc	15-120Hz 20-25kW Optimized Efficiency 3Ph 380-420V		
			5hp 38cc	15-120Hz 14/16/18kW Optimized Efficiency 1 Ph 220-240V / 3 Ph 380-420V					
		4hp 30cc	15-120Hz 10/12/14kW Optimized Efficiency 1Ph 220-240/3Ph 380-420V						
PAC Application		3hp 20cc	15-120Hz 10/12/14kW Optimized Efficiency 1Ph 220-240V / 3Ph 380-420V						

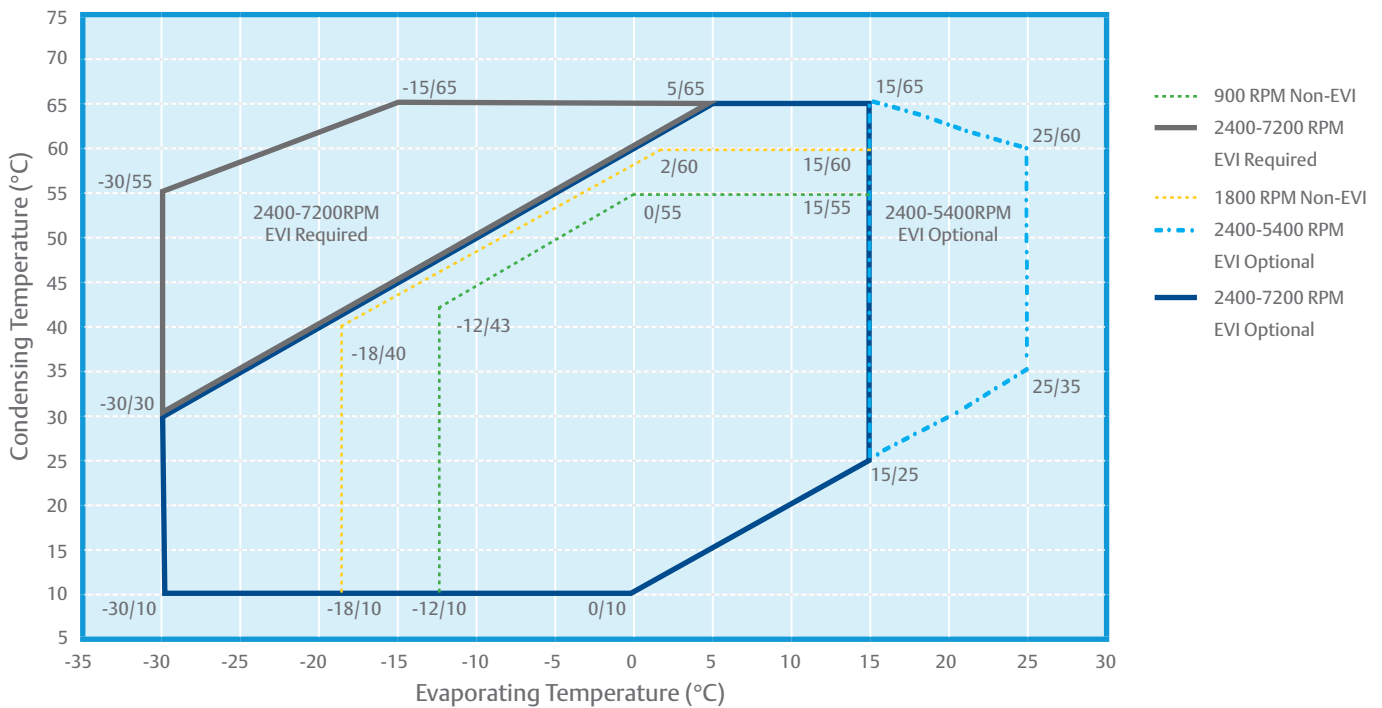
*EVI is available for all variable speed models

Technical Data

Compressor Model	ZPV030	ZPV038	ZPV050
HP	4	5	6-8
Displacement (cc/rev)	30	38	50
Speed range (RPM)	900-7200	900-7200	900-7200
Rated Capacity (kW)@ARI 60Hz	9.7	12.6	16.6
Power Input(kW)	2.98	3.80	5.03
COP (W/W)	3.25	3.30	3.30
Sound (dBA)@ARI 60Hz	70	71	72
Voltage	220-240 V/380-420 V		

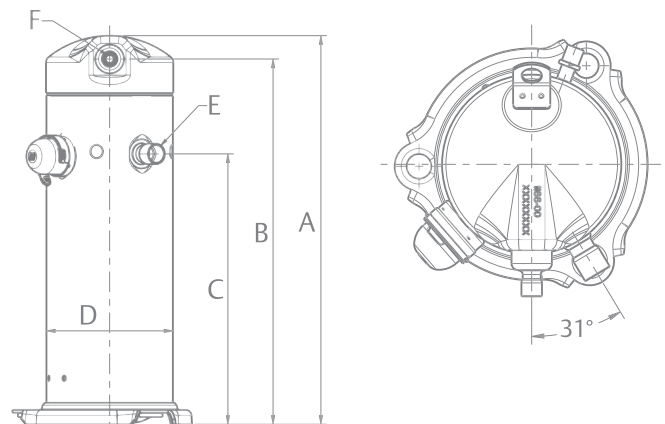
*ZPV050SE (6-8 HP) model is under development

Operating Envelope



Dimensional Drawing

Compressor Model	ZPV030	ZPV038	ZPV050
A (mm)	421	421	421
B (mm)	397	397	397
C (mm)	282	282	282
Shell Diameter D(mm)	141	139	139
Suction Port Size E (mm)	3/4"	3/4"	3/4"
Discharge Port Size F (inch)	1/2"	1/2"	1/2"
Base Size (mm)	194 X 198		



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