

ZH Scroll Compressors for R410A and R407C/R134a



The Best Choice for Comfort Systems

COPELAND SCROLL™



ZH Scroll R407C/R134a and R410A For Dedicated Heat Pump and Reversible System Applications

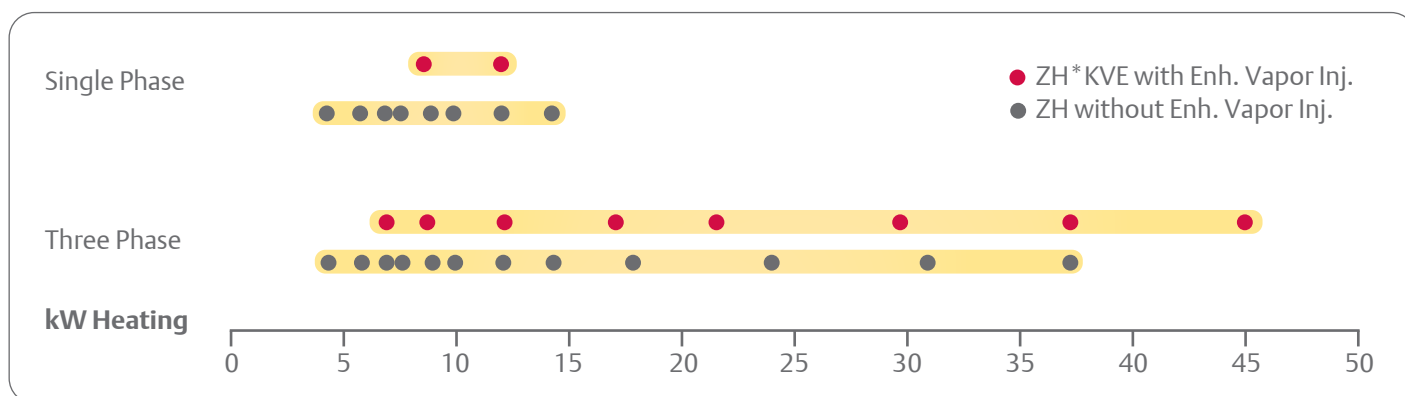
Application

The ZH range of Copeland Scroll™ compressors is the market reference for heat pump systems, both dedicated to heating and reversible. ZH compressors feature the market proven Copeland™ reliability and deliver outstanding performances both in new building and retrofit applications. In addition to the existing R407C range, Emerson has a complete residential and commercial line-up for R410A. OEMs can benefit from it by designing more compact, cost effective and efficient systems.

Features and Benefits

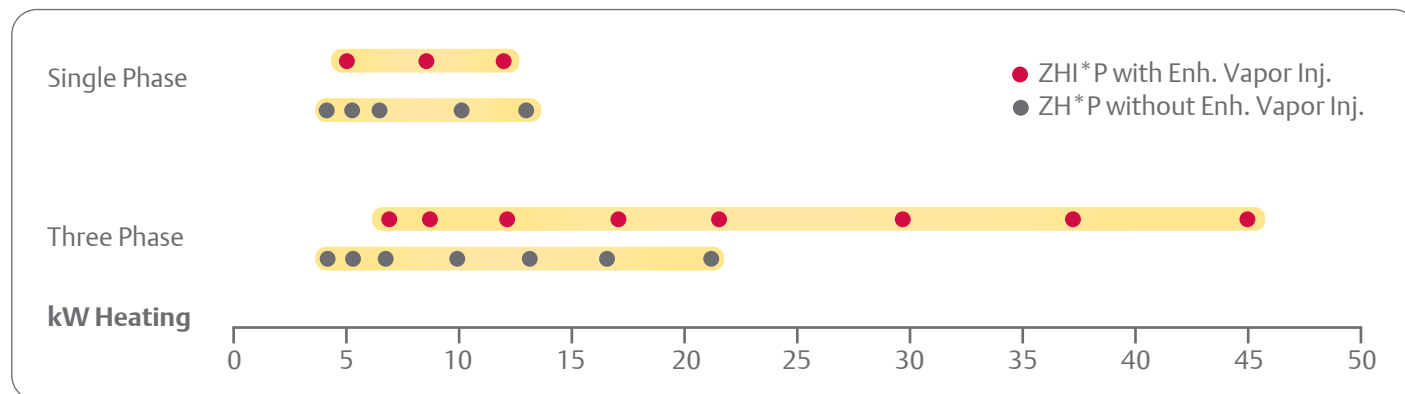
- Copeland Scroll axial and radial compliance for high reliability
- High efficiency and increased heating capacity
- High water temperature for all applications
- Low sound and low vibration level
- Tandem combination for superior seasonal efficiency
- Enhanced vapor injection technology for best seasonal efficiency

ZH / ZH* KVE (R407C) Line-up



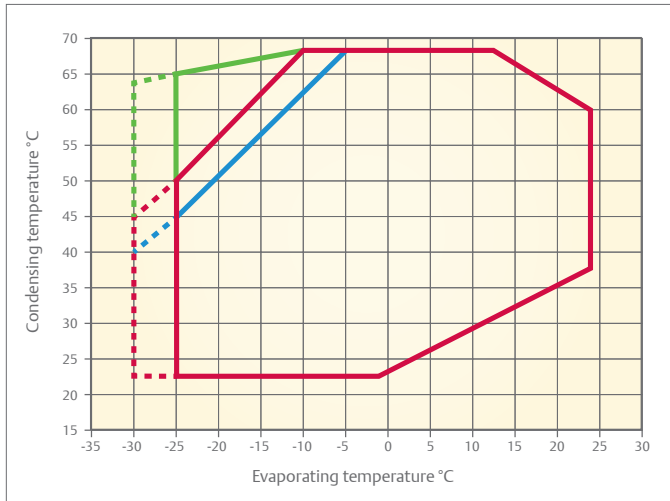
Conditions Heating kW: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

ZH*P / ZHI*P (R410A) Line-up



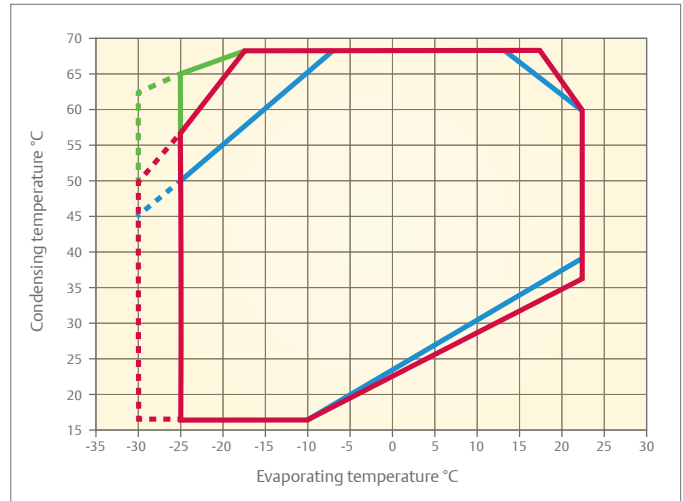
Conditions Heating kW: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

Operating Envelope: ZH*P / ZHI*P (R410A)



- ZH*P without Enh. Vapor Inj.
- - - ZH*P 2000 hours max.
- ZHI*P with Enh. Vapor Inj.
- - - ZHI*P 2000 hours max.
- Wet Injection

Operating Envelope: ZH / ZH*KVE (R407C)



- ZH without Enh. Vapor Inj.
- - - ZH 2000 hours max.
- ZH*KVE with Enh. Vapor Inj.
- - - ZH*KVE 2000 hours max.
- Wet Injection

Technical Overview: ZH R407C / R134a Without Enhanced Vapor Injection

Model	Heating Capacity (kW)		COP		Net Weight (kg)	1 Ph 230V	3 Ph 400V	Tandem Ready	Tandem Heating Cap. (kW)	Sound Power (dBA)	Dimensions (mm)		
	R407C	R134a	R407C	R134a							Shell Diameter	W x L	H
ZH12K4E	3.7	2.6	3.0	3.0	21	PFZ	n.a.		7	71	139	272/193	388
ZH15K4E	4.7	3.1	3.0	3.0	23	PFJ	TFD	✓	9	71	165	243/242	364
ZH21K4E	6.5	4.4	3.1	3.1	27				13	72		243/242	387
ZH26K4E	8.2	5.6	3.1	3.2	28				16	74	243/242	400	
ZH30K4E	9.5	6.5	3.1	3.3	38				19	73	247/241	438	
ZH38K4E	11.7	7.9	3.2	3.3	38	PFZ	TWD	✓	23	74	184	247/241	438
ZH45K4E	14.0	9.5	3.2	3.3	40	28			75	247/241	438		
ZH56K4E	17.4	11.4	3.1	2.9	93	34			80	357/321	525		
ZH75K4E	24.2	15.9	3.2	3.1	93	n.a.			48	81	283	357/321	525
ZH92K4E	30.7	20.1	3.3	3.2	103	n.a.	TWD	✓	61	83	283	357/321	532
ZH11M4E	37.0	24.1	3.3	3.1	112				73	85		357/323	579

Conditions: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

Technical Overview: ZH*KVE R407C With Enhanced Vapor Injection

EVI Model	Heating Capacity (kW)	COP	Net Weight (kg)	1 Ph 230V	3 Ph 400V	Tandem Ready	Tandem Heating Cap. (kW)	Sound Power (dBA)	Dimensions (mm)				
									Shell Diameter	W x L	H		
ZH06KVE	6.2	3.3	27	n.a.	TFM	n.a.	n.a.	69	165	242/242	363		
ZH09KVE	8.2	3.3	30	PFZ	TFD	✓	16	73	165	243/243	386		
ZH13KVE	11.8	3.4	38	PFJ						23	76	185	244/241
ZH18KVE	16.7	3.4	41	n.a.					TWD	✓	33	78	244/241
ZH24KVE	21.3	3.3	93		42	80	283	368/321					525
ZH33KVE	29.5	3.4	93		58	81	368/321	525					
ZH40KVE	37.0	3.4	103		73	83	368/321	532					
ZH48KVE	44.7	3.4	112	89	85	368/323	579						

Conditions: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat



Technical Overview: ZH* P R410A Without Enhanced Vapor Injection

Model	Heating Capacity (kW)	COP	Net Weight (kg)	1 Ph 230V	3Ph 400V	Tandem Ready	Tandem Heating Cap. (kW)	Sound Power (dBA)	Dimensions (mm)		
									Shell Diameter	W x L	H
ZH04K1P	4.2	2.8	22	PFZ	TFM	✓	8.3	70	139	198/229	388
ZH05K1P	5.0	2.8	22				9.9	70		198/229	388
ZH06K1P	6.6	2.9	31				13.1	73	165	246/229	418
ZH09K1P	9.0	3.1	33				17.8	73		246/229	418
ZH12K1P	11.4	3.0	35	n.a.			23.2	76	184	246/239	418
ZH15K1P	15.1	3.1	39				29.9	78		249/245	443
ZH19K1P	18.7	3.2	39				36.6	75		249/245	443

Conditions: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

Technical Overview: ZHI* P R410A With Enhanced Vapor Injection

EVI Model	Heating Capacity (kW)	COP	Net Weight (kg)	1 Ph 230V	3Ph 400V	Tandem Ready	Tandem Heating Cap. (kW)	Sound Power (dBA)	Dimensions (mm)		
									Shell Diameter	W x L	H
ZHI05K1P	5.2	3.0	22	PFZ	TFM	✓	10.3	70	139	198 x 229	388
ZHI08K1P	8.1	3.1	31				15.6	74		246/229	418
ZHI11K1P	10.8	3.3	31				21.3	74	165	246/229	418
ZHI14K1P	13.9	3.3	31				27.5	75		246/239	418
ZHI18K1P	18.8	3.3	39	n.a.	TFD		37.8	78	184	249/245	443
ZHI23K1P	22.8	3.3	41				45.1	78		249/245	443
ZHI27K1P	27.0	3.3	63				51.5	77	280/284	533	
ZHI32K1P	31.8	3.2	63	TWD			61.0	75	232	280/284	533
ZHI35K1P	35.6	3.2	63				68.9	76		280/284	568
ZHI40K1P	39.7	3.3	64				77.4	76		280/284	568
ZHI46K1P	46.6	3.3	64				93.2	78		280/284	568

Conditions: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

For more details, see www.emersonclimate.eu

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