

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

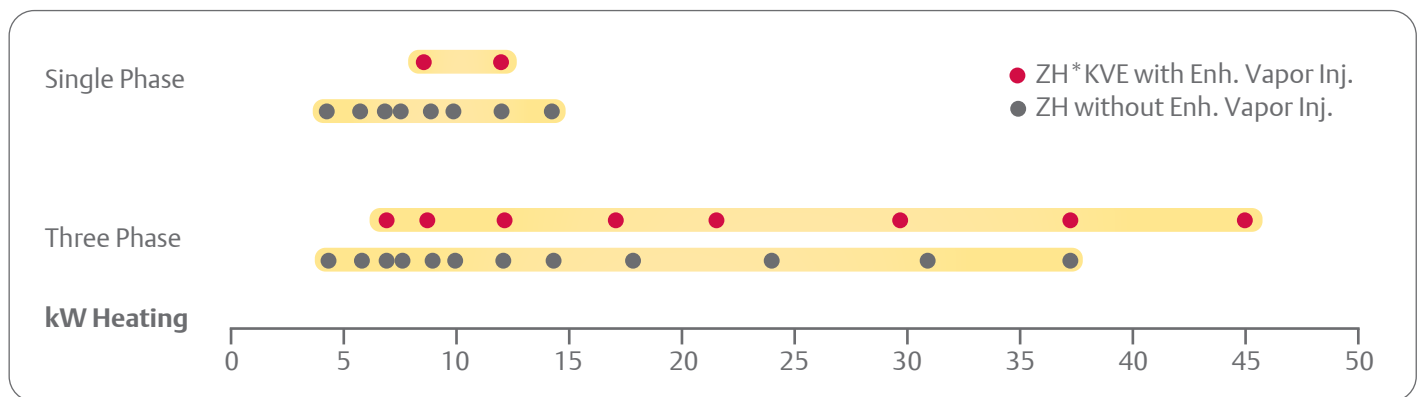
Application

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

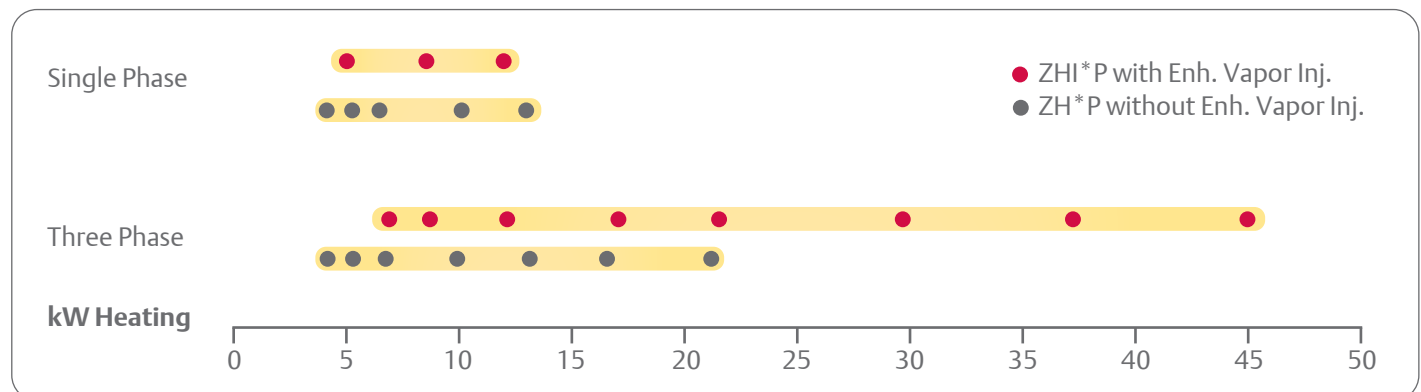
- Copeland Scroll axial and radial compliance for high reliability
- High efficiency and increased heating capacity
- High water temperature for all applications
- Low sound and low vibration level
- Tandem combination for superior seasonal efficiency
- Enhanced vapor injection technology for best seasonal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

ZH / ZH* KVE (R407C) Line-up



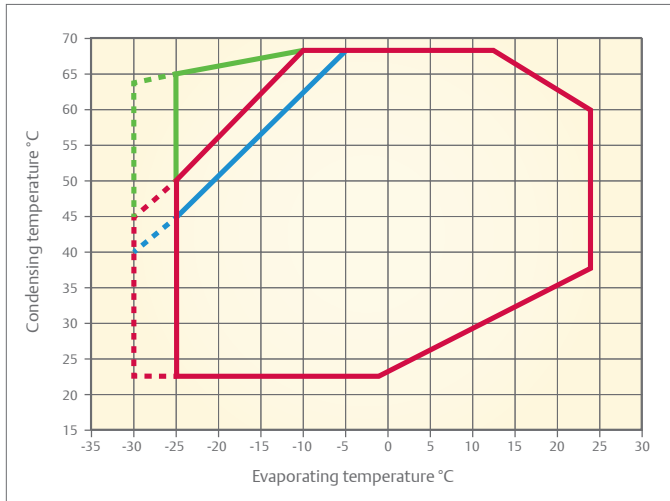
Conditions Heating kW: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

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



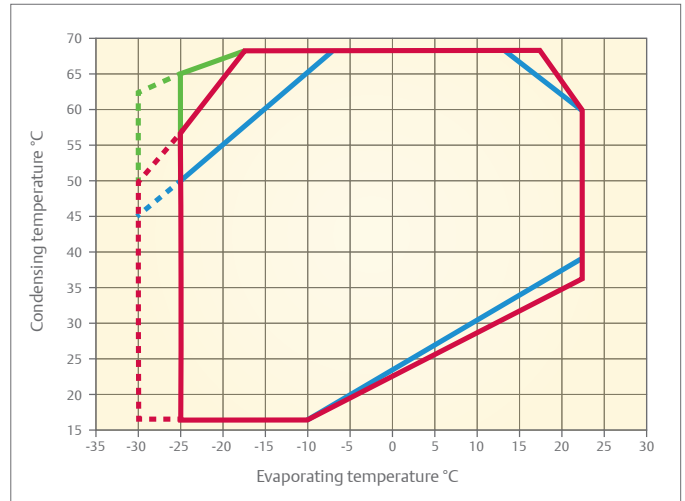
Conditions Heating kW: Evaporating -7°C, Condensing 50°C, 4K Subcooling, 5K Superheat

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 | 438 |
| ZH18KVE | 16.7 | 3.4 | 41 | n.a. | | | | | | TWD | ✓ | 33 | 78 | 283 |
| ZH24KVE | 21.3 | 3.3 | 93 | | 42 | 80 | 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 | n.a. | TWD | ✓ | 89 | 85 | 283 | 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 | 232 | 280/284 | 533 |
| ZHI32K1P | 31.8 | 3.2 | 63 | 61.0 | 75 | 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 | | TWD | | 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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