

ZRH/ZBH Copeland Scroll™ Horizontal Compressor Range

in R407C and R134a, for the specific needs of transport air conditioning.

Air conditioning for passenger comfort is a pre-requisite in today's public transport vehicles. At the same time, maximization of passenger space and streamlining of high speed trains increasingly impose limitations on height.

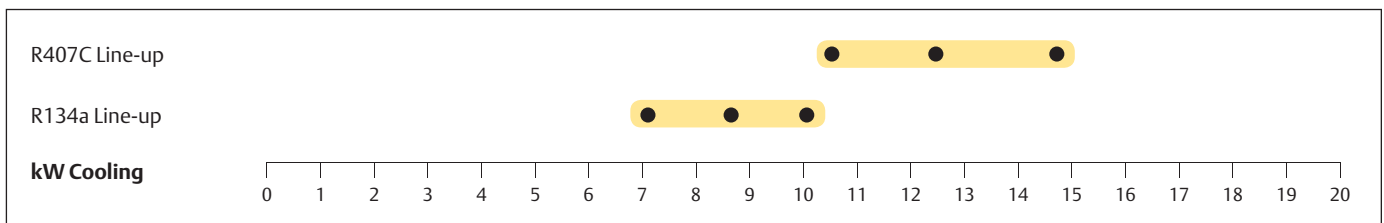
ZRH compressors are based on the unique Copeland Scroll™ design and provide the same reliability as a standard Copeland Scroll™. The addition of an oil pump covers the specific needs of transport air conditioning and of horizontal compressor arrangement in general.

The low profile design and modulation capabilities of the ZRH compressor range are the ideal response to these market needs.



Horizontal Scroll Compressors

ZRH Scroll Compressors Line-up R407C



EN12900: Evaporating 5°C, Condensing 50°C, Superheat 10K, Subcooling 0K

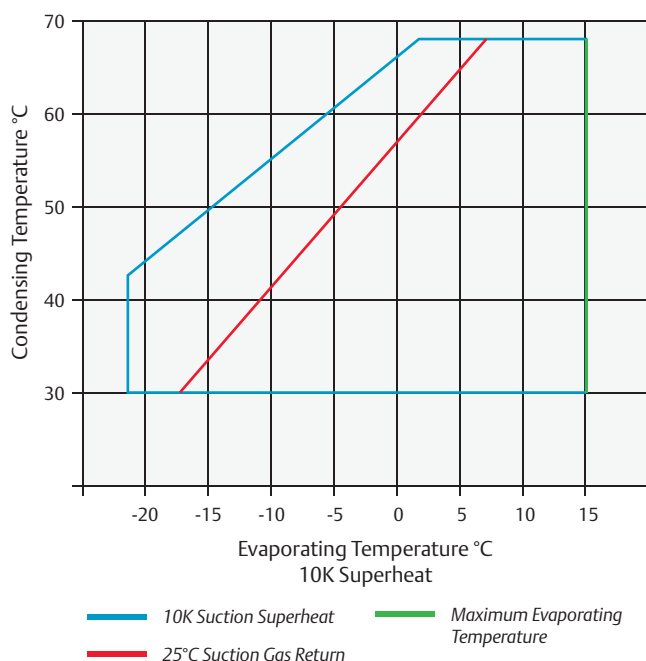
Features and Benefits

- Compactness and low weight
- Horizontal design with less than 250mm height
- Copeland Scroll™ compliance for superior reliability and efficiency
- Additional oil-pump
- Reduction of potential risk of refrigerant leakage through the drive shaft sealing
- Capacity modulation from 70% to 150% for ZRHV/ZBHV

Maximum Allowable Pressure (PS)

- 29.5 bar

Operating Envelope R407C



Technical Overview

R407C	Nominal hp	Capacity (kW)	COP	Displacement (m ³ /h)	Stub Suction (inch)	Stub Discharge (inch)	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version/ Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @1 m (dBA) **
										3 Ph*	3 Ph*	3 Ph*	
ZBH30KJE	4.0	9.9	2.85	11.8			1.80	487/290/245	52	TFD	9	52	68
ZRH49KJE	4.0	9.9	2.85	11.8			1.80	487/290/245	52	TFD	9	52	68
ZBH38KJE	5.0	12.4	2.88	14.5			1.80	487/290/245	53	TFD	12	64	69
ZRH61KJE	5.0	12.4	2.88	14.5			1.80	487/290/245	53	TFD	12	64	69
ZBH45KJE	6.0	14.7	2.78	20.6	7/8	1/2	1.80	487/290/245	53	TFD	12	74	66
ZBHV45KJE	6.0	14.8	2.78	17.1			1.80	487/290/245	53	TFD	15	100	66
ZRH72KJE	6.0	14.8	2.78	17.1			1.80	487/290/245	53	TFD	12	74	66
ZRHV72KJE	6.0	14.8	2.78	17.1			1.80	487/290/245	53	TFD	15	100	66

EN12900 R407C - HT: Evaporating +5°C, Condensing +50°C, Suction Superheat 10K, Subcooling 0K

*TFD: 3Ph 380-420V/50Hz - 460/60Hz; TF5 200-220V/50Hz, 200-230V/60Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Condensing Temperature +50°C															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-20	-10	-5	0	5	10	15	Model	-20	-10	-5	0	5	10	15
ZBH30KJE		5,3	6,6	8,2	9,9	11,9	14,1	ZBH30KJE		2,9	3,1	3,3	3,5	3,7	3,9
ZRH49KJE		5,3	6,6	8,2	9,9	11,9	14,1	ZRH49KJE		2,9	3,1	3,3	3,5	3,7	3,9
ZBH38KJE		6,6	8,3	10,2	12,4	14,8	17,5	ZBH38KJE		3,6	3,8	4,1	4,3	4,6	4,9
ZRH61KJE		6,6	8,3	10,2	12,4	14,8	17,5	ZRH61KJE		3,6	3,8	4,1	4,3	4,6	4,9
ZBH45KJE		7,8	9,7	10,1	14,7	17,7	21,0	ZBH45KJE		4,5	4,8	5,0	5,3	5,6	5,9
ZBHV45KJE		7,9	9,9	12,2	14,8	17,7	20,8	ZBHV45KJE		4,5	4,8	5,0	5,3	5,6	5,9
ZRH72KJE		7,9	9,9	12,2	14,8	17,7	20,8	ZRH72KJE		4,5	4,8	5,0	5,3	5,6	5,9
ZRHV72KJE		7,9	9,9	12,2	14,8	17,7	20,8	ZRHV72KJE		4,5	4,8	5,0	5,3	5,6	5,9

Suction Gas Return 10°C / Subcooling 0K