Copeland ZE Scroll Compressors Designed for R32

Low GWP Compressors for Future-Proof Residential Air Conditioning and Reversible Heat Pump Applications

Copeland has developed a new generation of environment-friendly and sustainable fixed-speed scroll compressors, optimized for low GWP R32 refrigerant. This full range of scroll compressors are designed to efficiently manage high discharge temperature, ensuring safety and reliability.

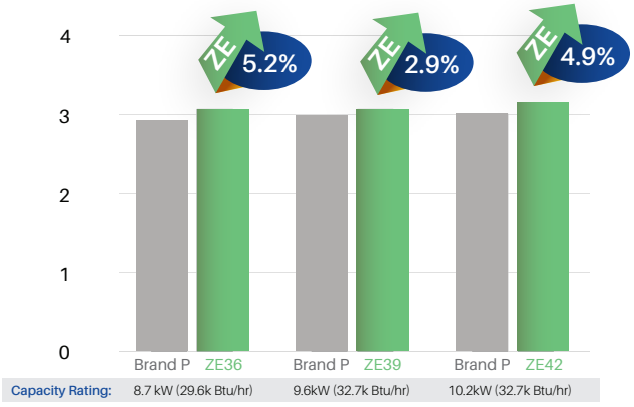
Thanks to advanced Copeland compression technologies, the new Copeland ZE compressors can be used in the same applications as Copeland scroll compressors that use R410A refrigerant. This is achieved without the need for liquid injection, which enhances efficiency and sustainability.

Copeland ZE compressors boast comparable overall dimensions to their equivalent R410 models, making them suitable for cooling-only and reversible heat pump systems. This enhanced adaptability enables simplified refrigerant transition and minimizes the need for extensive and costly system redesigns.

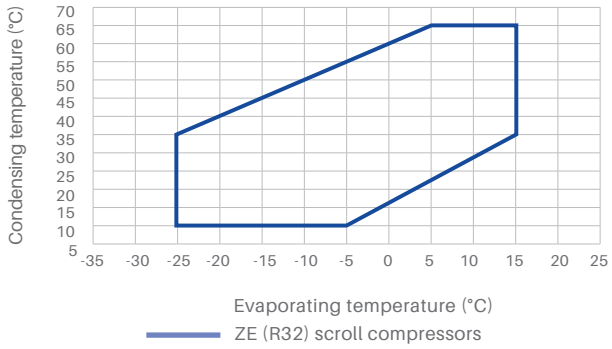
This compressor series leverages Copeland's technical expertise and extensive line-up with the advantages of a low Global Warming Potential (GWP) refrigerant, enabling a sustainable and reliable air conditioning solution.

COP Comparison

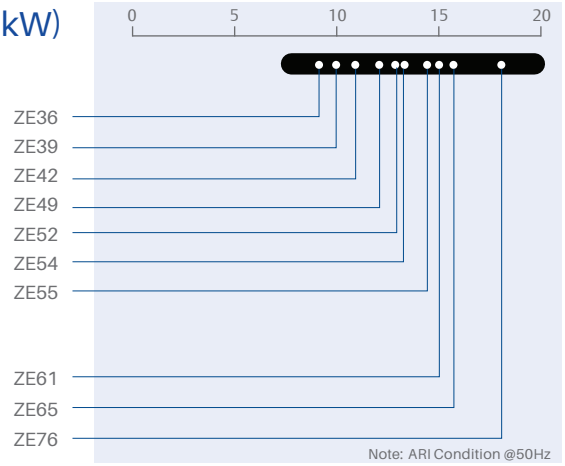
Copeland vs Rotary Compressor



ZE Operating Envelope



Cooling Capacity (kW)



Product Features

- Designed for R32 refrigerant
- Axial & radial compliance
- Enhanced sealing & lubrication through oil injection
- Low side pressure structure
- Modified suction flow path
- Leak-free hermetic design
- Optimized motor for maximum temperature limit
- Copeland Integrated Solutions ready

COPELAND

Copeland™ ZE Compressors Technical Overview

Copeland Scroll ZE Series Compressors								
Model	Cooling Capacity (W)	Input Power (W)	COP Cooling	Current (A)	Displacement (m^3/hr)	Electricals	Diameter (mm)	Height (mm)
ZE36KUE-PFZ	8,646	2,820	3.08	13.1	5.50	220/240V, 50Hz, 1ph	166	419
ZE36KME-TFM	8,851	2,800	3.17	5.2	5.50	380/420V, 50Hz, 3ph		
ZE39KUE-PFZ	9,496	3,100	3.08	15.8	5.74	220/240V, 50Hz, 1ph		
ZE39KME-TFM	9,671	3,060	3.17	5.5	6.00	380/420V, 50Hz, 3ph		
ZE42KUE-PFZ	10,316	3,250	3.17	15.1	6 .40	220/240V, 50Hz, 1ph		
ZE42KME-TFM	10,316	3,250	3.17	6.1	6.40	380/420V, 50Hz, 3ph		
ZE49KME-TFM	12,016	3,800	3.17	7.0	7.30	380/420V, 50Hz, 3ph		
ZE52KUE-TFM	12,778	3,930	3.25	7.1	7.74	380/420V, 50Hz, 3ph		
ZE54KME-TFM	13,364	4,220	3.17	7.7	8.19	380/420V, 50Hz, 3ph		
ZE55KME-TFM	13,364	4,220	3.17	7.7	8.19	380/420V, 50Hz, 3ph		
ZE61KCE-TFM	15,240	4,880	3.11	8.8	9.50	380/420V, 50Hz, 3ph	186	445
ZE65KCE-TFM	16,207	5,230	3.09	9.3	10.11	380/420V, 50Hz, 3ph		
ZE76KCE-TFD	18,376	5,850	3.14	10.9	11.68	380/420V, 50Hz, 3ph 460V, 60Hz, 3ph		

ARI Condition: Evap. Temp = 7.2 °C, Cond. Temp = 54.4 °C, Ambient Temp = 35 °C, SH = 11.1K, SC = 8.3K, @50Hz

Configuration	502	522/52E	542/54E
Stub tube	X	X	X
T-Block	X		
Grounding	X	X	X
T-box/cover (IP21)	X	X	
Circle fence			X
Mounting parts	X	X	X

Nomenclature

Z	E		36	K	U	E	-	P	F	Z	-	502
Family Series Z = Scroll V = Asia Scroll	**Application Range/Envelope** **Code Application Refgn/Substance Compressed** P AC R410A/B R AC R22/407C/134A/R450A/R513A E AC R32		**Nominal Capacity at Rating Condition** 2 - 3 numeric characters	**Capacity Multiplier** K = 1,000 M = 10,000	**Model Variation** C M S U	**Lubricant** E = POE Oil		**Motor Description** **Code Phase** P 1 T 3	**Motor Protection** **Code Type** F Internal Inherent Protection	**Typical Electrical Codes** **Code 60 Hz 50 Hz** D 460-3 380-420-3 M - 380-420-3 P - 380-3 Z - 220-240-1 5 200-230-3 200-220-3 7 380-3/380-400-3 -		**Bill-of-Material Product Variation**
Base model							-	**Electrical code**			-	**BOM**