Copeland Scroll™ ZS*KA Compressors

For Small Medium Temperature Refrigeration Applications

Improved Efficiency and Reliability with Multi-refrigerant Options

As an extension to the existing ZB*KCE scroll range, the new Copeland Scroll ZS*KA compressor range represents the latest innovation in scroll technology for refrigeration equipment covering a small size displacement range of 4m³/h to 5m³/h. As with the other existing scrolls, ZS*KA scrolls also feature a scroll compliance mechanism which makes them particularly robust and reliable under severe conditions including liquid slugging. The ZS*KA models are intended for medium temperature refrigeration type systems and are ideally suited for applications such as walk-ins, reach-ins, cold rooms, display cases, and milk tank units where smaller cooling capacities are required. These models are multi-refrigerant capable and feature low sound and low vibration, which is particularly important in the retail and food service sector and recommended for operations in restaurants, convenience stores and milk cooling. The ZS*KA range from 1.3 hp to 1.8 hp is designed to provide seasonal efficiencies up to 28% higher than the equivalent hermetic reciprocating compressors at low condensing temperatures. These compressors are qualified for today's HFC as well as new low GWP refrigerants and HFO blends.

Copeland Scroll™

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Features and Benefits

- Copeland Scroll axial and radial compliance for superior reliability and efficiency
- Superior liquid handling capability
- High seasonal efficiencies as scrolls are designed at the condition where equipment runs most of the time
- Up to 15% efficiency advantage over hermetic reciprocating compressors at rating conditions, and up to 28% improvement at lower condensing temperatures
- Wide operating range from -25°C to 10°C evaporating covering a minimum condensing limit of 10°C
- Qualified for R407A/F, R448A, R449A, R404A, R134a
- Multiple ordering options based on application needs:
  - IP21 or IP66 protection
  - 3 foot or 4 foot design
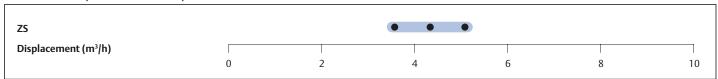 - Availability of soundshells providing up to 10dBA additional sound attenuation for silent operation

Copeland Scroll ZS*KA deliver best performance for medium temperature applications.

Applications

- Walk-in and reach-in refrigerators, freezers
- Coolers and chillers
- Soft serve machines
- Frozen beverage machines
- Milk cooling
- Light industrial process cooling
- Display cases

ZS*KA Compressor Line-up

ZS	
Displacement (m³/h)	● ● ●

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0        2        4        6        8        10
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Technical Overview

Models	Cooling Capacity (kW)	Power Input (kW)	COP	Nominal hp	Displacement (m³/h)	Rotalock Suction (inch)	Rotalock Discharge (inch)	Length/ Width/Height (mm)	Net Weight (kg)	Motor Version/Code		Sound Pressure @1m-dB(A) ***
										1 Ph*	3 Ph**	
ZS09KAE	1.9	1.0	2.3	1.3	3.7	¾	½	246/246/387	22.2	PFJ	TFD	59.0
ZS11KAE	2.3	1.1	2.1	1.5	4.4	¾	½	246/246/387	22.4	PFJ	TFD	59.0
ZS13KAE	2.7	1.3	2.0	1.8	5.0	¾	½	246/246/387	21.4	PFJ	TFD	59.0

Conditions EN12900 R448A/R449A: Evaporating -10°C, Condensing 40°C, Suction Gas Return 20°C, Subcooling 0K
* 1ph: 230V / 50Hz
** 3ph: 380-420V / 50Hz
*** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

For more details, see www.emersonclimate.eu

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