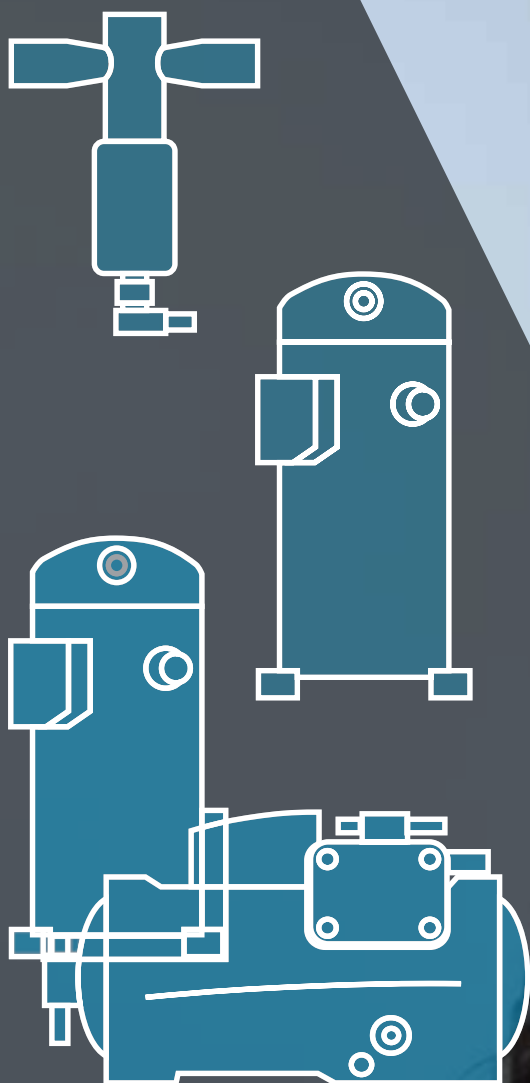


General Product Guide 2018

For refrigeration, air conditioning and heat pumps





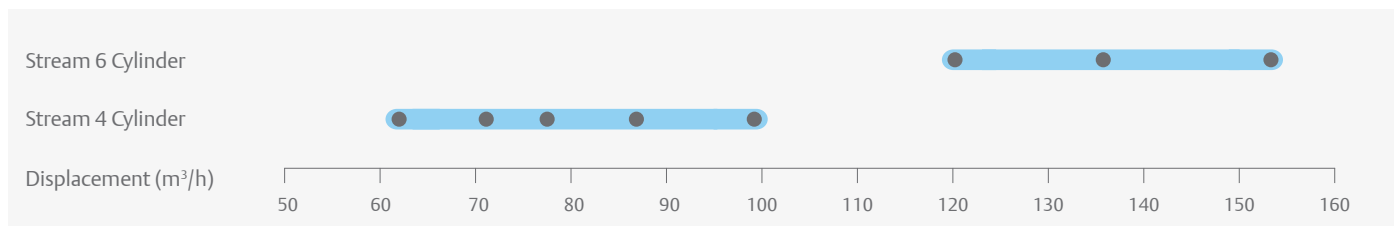
Copeland™ Stream With CoreSense™ Diagnostics, Semi-Hermetic Reciprocating Compressors for HFC / HFO Blends

Stream series 4 and 6 cylinder compressors provide best-in-class performance, thereby significantly reducing cost of operation and environmental impact compared to competing products. With advanced protection and diagnostics features for system reliability, reduced service costs and increased equipment uptime, Stream series is built to last in today's modern changing world.



Copeland Stream Compressor
Designed to Deliver Best-in-Class Performance

Stream Compressor Line-Up



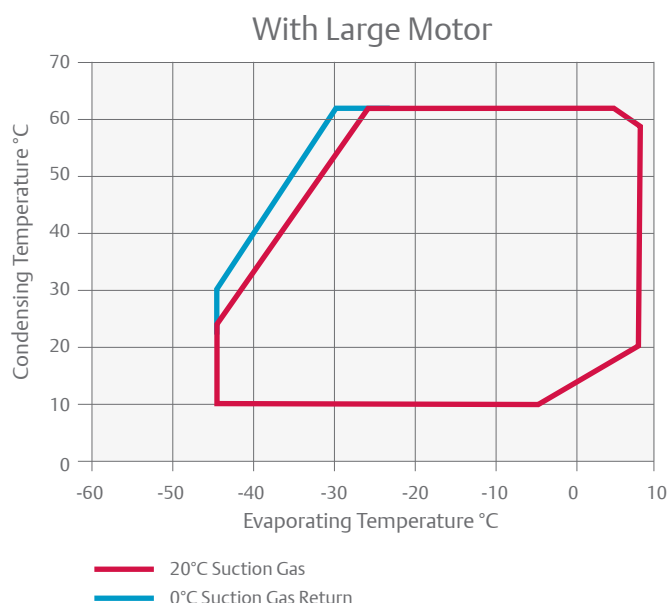
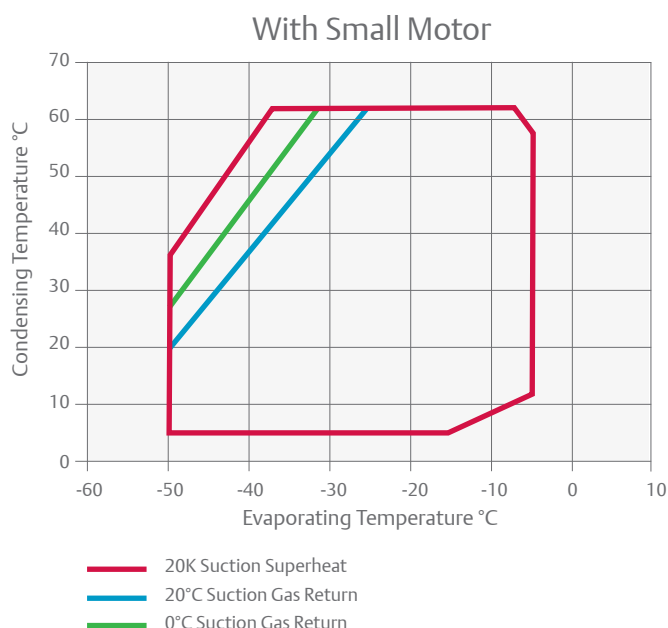
Features and Benefits

- Range of 16 models from 62 to 153m³/h
- Best-in-class seasonal efficiencies, up to 15% higher than market standard
- Multi-refrigerant compressor as it is compatible with R407A/ F/C, R448A/ R449A, R404A, R134a, R450A and R513A
- Stepless capacity modulation by means of inverter or Digital modulation
- Wide operating envelope covering low- and medium-temperature refrigeration without cooling fan
- Reduced sound level, dimensions and weight by up to 45 kg
- CoreSense protection available as option
- Option to use compressors with additional Demand Cooling function in order to achieve extended low temperature operating envelope without any superheat restriction for new refrigerants R407A/F, R448A and R449A

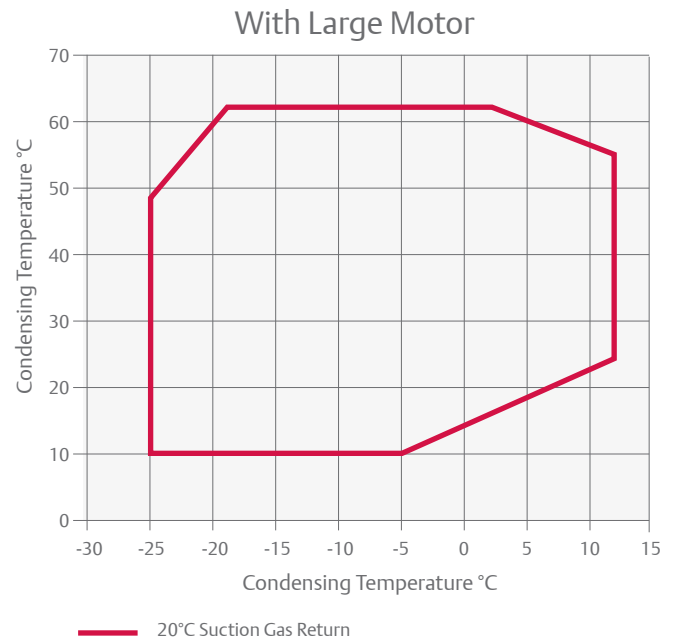
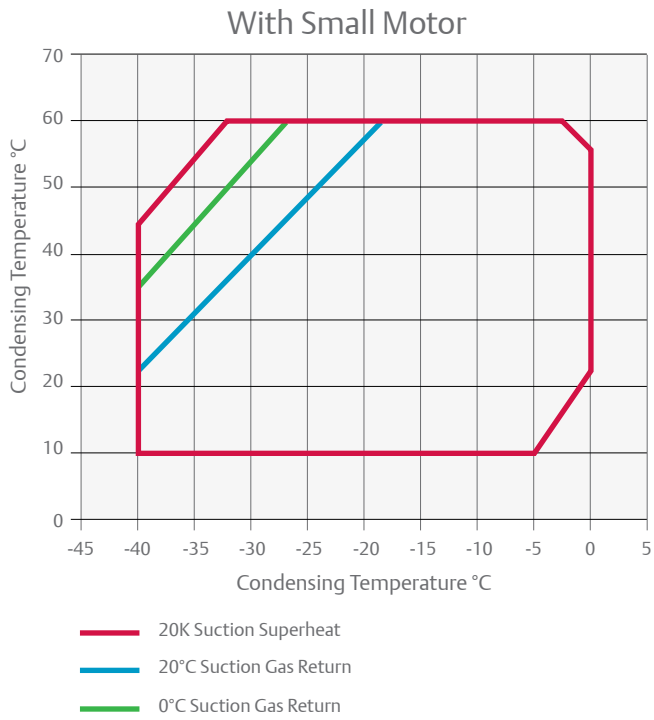
CoreSense Diagnostics Features

- Motor and oil protection
- Storage of compressor asset and advanced runtime information
- Runtime/alarm signalling using multi-colour LED flash-codes
- Communication to system controller via Modbus®
- Individual compressor power monitoring

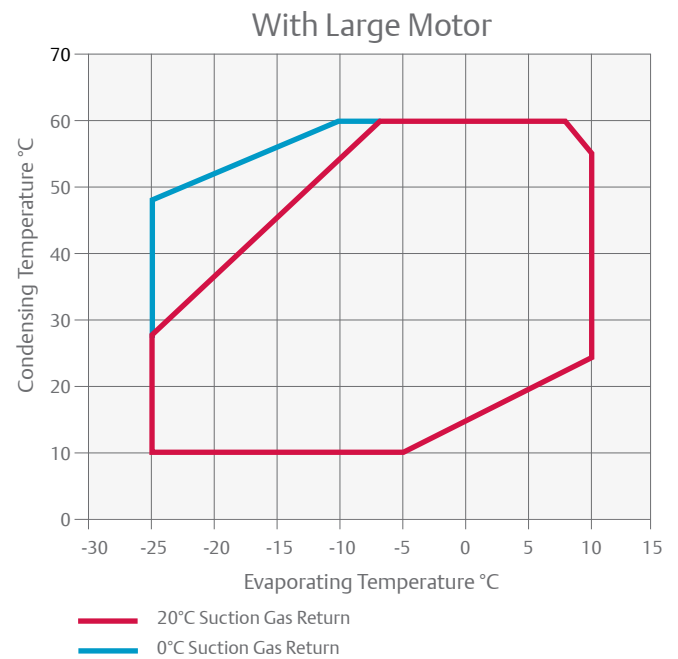
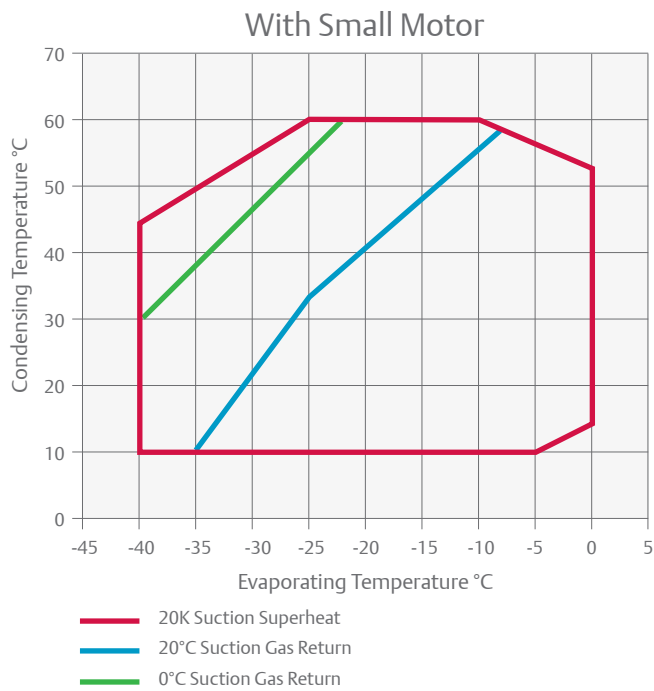
Operating Envelope R404A



Operating Envelope R407A

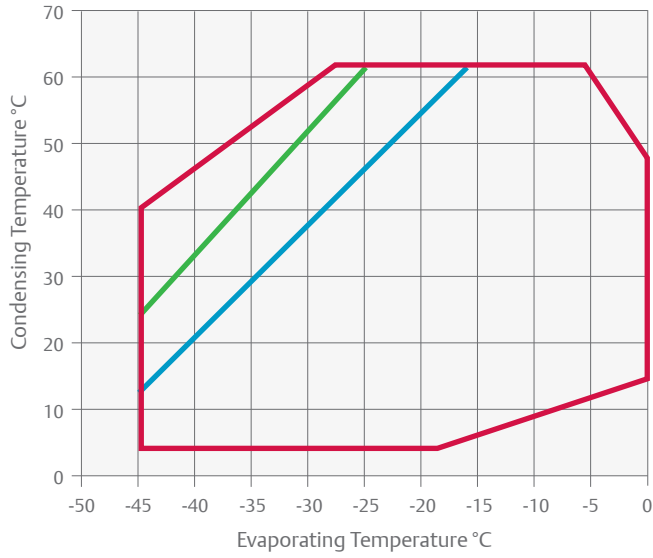


Operating Envelope R407F



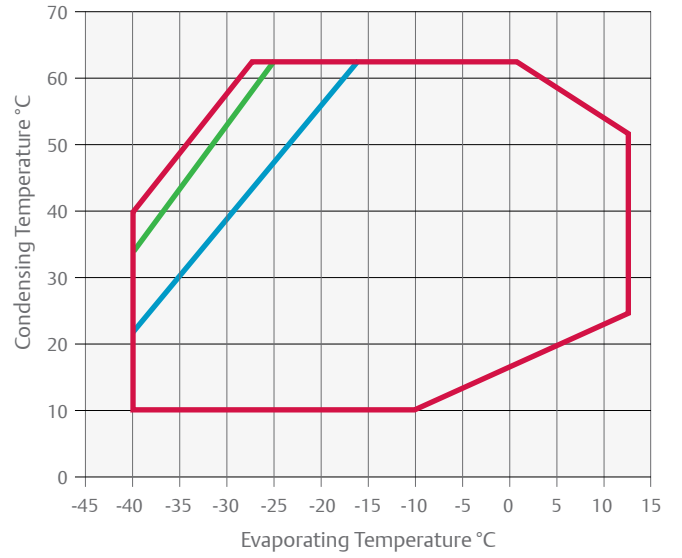
Operating Envelope R448A/R449A

With Small Motor



- 20K Suction Superheat
- 20°C Suction Gas Return
- 0°C Suction gas return

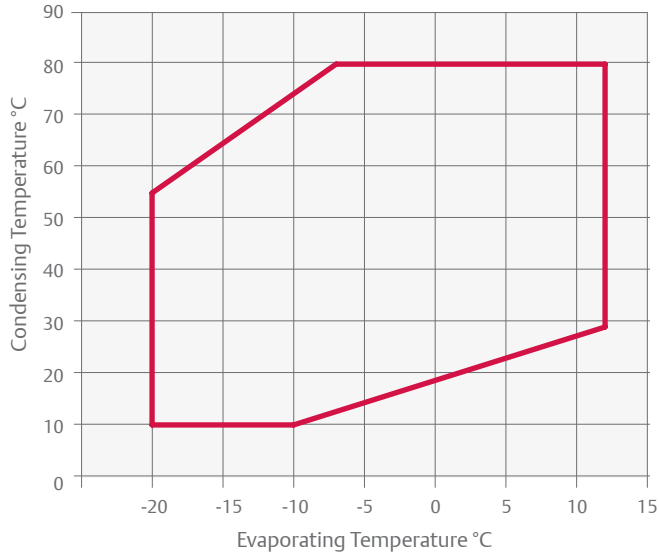
With Large Motor



- 20K Suction Superheat
- 20°C Suction Gas Return
- 0°C Suction Gas Return

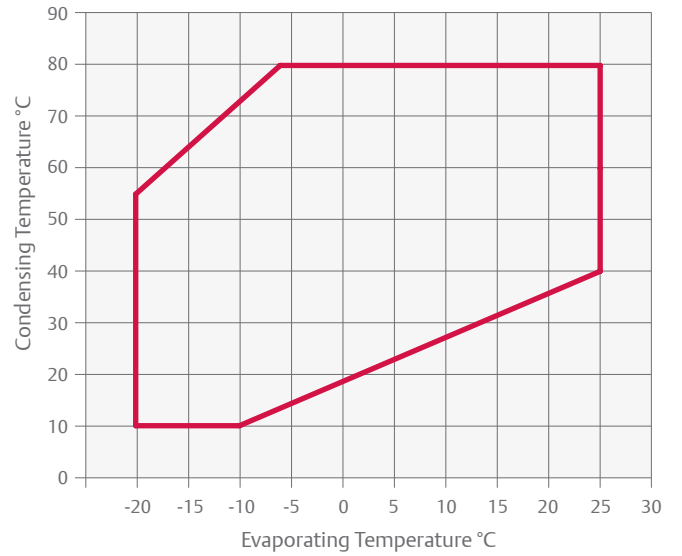
Operating Envelope R134a

With Small Motor



- 20°C Suction Gas Return

With Large Motor



- 20K Suction Superheat

For individual model details please refer to select software.

Technical Overview

| Models | Nominal hp | Displacement (m ³ /h) | 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 - dB(A) *** |
|---------|------------|----------------------------------|------------------|--------------------------|-----------------|---------------------|-------------------------------|--------------------------|----------------------------------|
| | | | | | | 3 Ph ** | 3 Ph ** | 3 Ph ** | |
| 4MF-13X | 13 | 61.7 | 3.3 | 638/501/452 | 177 | AWM | 30.8 | 105 | 70 |
| 4MA-22X | 22 | 61.7 | 3.3 | 638/501/452 | 177 | AWM | 36.3 | 175 | 75 |
| 4ML-15X | 15 | 71.4 | 3.3 | 638/501/452 | 180 | AWM | 35.4 | 156 | 71 |
| 4MH-25X | 25 | 71.4 | 3.3 | 657/501/452 | 187 | AWM | 41.6 | 199 | 75 |
| 4MM-20X | 17 | 78.2 | 3.3 | 657/501/452 | 182 | AWM | 39 | 175 | 71 |
| 4MI-30X | 27 | 78.2 | 3.3 | 657/501/452 | 188 | AWM | 46.6 | 221 | 75 |
| 4MT-22X | 22 | 87.7 | 3.3 | 657/501/452 | 183 | AWM | 44.5 | 175 | 73 |
| 4MJ-33X | 33 | 87.7 | 3.3 | 657/501/452 | 190 | AWM | 52.9 | 221 | 74 |
| 4MU-25X | 25 | 99.4 | 3.3 | 657/501/452 | 186 | AWM | 51.9 | 199 | 72 |
| 4MK-35X | 32 | 99.4 | 3.3 | 688/501/452 | 202 | AWM | 61.1 | 255 | 74 |
| 6MM-30X | 27 | 120.5 | 3.3 | 695/547/450 | 215 | AWM | 59.7 | 255 | 78 |
| 6MI-40X | 35 | 120.5 | 3.3 | 695/547/450 | 219 | AWM | 71.4 | 304 | 78 |
| 6MT-35X | 32 | 135 | 3.3 | 725/547/450 | 221 | AWM | 67.3 | 255 | 77 |
| 6MJ-45X | 40 | 135 | 3.3 | 725/547/450 | 223 | AWM | 81.5 | 304 | 79 |
| 6MU-40X | 40 | 153 | 3.3 | 757/547/450 | 225 | AWM | 75.8 | 306 | 78 |
| 6MK-50X | 50 | 153 | 3.3 | 773/547/450 | 230 | AWM | 92.9 | 393 | 80 |

** 3 Ph: 380-420V/ 50Hz

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

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-------|-------|------|------|------|-------|---------|------------------------------|-------|-------|------|------|------|------|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MF-13X | | 7.1* | 10.3* | 19.9 | 31.2 | 38.3 | | 4MF-13X | | 6.1* | 7.3* | 9.7 | 11.8 | 12.7 | |
| 4MA-22X | | | | 20.3 | 32.6 | 40.3 | 59.9 | 4MA-22X | | | | 9.5 | 11.7 | 12.6 | 14 |
| 4ML-15X | | 9.2* | 13.0* | 24.3 | 38 | 46.6 | | 4ML-15X | | 7.4* | 8.8* | 11.4 | 13.8 | 14.9 | |
| 4MH-25X | | | | 23.8 | 37.8 | 46.7 | 69.2 | 4MH-25X | | | | 11.4 | 13.7 | 14.6 | 15.9 |
| 4MM-20X | | 10.4* | 14.5* | 26.7 | 41.6 | 51 | | 4MM-20X | | 8.3* | 9.7* | 12.7 | 15.3 | 16.5 | |
| 4MI-30X | | | | 26.7 | 42.1 | 51.9 | 76.5 | 4MI-30X | | | | 12.6 | 15 | 16.1 | 17.8 |
| 4MT-22X | | 11.2* | 15.5* | 28.7 | 44.7 | 54.8 | | 4MT-22X | | 9.4* | 11.1* | 14.5 | 17.5 | 18.9 | |
| 4MJ-33X | | | | 29.7 | 46.8 | 57.7 | 85.1 | 4MJ-33X | | | | 14.2 | 17 | 18.2 | 20.1 |
| 4MU-25X | | 12.3* | 17.3* | 32.6 | 50.9 | 62.4 | | 4MU-25X | | 10.6* | 12.4* | 16.2 | 19.9 | 21.6 | |
| 4MK-35X | | | | 33.5 | 52.6 | 64.7 | 95.1 | 4MK-35X | | | | 16.2 | 19.5 | 20.9 | 23.4 |
| 6MM-30X | | 15.1* | 21.2* | 39.7 | 61.9 | 75.8 | | 6MM-30X | | 12.6* | 14.9* | 19.4 | 23.6 | 25.5 | |
| 6MI-40X | | | | 40.8 | 64.2 | 79 | 116.5 | 6MI-40X | | | | 19.3 | 23.3 | 25 | 27.6 |
| 6MT-35X | | 18.4* | 25.1* | 45.7 | 71 | 86.9 | | 6MT-35X | | 14.5* | 16.8* | 21.9 | 26.9 | 29.1 | |
| 6MJ-45X | | | | 45.4 | 71.4 | 87.9 | 129.5 | 6MJ-45X | | | | 21.5 | 26.1 | 28 | 31 |
| 6MU-40X | | 20.9* | 27.8* | 50.3 | 78.7 | 96.7 | | 6MU-40X | | 16.6* | 19.0* | 24.4 | 30.1 | 32.8 | |
| 6MK-50X | | | | 50.6 | 79.4 | 97.6 | 143.5 | 6MK-50X | | | | 24.4 | 29.8 | 32.3 | 36.4 |

Suction Gas Return 20°C, Subcooling OK

* Suction Superheat 10K, Subcooling OK

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-------|-------|-------|------|-------|-------|---------|------------------------------|-------|-------|-------|------|------|------|
| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MF-13X | | 7.8* | 11.1* | 19.7* | 32.5 | 39.9 | | 4MF-13X | | 6.5* | 7.7* | 10.2* | 12.4 | 13.3 | |
| 4MA-22X | | | | 20.7* | 34.8 | 43 | 63.8 | 4MA-22X | | | | 10.2* | 12.4 | 13.2 | 14.4 |
| 4MH-25X | | | | 24.2* | 40.4 | 49.9 | 73.8 | 4MH-25X | | | | 11.9* | 14.4 | 15.4 | 16.8 |
| 4ML-15X | | 9.9* | 13.8* | 24.2* | 39.8 | 48.9 | | 4ML-15X | | 7.8* | 9.2* | 12.0* | 14.6 | 15.7 | |
| 4MM-20X | | 11.0* | 15.3* | 26.6* | 43.5 | 53.4 | | 4MM-20X | | 8.7* | 10.3* | 13.3* | 16.0 | 17.2 | |
| 4MI-30X | | | | 26.9* | 44.4 | 54.8 | 80.7 | 4MI-30X | | | | 13.1* | 15.8 | 17.0 | 18.6 |
| 4MT-22X | | 12.7* | 17.4* | 29.9* | 48.5 | 59.5 | | 4MT-22X | | 10.0* | 11.7* | 15.1* | 18.3 | 19.7 | |
| 4MJ-33X | | | | 30.2* | 49.5 | 60.9 | 89.8 | 4MJ-33X | | | | 14.8* | 17.8 | 19.2 | 21.1 |
| 4MU-25X | | 14.0* | 19.3* | 33.3* | 54.6 | 66.9 | | 4MU-25X | | 11.2* | 13.2* | 17.2* | 21.0 | 22.8 | |
| 4MK-35X | | | | 33.7* | 55.3 | 68.3 | 101 | 4MK-35X | | | | 16.8* | 20.4 | 22.1 | 24.4 |
| 6MM-30X | | 17.2* | 23.7* | 40.7* | 66 | 80.7 | | 6MM-30X | | 13.6* | 15.8* | 20.4* | 24.8 | 26.7 | |
| 6MI-40X | | | | 41.2* | 67.9 | 83.5 | 122.5 | 6MI-40X | | | | 20.2* | 24.4 | 26.2 | 28.9 |
| 6MT-35X | | 19.8* | 27.0* | 45.8* | 74.1 | 90.4 | | 6MT-35X | | 15.3* | 18.0* | 23.1* | 28.0 | 30.3 | |
| 6MJ-45X | | | | 45.8* | 75.2 | 92.6 | 136 | 6MJ-45X | | | | 22.9* | 27.6 | 29.7 | 32.8 |
| 6MU-40X | | 20.1* | 27.7* | 48.5* | 82.7 | 101.5 | | 6MU-40X | | 16.9* | 19.8* | 25.9* | 31.7 | 34.4 | |
| 6MK-50X | | | | 51.3* | 84.5 | 104 | 153.5 | 6MK-50X | | | | 25.8* | 31.3 | 33.7 | 37.5 |

Suction Gas Return 20°C, Subcooling 0K
 * Suction Superheat 10K, Subcooling 0K

| Condensing Temperature 40°C | | | | | | | | | | | | | | | |
|-----------------------------|------------------------------|-------|-------|------|------|-------|-------|-----------------|------------------------------|-------|-------|------|------|------|------|
| R448A/ R449A | Cooling Capacity (kW) | | | | | | | R448A/ R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | 5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | 5 |
| 4MA-22X | | 7.8* | 11.3* | 21.2 | 34.3 | 42.7 | 63.5 | 4MA-22X | | 6.2* | 7.4* | 9.8 | 11.8 | 12.6 | 13.7 |
| 4MF-13X | 3.8* | 8.2* | 11.1* | 19.6 | 30.4 | 37.3 | | 4MF-13X | 4.5* | 6.3* | 7.4* | 9.8 | 12.2 | 13.1 | |
| 4MH-25X | | 9.4* | 13.5* | 24.7 | 39.1 | 48.0 | 70.3 | 4MH-25X | | 7.6* | 8.9* | 11.6 | 14.1 | 15.1 | 16.7 |
| 4ML-15X | 4.3* | 10.5* | 14.3* | 25.2 | 38.7 | 47.1 | | 4ML-15X | 5.2* | 7.6* | 8.9* | 11.6 | 14.2 | 15.4 | |
| 4MI-30X | | 10.8* | 15.4* | 28.1 | 44.1 | 54.0 | 78.6 | 4MI-30X | | 8.2* | 9.8* | 13.0 | 15.6 | 16.7 | 18.2 |
| 4MM-20X | 4.9* | 11.8* | 16.0* | 27.8 | 42.5 | 51.5 | | 4MM-20X | 5.8* | 8.5* | 9.9* | 12.9 | 15.6 | 16.9 | |
| 4MJ-33X | | 12.1* | 17.0* | 30.9 | 48.7 | 59.8 | 87.6 | 4MJ-33X | | 9.2* | 11.0* | 14.5 | 17.6 | 18.9 | 20.6 |
| 4MT-22X | 5.9* | 13.5* | 18.2* | 31.3 | 47.7 | 57.8 | | 4MT-22X | 6.6* | 9.7* | 11.3* | 14.6 | 17.8 | 19.2 | |
| 4MK-35X | | 13.7* | 19.2* | 34.7 | 54.8 | 67.5 | 98.9 | 4MK-35X | | 10.7* | 12.7* | 16.7 | 20.4 | 22.0 | 24.4 |
| 4MU-25X | 6.5* | 14.3* | 19.5* | 34.2 | 53.2 | 65.1 | | 4MU-25X | 7.4* | 10.8* | 12.7* | 16.6 | 20.5 | 22.4 | |
| 6MI-40X | | 17.1* | 23.9* | 42.8 | 66.6 | 81.4 | 118.0 | 6MI-40X | | 13.0* | 15.3* | 19.6 | 23.5 | 25.2 | 28.0 |
| 6MM-30X | 6.6* | 17.6* | 24.1* | 41.8 | 63.2 | 76.3 | | 6MM-30X | 8.8* | 13.1* | 15.4* | 19.9 | 23.9 | 25.6 | |
| 6MT-35X | 7.5* | 19.8* | 26.9* | 46.5 | 70.0 | 84.3 | | 6MT-35X | 9.7* | 14.6* | 17.2* | 22.2 | 26.9 | 29.0 | |
| 6MJ-45X | | 19.5* | 27.2* | 48.1 | 74.5 | 91.0 | 132.0 | 6MJ-45X | | 14.3* | 17.0* | 22.2 | 26.9 | 28.8 | 31.7 |
| 6MK-50X | | 21.1* | 29.4* | 52.7 | 82.2 | 101.0 | 147.0 | 6MK-50X | | 16.4* | 19.2* | 25.0 | 30.3 | 32.7 | 36.7 |
| 6MU-40X | 8.3* | 22.2* | 30.5* | 53.4 | 81.8 | 99.4 | | 6MU-40X | 10.9* | 16.3* | 19.1* | 24.6 | 29.8 | 32.1 | |

Suction Gas Return 20°C / Subcooling 0K
 *Suction Superheat 10K, Subcooling 0K
 Preliminary Data

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|------|------|------|------|-------|-------|---------|------------------------------|------|------|------|------|------|------|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MA-22X | | 10.5 | 14.3 | 23.6 | 36.0 | 43.5 | 62.0 | 4MA-22X | | 7.3 | 8.6 | 11.0 | 13.0 | 13.7 | 14.7 |
| 4MF-13X | 3.6* | 10.7 | 14.0 | 22.8 | 34.8 | 42.2 | | 4MF-13X | 5.0* | 7.4 | 8.7 | 11.0 | 13.0 | 13.9 | |
| 4MH-25X | | 12.4 | 16.7 | 27.5 | 42.2 | 51.3 | 73.6 | 4MH-25X | | 8.6 | 10.1 | 13.0 | 15.4 | 16.3 | 17.5 |
| 4ML-15X | 4.8* | 13.3 | 17.4 | 27.9 | 42.0 | 50.8 | | 4ML-15X | 6.3* | 9.0 | 10.5 | 13.3 | 15.8 | 16.7 | |
| 4MI-30X | | 14.4 | 19.4 | 31.2 | 46.8 | 56.3 | 79.5 | 4MI-30X | | 9.8 | 11.5 | 14.5 | 17.0 | 18 | 19.5 |
| 4MM-20X | 5.7* | 15.1 | 19.6 | 30.9 | 46.1 | 55.4 | | 4MM-20X | 7.1* | 10.1 | 11.6 | 14.6 | 17.0 | 18.2 | |
| 4MJ-33X | | 16.2 | 21.4 | 34.6 | 52.4 | 63.4 | 90.4 | 4MJ-33X | | 10.9 | 12.6 | 16.0 | 19.0 | 20.2 | 21.8 |
| 4MT-22X | 6.7* | 17.0 | 21.9 | 34.7 | 52.0 | 62.7 | | 4MT-22X | 8.0* | 11.5 | 13.2 | 16.6 | 19.5 | 20.7 | |
| 4MK-35X | | 18.3 | 24.0 | 38.8 | 58.9 | 71.3 | 102.0 | 4MK-35X | | 12.6 | 14.6 | 18.5 | 22.0 | 23.5 | 25.7 |
| 4MU-25X | 7.2* | 18.6 | 24.1 | 38.5 | 58.1 | 70.2 | | 4MU-25X | 9.0* | 12.9 | 14.9 | 18.8 | 22.3 | 23.7 | |
| 6MI-40X | | 21.9 | 28.9 | 46.7 | 70.8 | 85.8 | 122.5 | 6MI-40X | | 15.2 | 17.6 | 22.2 | 26.1 | 27.7 | 30.1 |
| 6MM-30X | 8.9* | 22.7 | 29.3 | 46.5 | 70.2 | 85.1 | | 6MM-30X | 11.0* | 15.7 | 18.0 | 22.5 | 26.3 | 27.8 | |
| 6MJ-45X | | 24.3 | 32.3 | 52.5 | 79.5 | 96.1 | 136.5 | 6MJ-45X | | 16.8 | 19.6 | 24.9 | 29.5 | 31.4 | 33.9 |
| 6MT-35X | 10.3* | 25.6 | 33 | 52.5 | 79.3 | 95.9 | | 6MT-35X | 12.3* | 17.5 | 20.1 | 25.3 | 29.7 | 31.5 | |
| 6MK-50X | | 27.3 | 36.3 | 58.7 | 88.6 | 107.0 | 152.0 | 6MK-50X | | 19.4 | 22.5 | 28.3 | 33.5 | 35.9 | 39.9 |
| 6MU-40X | 11.0* | 28.4 | 36.8 | 58.7 | 89.0 | 108.0 | | 6MU-40X | 13.8* | 19.7 | 22.7 | 28.5 | 33.6 | 35.8 | |

Suction Gas Return 20°C, Subcooling 0K
 * Suction superheat 10K, Subcooling 0K

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-----|-----|------|------|------|------|---------|------------------------------|-----|-----|------|------|------|------|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Models | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Models | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MA-22X | | | | 13.1 | 21.3 | 26.6 | 40.1 | 4MA-22X | | | | 5.9 | 7.3 | 7.9 | 8.7 |
| 4MF-13X | | | | 12.2 | 20.4 | 25.6 | 38.9 | 4MF-13X | | | | 5.8 | 7.2 | 7.8 | 8.7 |
| 4MH-25X | | | | 15.0 | 24.6 | 30.7 | 46.4 | 4MH-25X | | | | 7.0 | 8.7 | 9.4 | 10.4 |
| 4ML-15X | | | | 15.0 | 24.5 | 30.5 | 46.0 | 4ML-15X | | | | 6.9 | 8.5 | 9.3 | 10.4 |
| 4MI-30X | | | | 16.8 | 27.1 | 33.7 | 50.7 | 4MI-30X | | | | 7.6 | 9.4 | 10.3 | 11.4 |
| 4MM-20X | | | | 16.6 | 27.0 | 33.6 | 50.3 | 4MM-20X | | | | 7.7 | 9.4 | 10.2 | 11.4 |
| 4MJ-33X | | | | 18.9 | 30.3 | 37.6 | 56.4 | 4MJ-33X | | | | 8.7 | 10.7 | 11.5 | 12.8 |
| 4MT-22X | | | | 19.0 | 30.6 | 38.1 | 57.2 | 4MT-22X | | | | 8.7 | 10.8 | 11.7 | 13.0 |
| 4MK-35X | | | | 21.0 | 34.0 | 42.2 | 63.3 | 4MK-35X | | | | 9.7 | 12.2 | 13.3 | 14.9 |
| 4MU-25X | | | | 20.7 | 33.9 | 42.3 | 63.8 | 4MU-25X | | | | 9.8 | 12.2 | 13.3 | 15.0 |
| 6MI-40X | | | | 24.8 | 40.2 | 50.2 | 76.0 | 6MI-40X | | | | 12.0 | 14.6 | 15.8 | 17.8 |
| 6MM-30X | | | | 25.2 | 40.7 | 50.7 | 76.1 | 6MM-30X | | | | 11.7 | 14.6 | 15.8 | 17.7 |
| 6MJ-45X | | | | 28.5 | 45.6 | 56.7 | 85.3 | 6MJ-45X | | | | 13.0 | 16.2 | 17.8 | 20.3 |
| 6MT-35X | | | | 28.5 | 46.0 | 57.1 | 85.2 | 6MT-35X | | | | 13.3 | 16.5 | 17.9 | 20.0 |
| 6MK-50X | | | | 29.8 | 49.1 | 61.7 | 94.3 | 6MK-50X | | | | 15.2 | 18.8 | 20.5 | 23.3 |
| 6MU-40X | | | | 31.5 | 50.6 | 62.9 | 94.5 | 6MU-40X | | | | 14.6 | 18.4 | 20.1 | 23.0 |

Suction Gas Return 20°C, Subcooling 0K
 * Suction Superheat 10K, Subcooling 0K

Copeland™ Stream Digital With CoreSense™ Diagnostics for Continuous Capacity Modulation

Stream Digital series 4 and 6 cylinder compressors provide an alternative means of continuous modulation to inverter. Digital modulation is the most simple and precise method of capacity control and helps to contain applied costs associated with modulation.

Digital technology is based on controlling a high-cycle solenoid valve fitted on one of the cylinder heads based on cycle time. The valve actuates a piston that controls the flow of gas into the suction area of the Stream valve plate.

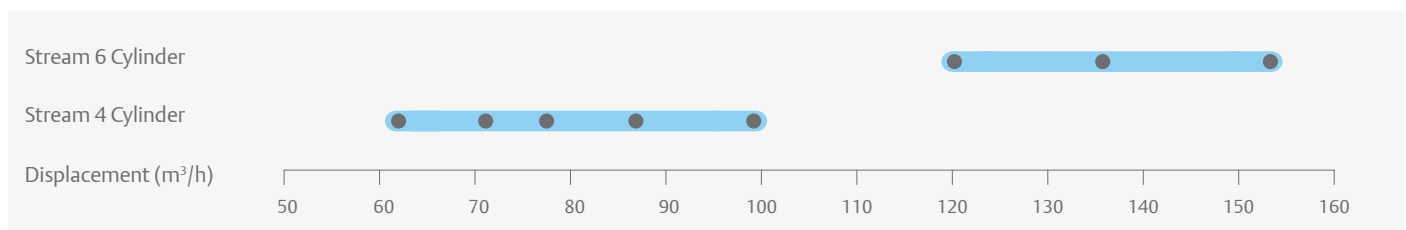
The compressor always runs at constant speed which resolves the challenges related to oil return, mechanical and electrical stress on the system.

All compressors are equipped with CoreSense technology and offer the possibility to diagnose system-related problems faster or even before they occur.



Copeland Stream Digital Compressor

Stream Digital Line-Up

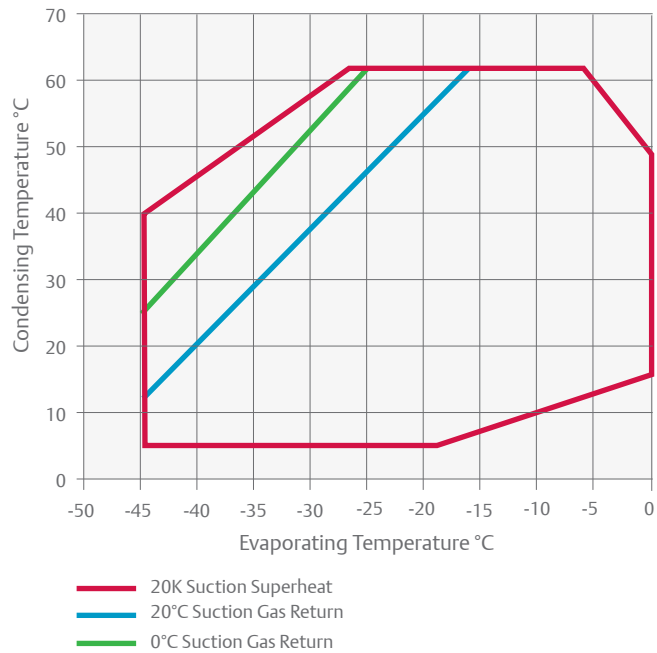


Features and Benefits

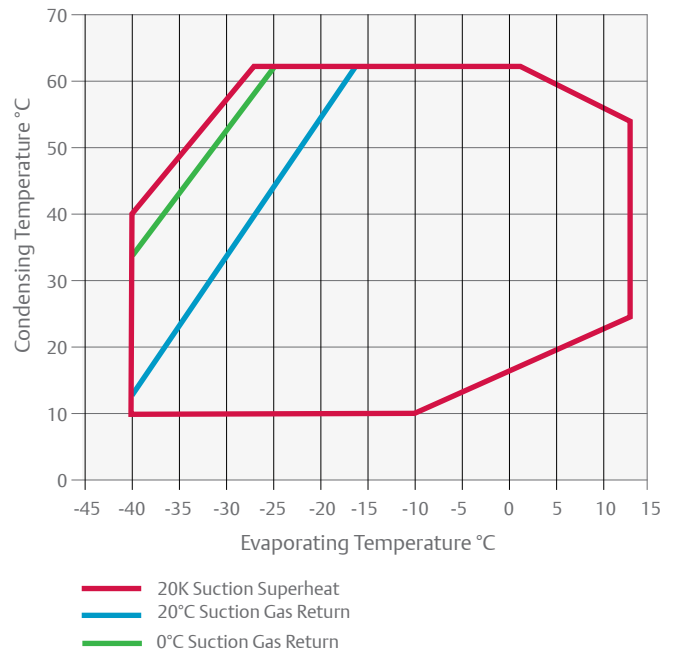
- Range of 16 Models from 62 to 153 m³/h
- Multi-refrigerant compressor as it is compatible with R407A/ F/C, R448A/ R449A, R404A, R134a, R450A and R513A
- Continuous modulation from 50–100% (4-cylinder) and 33–100% (6-cylinder) ensuring a perfect match of capacity and power to refrigeration load
- Economical and reliable alternative to frequency inverters
- Precise suction pressure control with associated energy savings and stable evaporating temperatures
- Quick and easy integration into refrigeration equipment, similar to any other standard compressor
- Possibility to easily retrofit existing installations with digital cylinder head kit
- No vibrations or mechanical stress on system piping and compressor parts
- Reduced compressor cycling for longer contactor and compressor life
- Emerson CoreSense Diagnostics technology providing advanced protection, diagnostics and preventive maintenance
- CoreSense Protection available as option

Operating Envelope R448A/R449A

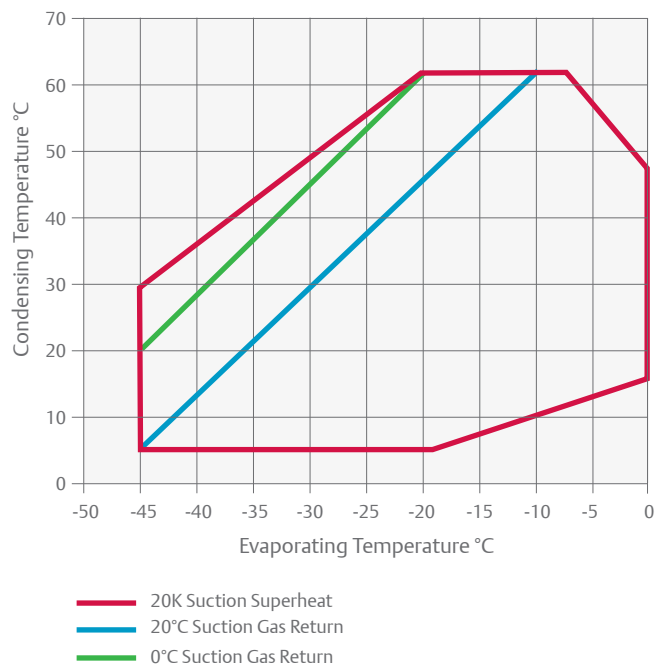
With 4 Cylinder Small Motor - 100% Modulation



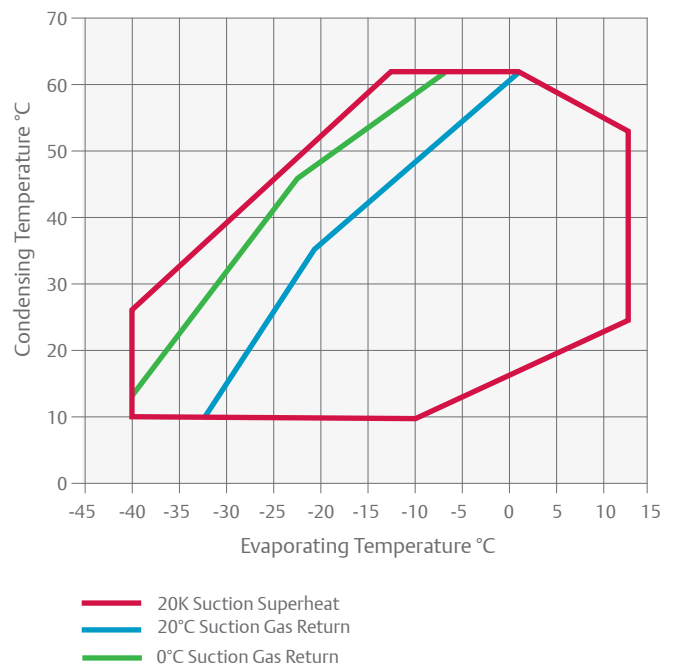
With 6 Cylinder Large Motor - 100% Modulation



With 4 Cylinder Small Motor - 50% Modulation



With 6 Cylinder Large Motor - 33% Modulation



All other refrigerant envelopes are available as 'Dynamic Envelopes' and can be accessed through select software.

Technical Overview

| Models | Nominal hp | Displacement (m ³ /h) | 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 - dB(A) *** |
|----------|------------|----------------------------------|------------------|--------------------------|-----------------|--------------------|-------------------------------|--------------------------|---------------------------------|
| | | | | | | 3 Ph ** | 3 Ph ** | 3 Ph ** | |
| 4MFD-13X | 13 | 61.7 | 3.3 | 638/501/452 | 183 | AWM | 30.8 | 105 | 70 |
| 4MAD-22X | 22 | 61.7 | 3.3 | 638/501/452 | 183 | AWM | 36.3 | 175 | 75 |
| 4MLD-15X | 15 | 71.4 | 3.3 | 638/501/452 | 186 | AWM | 35.4 | 156 | 71 |
| 4MHD-25X | 25 | 71.4 | 3.3 | 657/501/452 | 193 | AWM | 41.6 | 199 | 75 |
| 4MMD-20X | 17 | 78.2 | 3.3 | 657/501/452 | 188 | AWM | 39.0 | 175 | 71 |
| 4MID-30X | 27 | 78.2 | 3.3 | 657/501/452 | 194 | AWM | 46.6 | 221 | 75 |
| 4MTD-22X | 22 | 87.7 | 3.3 | 657/501/452 | 189 | AWM | 44.5 | 175 | 73 |
| 4MJD-33X | 33 | 87.7 | 3.3 | 657/501/452 | 196 | AWM | 52.9 | 221 | 74 |
| 4MUD-25X | 25 | 99.4 | 3.3 | 657/501/452 | 192 | AWM | 51.9 | 199 | 72 |
| 4MKD-35X | 32 | 99.4 | 3.3 | 688/501/452 | 202 | AWM | 61.1 | 255 | 74 |
| 6MMD-30X | 27 | 120.5 | 3.3 | 695/547/450 | 221 | AWM | 59.7 | 255 | 78 |
| 6MID-40X | 35 | 120.5 | 3.3 | 695/547/450 | 225 | AWM | 71.4 | 304 | 78 |
| 6MTD-35X | 32 | 135.0 | 3.3 | 725/547/450 | 227 | AWM | 67.3 | 255 | 77 |
| 6MJD-45X | 40 | 135.0 | 3.3 | 725/547/450 | 229 | AWM | 81.5 | 304 | 79 |
| 6MUD-40X | 40 | 153.0 | 3.3 | 757/547/450 | 231 | AWM | 75.8 | 304 | 78 |
| 6MKD-50X | 50 | 153.0 | 3.3 | 773/547/450 | 236 | AWM | 92.9 | 393 | 80 |

** 3 Ph: 380-420V/ 50Hz

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

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-----|-------|-------|------|------|-------|----------|------------------------------|-----|-------|-------|------|------|------|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MFD-13X | | | | 18.3* | 30.9 | 37.9 | | 4MFD-13X | | | | 9.7* | 11.8 | 12.7 | |
| 4MAD-22X | | | | | 32.2 | 39.9 | 59.3 | 4MAD-22X | | | | | 11.7 | 12.6 | 14.0 |
| 4MLD-15X | | | | 22.7* | 37.7 | 46.1 | | 4MLD-15X | | | | 11.4* | 13.8 | 14.9 | |
| 4MHD-25X | | | | | 37.4 | 46.2 | 68.5 | 4MHD-25X | | | | | 13.7 | 14.6 | 15.9 |
| 4MMD-20X | | | | 24.9* | 41.2 | 50.5 | | 4MMD-20X | | | | 12.7* | 15.3 | 16.5 | |
| 4MID-30X | | | | 21.6* | 37.4 | 46.2 | 68.5 | 4MID-30X | | | | 11.4* | 13.7 | 14.6 | 15.9 |
| 4MTD-22X | | | | 26.5* | 44.2 | 54.2 | | 4MTD-22X | | | | 14.5* | 17.5 | 18.9 | |
| 4MJD-33X | | | | | 41.7 | 51.4 | 75.7 | 4MJD-33X | | | | | 15.1 | 16.1 | 17.8 |
| 4MUD-25X | | | | 30.1* | 50.4 | 61.8 | | 4MUD-25X | | | | 16.2* | 19.9 | 21.6 | |
| 4MKD-35X | | | | | 52.1 | 64.1 | 94.2 | 4MKD-35X | | | | | 19.5 | 20.9 | 23.4 |
| 6MMD-30X | | | 20.9* | 39.3 | 61.3 | 75.0 | | 6MMD-30X | | | 14.9* | 19.4 | 23.6 | 25.5 | |
| 6MID-40X | | | | 40.4 | 63.6 | 78.3 | 115.5 | 6MID-40X | | | | 19.3 | 23.3 | 25.0 | 27.6 |
| 6MTD-35X | | | 24.8* | 45.3 | 70.3 | 86.0 | | 6MTD-35X | | | 16.8* | 21.9 | 26.9 | 29.1 | |
| 6MJD-45X | | | | 45.0 | 70.7 | 87.0 | 128.0 | 6MJD-45X | | | | 21.5 | 26.1 | 28.0 | 31.0 |
| 6MUD-40X | | | | 50.4 | 78.7 | 96.7 | | 6MUD-40X | | | | 24.4 | 30.1 | 32.8 | |
| 6MKD-50X | | | | 50.1 | 78.6 | 96.6 | 142.0 | 6MKD-50X | | | | 24.4 | 29.8 | 32.3 | 36.4 |

Suction Gas Return 20°C, Subcooling 0K, 100% Loaded

* Suction Superheat 10K, Subcooling 0K

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-----|-----|-------|------|-------|-------|----------|------------------------------|-----|-----|-------|------|------|------|
| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Models | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MAD-22X | | | | 20.5* | 34.4 | 42.6 | 63.1 | 4MAD-22X | | | | 10.2* | 12.4 | 13.2 | 14.4 |
| 4MFD-13X | | | | 19.5* | 32.2 | 39.5 | | 4MFD-13X | | | | 10.2* | 12.4 | 13.3 | |
| 4MHD-25X | | | | 23.9* | 40.0 | 49.4 | 73.1 | 4MHD-25X | | | | 11.9* | 14.4 | 15.4 | 16.8 |
| 4MLD-15X | | | | 23.9* | 39.4 | 48.4 | | 4MLD-15X | | | | 12.0* | 14.6 | 15.7 | |
| 4MID-30X | | | | 26.6* | 44.0 | 54.2 | 79.9 | 4MID-30X | | | | 13.1* | 15.8 | 17.0 | 18.6 |
| 4MMD-20X | | | | 26.3* | 43.0 | 52.9 | | 4MMD-20X | | | | 13.3* | 16.0 | 17.2 | |
| 4MJD-33X | | | | 29.8* | 49.0 | 60.3 | 88.9 | 4MJD-33X | | | | 14.8* | 17.8 | 19.2 | 21.1 |
| 4MTD-22X | | | | 29.5* | 48.0 | 58.9 | | 4MTD-22X | | | | 15.1* | 18.3 | 19.7 | |
| 4MKD-35X | | | | 33.3* | 54.8 | 67.6 | 100.0 | 4MKD-35X | | | | 16.8* | 20.4 | 22.0 | 24.4 |
| 4MUD-25X | | | | 32.9* | 54.0 | 66.3 | | 4MUD-25X | | | | 17.1* | 21.0 | 22.8 | |
| 6MID-40X | | | | 40.7* | 67.2 | 82.6 | 121.5 | 6MID-40X | | | | 20.2* | 24.4 | 26.2 | 28.9 |
| 6MMD-30X | | | | 40.2* | 65.4 | 79.9 | | 6MMD-30X | | | | 20.4* | 24.8 | 26.7 | |
| 6MJD-45X | | | | 45.3* | 74.5 | 91.6 | 135.0 | 6MJD-45X | | | | 22.9* | 27.6 | 29.7 | 32.8 |
| 6MTD-35X | | | | 45.3* | 73.3 | 89.5 | | 6MTD-35X | | | | 23.1* | 28.0 | 30.3 | |
| 6MKD-50X | | | | 50.7* | 83.7 | 103.0 | 151.5 | 6MKD-50X | | | | 25.8* | 31.3 | 33.7 | 37.5 |
| 6MUD-40X | | | | 47.9* | 81.9 | 100.5 | | 6MUD-40X | | | | 25.9* | 31.7 | 34.4 | |

Suction Gas Return 20°C, Subcooling 0K, 100% Loaded

* Suction Superheat 10K, Subcooling 0K

Preliminary Data

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|-----|------------------------------|-------|------|------|-------|-------|----------|-----|------------------------------|-------|------|------|------|------|
| R404A | | Cooling Capacity (kW) | | | | | | R404A | | Power Input (kW) | | | | | |
| | | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MAD-22X | | 8.1* | 11.7* | 23.4 | 35.6 | 43.1 | 61.3 | 4MAD-22X | | 7.3* | 8.6* | 11.0 | 13.0 | 13.7 | 14.7 |
| 4MFD-13X | | 8.3* | 11.5* | 22.6 | 34.5 | 41.8 | | 4MFD-13X | | 7.4* | 8.7* | 11.0 | 13.1 | 13.9 | |
| 4MHD-25X | | 9.6* | 13.7* | 27.2 | 41.7 | 50.7 | 72.9 | 4MHD-25X | | 8.6* | 10.1* | 13.0 | 15.4 | 16.3 | 17.5 |
| 4MLD-15X | | 10.6* | 14.5* | 27.6 | 41.6 | 50.2 | | 4MLD-15X | | 9.0* | 10.5* | 13.3 | 15.8 | 16.7 | |
| 4MID-30X | | 11.4* | 16.2* | 30.9 | 46.3 | 55.7 | 78.7 | 4MID-30X | | 9.8* | 11.5* | 14.5 | 17.0 | 18.0 | 19.5 |
| 4MMD-20X | | 12.2* | 16.4* | 30.6 | 45.6 | 54.8 | | 4MMD-20X | | 10.1* | 11.6* | 14.6 | 17.1 | 18.2 | |
| 4MJD-33X | | 12.9* | 17.8* | 34.2 | 51.9 | 62.7 | 89.5 | 4MJD-33X | | 10.9* | 12.6* | 16.1 | 19.0 | 20.2 | 21.8 |
| 4MTD-22X | | 13.7* | 18.4* | 34.3 | 51.5 | 62.1 | | 4MTD-22X | | 11.5* | 13.2* | 16.6 | 19.5 | 20.7 | |
| 4MKD-35X | | 14.5* | 20.0* | 38.4 | 58.3 | 70.6 | 101.0 | 4MKD-35X | | 12.6* | 14.6* | 18.5 | 22.0 | 23.5 | 25.7 |
| 4MUD-25X | | 14.9* | 20.1* | 38.1 | 57.5 | 69.5 | | 4MUD-25X | | 12.9* | 14.9* | 18.8 | 22.3 | 23.7 | |
| 6MID-40X | | 17.3* | 28.6° | 46.2 | 70.1 | 84.9 | 121.5 | 6MID-40X | | 15.2* | 17.6° | 22.2 | 26.1 | 27.7 | 30.1 |
| 6MMD-30X | | 18.2* | 29.0° | 46.0 | 69.5 | 84.3 | | 6MMD-30X | | 15.7* | 18.1° | 22.5 | 26.3 | 27.8 | |
| 6MJD-45X | | 19.2* | 32.0° | 51.9 | 78.7 | 95.1 | 135.0 | 6MJD-45X | | 16.8* | 19.6° | 24.9 | 29.5 | 31.4 | 33.9 |
| 6MTD-35X | | 20.5* | 32.7° | 52.0 | 78.5 | 94.9 | | 6MTD-35X | | 17.5* | 20.1° | 25.3 | 29.7 | 31.5 | |
| 6MKD-50X | | 21.4* | 36.0° | 58.1 | 87.7 | 106.0 | 150.5 | 6MKD-50X | | 19.4* | 22.5° | 28.3 | 33.5 | 35.9 | 39.9 |
| 6MUD-40X | | 22.6* | 36.5° | 58.1 | 88.1 | 107.0 | | 6MUD-40X | | 19.7* | 22.7° | 28.5 | 33.6 | 35.8 | |

Suction Gas Return 20°C, Subcooling 0K, 100% Loaded

* Suction Superheat 10K, Subcooling 0K

° Additional Cooling Required

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|-----|------------------------------|-------|-------|-------|-------|------|----------|-----|------------------------------|------|-------|-------|-------|------|
| R134a | | Cooling Capacity (kW) | | | | | | R134a | | Power Input (kW) | | | | | |
| | | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MAD-22X | | 4.0* | 6.2* | 11.8* | 20.0* | 25.4* | 39.7 | 4MAD-22X | | 3.7* | 4.4* | 5.9* | 7.3* | 7.9* | 8.7 |
| 4MFD-13X | | | | 12.1 | 20.2 | 25.4 | 38.5 | 4MFD-13X | | | | 5.8 | 7.2 | 7.8 | 8.7 |
| 4MHD-25X | | 4.4* | 6.9* | 13.5* | 23.1* | 29.3* | 45.9 | 4MHD-25X | | 4.7* | 5.4* | 7.1* | 8.7* | 9.4* | 10.4 |
| 4MLD-15X | | | | 14.8 | 24.2 | 30.2 | 45.5 | 4MLD-15X | | | | 6.9 | 8.5 | 9.3 | 10.4 |
| 4MID-30X | | 5.2* | 8.0* | 15.1* | 25.4* | 32.2* | 50.2 | 4MID-30X | | 4.9* | 5.8* | 7.6* | 9.4* | 10.3* | 11.4 |
| 4MMD-20X | | | | 16.5 | 26.7 | 33.3 | 49.8 | 4MMD-20X | | | | 7.7 | 9.4 | 10.2 | 11.4 |
| 4MJD-33X | | 6.0* | 9.1* | 17.0* | 28.5* | 35.9* | 55.9 | 4MJD-33X | | 5.6* | 6.6* | 8.7* | 10.7* | 11.5* | 12.8 |
| 4MTD-22X | | | | 18.9 | 30.3 | 37.7 | 56.7 | 4MTD-22X | | | | 8.7 | 10.8 | 11.7 | 13.1 |
| 4MKD-35X | | 7.0* | 10.4* | 19.1* | 31.9* | 40.3* | 62.7 | 4MKD-35X | | 7.1* | 7.7* | 9.7* | 12.2* | 13.3* | 14.9 |
| 4MUD-25X | | | | 20.5 | 33.5 | 41.9 | 63.2 | 4MUD-25X | | | | 9.8 | 12.2 | 13.3 | 15.1 |
| 6MID-40X | | | | 22.2* | 37.6* | 47.8* | 75.3 | 6MID-40X | | | | 12.0* | 14.6* | 15.8* | 17.8 |
| 6MMD-30X | | | | 24.9 | 40.3 | 50.2 | 75.3 | 6MMD-30X | | | | 11.7 | 14.6 | 15.8 | 17.7 |
| 6MJD-45X | | | | 25.6* | 42.7* | 54.0* | 84.5 | 6MJD-45X | | | | 13.0* | 16.2* | 17.8* | 20.3 |
| 6MTD-35X | | | | 28.2 | 45.5 | 56.5 | 84.4 | 6MTD-35X | | | | 13.3 | 16.5 | 17.9 | 20.0 |
| 6MKD-50X | | | | 26.2* | 45.7* | 58.6* | 93.4 | 6MKD-50X | | | | 15.2* | 18.8* | 20.5* | 23.3 |
| 6MUD-40X | | | | 31.2 | 50.1 | 62.3 | 93.6 | 6MUD-40X | | | | 14.6 | 18.4 | 20.1 | 23.0 |

Suction Gas Return 20°C, Subcooling 0K, 100% Loaded

* Suction Superheat 10K, Subcooling 0K

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-------|-------|------|------|------|-------|---------------|------------------------------|-------|-------|------|------|------|------|
| R448A / R449A | Cooling Capacity (kW) | | | | | | | R448A / R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| 4MAD-22X | | 7.7* | 11.1* | 21.0 | 34.0 | 42.2 | 62.9 | 4MAD-22X | | 6.2* | 7.4* | 9.8 | 11.8 | 12.6 | 13.7 |
| 4MFD-13X | 3.7* | 8.1* | 10.9* | 19.4 | 30.1 | 36.9 | | 4MFD-13X | 4.5* | 6.3* | 7.4* | 9.8 | 12.2 | 13.1 | |
| 4MLD-15X | 4.2* | 10.3* | 14.2* | 24.9 | 38.3 | 46.6 | | 4MLD-15X | 5.2* | 7.6* | 8.9* | 11.6 | 14.2 | 15.4 | |
| 4MHD-25X | | 9.3* | 13.3* | 24.5 | 38.7 | 47.6 | 69.6 | 4MHD-25X | | 7.6* | 8.9* | 11.6 | 14.1 | 15.1 | 16.7 |
| 4MMD-20X | 4.9* | 11.6* | 15.8* | 27.5 | 42.0 | 51.0 | | 4MMD-20X | 5.8* | 8.5* | 9.9* | 12.9 | 15.6 | 16.9 | |
| 4MID-30X | | 10.6* | 15.3* | 27.8 | 43.6 | 53.5 | 77.8 | 4MID-30X | | 8.2* | 9.8* | 13.0 | 15.6 | 16.7 | 18.2 |
| 4MJD-33X | | 11.9* | 16.8* | 30.6 | 48.2 | 59.2 | 86.7 | 4MJD-33X | | 9.2* | 11.0* | 14.5 | 17.6 | 18.9 | 20.6 |
| 4MTD-22X | 5.8* | 13.3* | 17.9* | 31.0 | 47.2 | 57.2 | | 4MTD-22X | 6.6* | 9.7* | 11.3* | 14.6 | 17.8 | 19.2 | |
| 4MKD-35X | | 13.6* | 19.0* | 34.4 | 54.3 | 66.8 | 97.9 | 4MKD-35X | | 10.7* | 12.7* | 16.7 | 20.4 | 22.0 | 24.4 |
| 4MUD-25X | 6.4* | 14.2* | 19.2* | 33.9 | 52.7 | 64.4 | | 4MUD-25X | 7.4* | 10.8* | 12.7* | 16.6 | 20.5 | 22.4 | |
| 6MID-40X | | 16.9* | 23.7* | 42.4 | 65.9 | 80.6 | 116.5 | 6MID-40X | | 13.0* | 15.3* | 19.6 | 23.5 | 25.2 | 28.0 |
| 6MMD-30X | 6.5* | 17.4* | 23.8* | 41.4 | 62.6 | 75.5 | | 6MMD-30X | 8.8* | 13.1* | 15.4* | 19.9 | 23.9 | 25.6 | |
| 6MTD-35X | 7.4* | 19.5* | 26.6* | 46.0 | 69.3 | 83.5 | | 6MTD-35X | 9.7* | 14.6* | 17.2* | 22.2 | 26.9 | 29.0 | |
| 6MJD-45X | | 19.3* | 26.9* | 47.6 | 73.7 | 90.1 | 131.0 | 6MJD-45X | | 14.3* | 17.0* | 22.2 | 26.9 | 28.8 | 31.7 |
| 6MKD-50X | | 20.8* | 29.1* | 52.2 | 81.4 | 99.8 | 145.5 | 6MKD-50X | | 16.4* | 19.2* | 25.0 | 30.3 | 32.7 | 36.7 |
| 6MUD-40X | 8.2* | 21.9* | 30.2* | 52.9 | 81.0 | 98.4 | | 6MUD-40X | 10.9* | 16.3* | 19.1* | 24.6 | 29.8 | 32.1 | |

Conditions: Suction Gas Return 20°C / Subcooling 0K, 100% Loaded

*Conditions: Suction Superheat 10K, Subcooling 0K

Preliminary Data

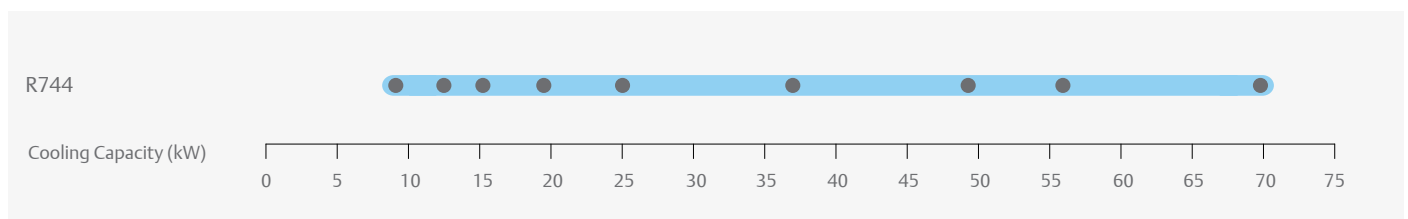
Copeland™ Stream Compressors With CoreSense™ Diagnostics for R744-Transcritical Applications

Stream series of 4 cylinder CO₂ compressors is the ideal solution for R744 booster systems. It is characterized by a design pressure of 135 bar. Refrigerant flow and heat transfer have been optimized for best performance. All compressors are equipped with CoreSense technology and offer the possibility to diagnose system-related problems faster or even before they occur.



Copeland Stream Compressors for R744 Refrigeration Designed for Durability and Best-in-Class Performance in R744-Transcritical Applications

Stream Compressor Line-up



Conditions: EN12900 R744: Evaporating -10°C, gas cooler exit: 35°C/ 90 bar, superheat: 10K

Features and Benefits

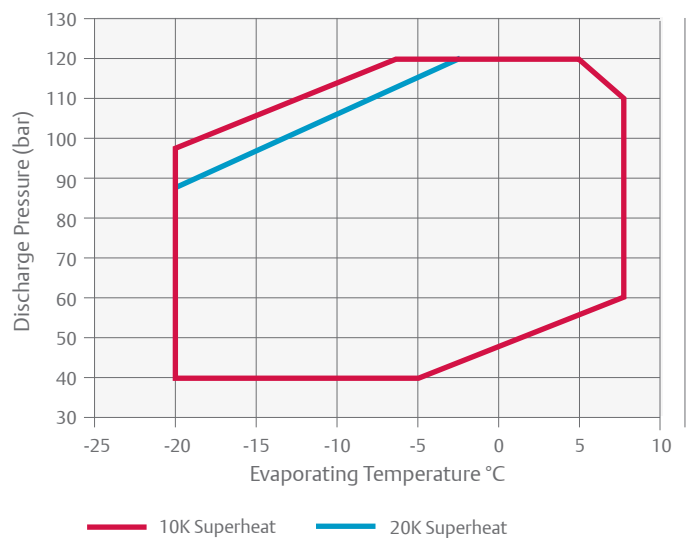
Stream provides for flexibility in pack design and operation:

- Compact dimensions
- Integrated low pressure relief valve
- Discharge temperature protection
- Service valve 360° rotation for ease of piping design
- 2 sight glasses for mounting of oil management control and visual inspection
- One oil port for oil equalization in parallel system
- Oil splasher system ensuring lubrication at constant and variable speed

Designed for durability and performance in R744 applications:

- Low sound, low vibration and large discharge chamber to eliminate pulsation
- High design pressures of 135 bar (high side) and 90 bar (low side)
- Burst pressures in excess of safety factor 3
- Cylinder head and discharge plenum design minimizing heat transfer to suction side
- Stepless capacity modulation via inverter from 25 to 70Hz
- CoreSense™ Diagnostics
- Individual compressor power consumption monitoring
- CoreSense Protection available as option

Operating Envelope R744



Technical Overview

| Model | Nominal hp | Displacement (m ³ /h) | Capacity (kw) | COP | 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 - dB(A)*** |
|----------|------------|----------------------------------|---------------|------|------------------|--------------------------|-----------------|---------------------|-------------------------------|--------------------------|--------------------------------|
| | | | | | | | | 3 Ph** | 3 Ph** | 3 Ph** | |
| 4MTL-05X | 5.0 | 4.6 | 9.3 | 1.6 | 1.5 | 630/425/410 | 123.0 | EWL | 13.3 | 80.5 | 59.0 |
| 4MTL-07X | 7.0 | 6.2 | 12.5 | 1.6 | 1.5 | 630/425/410 | 124.0 | EWL | 17.5 | 81.2 | 62.0 |
| 4MTL-09X | 9.0 | 7.4 | 15.3 | 1.6 | 1.5 | 630/425/410 | 123.0 | EWL | 21.0 | 93.5 | 63.0 |
| 4MTL-12X | 12.0 | 9.5 | 19.2 | 1.7 | 1.8 | 697/444/423 | 170.0 | AWM | 26.5 | 145.0 | 67.4 |
| 4MTL-15X | 15.0 | 12.5 | 25.2 | 1.8 | 1.8 | 697/445/422 | 170.0 | AWM | 34.8 | 156.0 | 71.3 |
| 4MTL-30X | 30.0 | 18.0 | 37.0 | 1.8 | 1.8 | 697/445/422 | 175.0 | AWM | 50.0 | 221.0 | 75.1 |
| 4MTL-35X | 35.0 | 22.7 | 49.0 | 1.79 | 2.5 | 842/ 468/ 467 | 257.9 | AWM | 67.1 | 304 | 75.1 |
| 4MTL-40X | 40.0 | 26.6 | 56.0 | 1.84 | 2.5 | 842/ 468/ 467 | 264.0 | AWM | 72.6 | 306 | 75.1 |
| 4MTL-50X | 50.0 | 32.0 | 70.0 | 1.81 | 2.5 | 842/ 468/ 467 | 269.4 | AWM | 90.3 | 393 | 75.1 |

** 3 Ph: 380-420V/ 50Hz

*** @ 1m: Sound Pressure Level at 1m Distance from the Compressor, Free Field Condition

Preliminary Data

Capacity Data

| | | | Cooling Capacity (kW) | | | | | Power Input (kW) | | | | | |
|----------|------------------|----------------|---------------------------------------|------|------|------|------|---------------------------------------|------|------|------|------|------|
| Model | Temperature (°C) | Pressure (bar) | Evaporating Temperature (°C) | | | | | Evaporating Temperature (°C) | | | | | |
| | | | -20 | -15 | -10 | -5 | 0 | -20 | -15 | -10 | -5 | 0 | |
| | | | Equivalent Evaporation Pressure (bar) | | | | | Equivalent Evaporation Pressure (bar) | | | | | |
| | | | 19.7 | 22.9 | 26.5 | 30.5 | 34.9 | 19.7 | 22.9 | 26.5 | 30.5 | 34.9 | |
| 4MTL-05X | Condensing | 10 | 45 | 10.9 | 13.4 | 16.3 | 19.5 | | 3.1 | 3.0 | 2.8 | 2.5 | |
| | | 15 | 50 | 9.8 | 12.1 | 14.8 | 17.8 | 21.2 | 3.4 | 3.4 | 3.2 | 3.0 | 2.6 |
| | | 20 | 57 | 8.8 | 10.8 | 13.2 | 16.0 | 19.1 | 3.8 | 3.8 | 3.7 | 3.5 | 3.2 |
| | | 25 | 64 | 7.6 | 9.4 | 11.5 | 14.0 | 16.7 | 4.1 | 4.2 | 4.2 | 4.0 | 3.8 |
| | | 30 | 75 | 6.0 | 7.4 | 9.2 | 11.2 | 13.4 | 4.5 | 4.6 | 4.6 | 4.6 | 4.4 |
| | Cool gas | 35 | 90 | | 7.0 | 8.7 | 10.7 | 12.9 | | 5.4 | 5.6 | 5.7 | 5.7 |
| | | 40 | 100 | | | 7.5 | 9.3 | 11.3 | | | 6.0 | 6.2 | 6.3 |
| | | 40 | 110 | | | | 9.6 | 11.7 | | | | 6.6 | 6.8 |
| 4MTL-07X | Condensing | 10 | 45 | 14.9 | 18.2 | 22.1 | 26.5 | | 3.9 | 3.7 | 3.4 | 3.0 | |
| | | 15 | 50 | 13.5 | 16.5 | 20.1 | 24.1 | 28.7 | 4.3 | 4.3 | 4.0 | 3.7 | 3.2 |
| | | 20 | 57 | 12.0 | 14.7 | 17.9 | 21.7 | 25.8 | 4.8 | 4.8 | 4.7 | 4.4 | 4.0 |
| | | 25 | 64 | 10.4 | 12.8 | 15.6 | 18.9 | 22.5 | 5.3 | 5.4 | 5.3 | 5.2 | 4.9 |
| | | 30 | 75 | 8.2 | 10.2 | 12.5 | 15.1 | 18.1 | 5.8 | 6.0 | 6.0 | 5.9 | 5.7 |
| | Cool gas | 35 | 90 | | 9.5 | 11.8 | 14.5 | 17.4 | | 7.0 | 7.3 | 7.4 | 7.5 |
| | | 40 | 100 | | | 10.2 | 12.5 | 15.1 | | | 7.9 | 8.2 | 8.3 |
| | | 40 | 110 | | | | 12.9 | 15.6 | | | | 8.8 | 9.0 |
| 4MTL-09X | Condensing | 10 | 45 | 18.3 | 22.3 | 27.0 | 32.4 | | 4.6 | 4.5 | 4.1 | 3.6 | |
| | | 15 | 50 | 16.6 | 20.3 | 24.6 | 29.5 | 35.0 | 5.2 | 5.1 | 4.9 | 4.5 | 3.9 |
| | | 20 | 57 | 14.8 | 18.2 | 22.1 | 26.5 | 31.5 | 5.8 | 5.8 | 5.6 | 5.3 | 4.9 |
| | | 25 | 64 | 12.9 | 15.8 | 19.3 | 23.2 | 27.6 | 6.4 | 6.5 | 6.4 | 6.2 | 5.9 |
| | | 30 | 75 | 10.3 | 12.6 | 15.4 | 18.6 | 22.1 | 6.9 | 7.1 | 7.2 | 7.1 | 6.9 |
| | Cool gas | 35 | 90 | | 11.9 | 14.7 | 17.8 | 21.4 | | 8.5 | 8.8 | 9.0 | 9.0 |
| | | 40 | 100 | | | 12.7 | 15.5 | 18.6 | | | 9.5 | 9.8 | 10.0 |
| | | 40 | 110 | | | | 16.0 | 19.3 | | | | 10.6 | 10.9 |
| 4MTL-12X | Condensing | 10 | 45 | 24.1 | 29.1 | 35.0 | 41.7 | | 6.1 | 5.9 | 5.5 | 4.9 | |
| | | 15 | 50 | 21.8 | 26.4 | 31.9 | 38.1 | 45.0 | 6.8 | 6.8 | 6.5 | 6.0 | 5.3 |
| | | 20 | 57 | 19.5 | 23.7 | 28.6 | 34.3 | 40.6 | 7.6 | 7.6 | 7.4 | 7.0 | 6.5 |
| | | 25 | 64 | 16.9 | 20.6 | 25.0 | 30.0 | 35.6 | 8.3 | 8.4 | 8.4 | 8.2 | 7.7 |
| | | 30 | 75 | 13.5 | 16.4 | 20.0 | 24.1 | 28.6 | 9.0 | 9.3 | 9.4 | 9.3 | 9.0 |
| | Cool gas | 35 | 90 | 12.8 | 15.7 | 19.3 | 23.3 | 27.9 | 10.2 | 10.9 | 11.3 | 11.6 | 11.6 |
| | | 40 | 100 | | 13.6 | 16.8 | 20.4 | 24.4 | | 11.5 | 12.2 | 12.6 | 12.8 |
| | | 40 | 110 | | | 17.4 | 21.2 | 25.5 | | | 12.8 | 13.5 | 13.9 |
| 4MTL-15X | Condensing | 10 | 45 | 31.2 | 37.9 | 45.6 | 54.4 | | 7.9 | 7.6 | 7.1 | 6.3 | |
| | | 15 | 50 | 28.3 | 34.5 | 41.6 | 49.7 | 58.7 | 8.8 | 8.7 | 8.4 | 7.8 | 6.9 |
| | | 20 | 57 | 25.3 | 30.9 | 37.4 | 44.8 | 53.0 | 9.7 | 9.7 | 9.6 | 9.2 | 8.6 |
| | | 25 | 64 | 22.0 | 26.9 | 32.7 | 39.3 | 46.6 | 10.5 | 10.8 | 10.8 | 10.7 | 10.2 |
| | | 30 | 75 | 17.5 | 21.5 | 26.2 | 31.6 | 37.5 | 11.4 | 11.8 | 12.0 | 12.1 | 11.8 |
| | Cool gas | 35 | 90 | 16.5 | 20.5 | 25.2 | 30.5 | 36.5 | 13.1 | 13.8 | 14.4 | 14.8 | 15.0 |
| | | 40 | 100 | | 17.7 | 21.8 | 26.6 | 31.8 | | 14.8 | 15.5 | 16.1 | 16.4 |
| | | 40 | 110 | | | 22.5 | 27.5 | 33.1 | | | 16.6 | 17.3 | 17.9 |
| 4MTL-30X | Condensing | 10 | 45 | 45.6 | 54.9 | 65.9 | 78.3 | | 11.4 | 11.0 | 10.4 | 9.3 | |
| | | 15 | 50 | 41.5 | 50.2 | 60.3 | 71.7 | 84.4 | 12.6 | 12.5 | 12.1 | 11.4 | 10.2 |
| | | 20 | 57 | 37.2 | 45.1 | 54.3 | 64.7 | 76.3 | 13.9 | 14.0 | 13.9 | 13.4 | 12.5 |
| | | 25 | 64 | 32.4 | 39.4 | 47.6 | 56.9 | 67.2 | 15.2 | 15.5 | 15.6 | 15.4 | 14.8 |
| | | 30 | 75 | 25.9 | 31.6 | 38.3 | 45.8 | 54.2 | 16.4 | 16.9 | 17.3 | 17.4 | 17.1 |
| | Cool gas | 35 | 90 | 24.7 | 30.3 | 37.0 | 44.6 | 53.1 | 18.8 | 19.8 | 20.6 | 21.2 | 21.5 |
| | | 40 | 100 | | 26.3 | 32.2 | 39.0 | 46.5 | | 21.2 | 22.2 | 23.0 | 23.6 |
| | | 40 | 110 | | | 33.4 | 40.5 | 48.5 | | | 23.8 | 24.8 | 25.6 |

Suction Superheat 10K / Subcooling 0K
Preliminary Data

Capacity Data

| | | | Cooling Capacity (kW) | | | | | Power Input (kW) | | | | | |
|----------|------------------|----------------|---------------------------------------|------|------|-------|-------|---------------------------------------|------|------|------|------|------|
| Model | Temperature (°C) | Pressure (bar) | Evaporating Temperature (°C) | | | | | Evaporating Temperature (°C) | | | | | |
| | | | -20 | -15 | -10 | -5 | 0 | -20 | -15 | -10 | -5 | 0 | |
| | | | Equivalent Evaporation Pressure (bar) | | | | | Equivalent Evaporation Pressure (bar) | | | | | |
| | | | 19.7 | 22.9 | 26.5 | 30.5 | 34.9 | 19.7 | 22.9 | 26.5 | 30.5 | 34.9 | |
| 4MTL-35X | Condensing | 10 | 45 | 57.9 | 69.9 | 84.2 | 100.5 | | 14.3 | 13.7 | 12.6 | 11.2 | |
| | | 15 | 50 | 52.6 | 63.7 | 76.8 | 91.9 | 109.0 | 15.9 | 15.6 | 14.8 | 13.6 | 12.0 |
| | | 20 | 57 | 47.1 | 57.1 | 69.1 | 82.8 | 98.2 | 17.6 | 17.6 | 17.1 | 16.2 | 14.9 |
| | | 25 | 64 | 41.1 | 49.9 | 60.5 | 72.6 | 86.2 | 19.3 | 19.6 | 19.4 | 18.8 | 17.8 |
| | | 30 | 75 | 32.8 | 40.0 | 48.5 | 58.4 | 69.4 | 20.9 | 21.5 | 21.7 | 21.5 | 20.8 |
| | Cool gas | 35 | 90 | 31.5 | 38.4 | 46.9 | 56.7 | 67.7 | 23.6 | 25.1 | 26.1 | 26.7 | 26.9 |
| | | 40 | 100 | | 33.5 | 40.9 | 49.5 | 59.3 | | 26.5 | 28.0 | 29.1 | 29.7 |
| | 40 | 110 | | | 42.5 | 51.6 | 61.9 | | | 29.5 | 31.1 | 32.1 | |
| 4MTL-40X | Condensing | 10 | 45 | 69.0 | 83.1 | 99.7 | 118.5 | | 16.5 | 15.9 | 14.7 | 13.0 | |
| | | 15 | 50 | 62.8 | 75.8 | 91.1 | 108.5 | 128.0 | 18.5 | 18.2 | 17.4 | 16.1 | 14.1 |
| | | 20 | 57 | 56.4 | 68.1 | 81.9 | 97.9 | 115.5 | 20.4 | 20.4 | 20.0 | 19.1 | 17.6 |
| | | 25 | 64 | 49.3 | 59.6 | 71.8 | 85.9 | 101.5 | 22.4 | 22.7 | 22.6 | 22.1 | 21.1 |
| | | 30 | 75 | 39.5 | 47.8 | 57.7 | 69.1 | 81.9 | 24.3 | 25.0 | 25.3 | 25.2 | 24.6 |
| | Cool gas | 35 | 90 | 38.1 | 46.2 | 55.9 | 67.2 | 79.9 | 28.2 | 29.4 | 30.4 | 31.1 | 31.4 |
| | | 40 | 100 | | 40.3 | 48.8 | 58.8 | 70.0 | | 31.8 | 33.0 | 34.1 | 34.8 |
| | 40 | 110 | | | 50.8 | 61.2 | 73.1 | | | 35.6 | 36.9 | 37.9 | |
| 4MTL-50X | Condensing | 10 | 45 | 82.8 | 99.7 | 119.5 | 142.0 | | 20.2 | 19.6 | 18.4 | 16.7 | |
| | | 15 | 50 | 75.6 | 91.1 | 109.5 | 130.5 | 153.5 | 22.6 | 22.3 | 21.5 | 20.0 | 18.0 |
| | | 20 | 57 | 67.9 | 82.0 | 98.6 | 117.5 | 139.0 | 24.9 | 25.1 | 24.6 | 23.5 | 21.9 |
| | | 25 | 64 | 59.5 | 71.9 | 86.5 | 103.5 | 122.0 | 27.3 | 27.8 | 27.8 | 27.2 | 25.9 |
| | | 30 | 75 | 47.7 | 57.8 | 69.7 | 83.4 | 98.6 | 29.6 | 30.6 | 31.1 | 30.9 | 30.1 |
| | Cool gas | 35 | 90 | 46.2 | 56.0 | 67.8 | 81.4 | 96.7 | 33.9 | 35.9 | 37.4 | 38.3 | 38.6 |
| | | 40 | 100 | | 49.0 | 59.3 | 71.3 | 84.8 | | 38.2 | 40.3 | 41.8 | 42.6 |
| | 40 | 110 | | | 61.9 | 74.5 | 88.8 | | | 42.6 | 44.7 | 46.2 | |

Copeland™ Stream Compressors With CoreSense™ Diagnostics for R744-Subcritical Applications Requiring High Standstill Pressures (90bar)

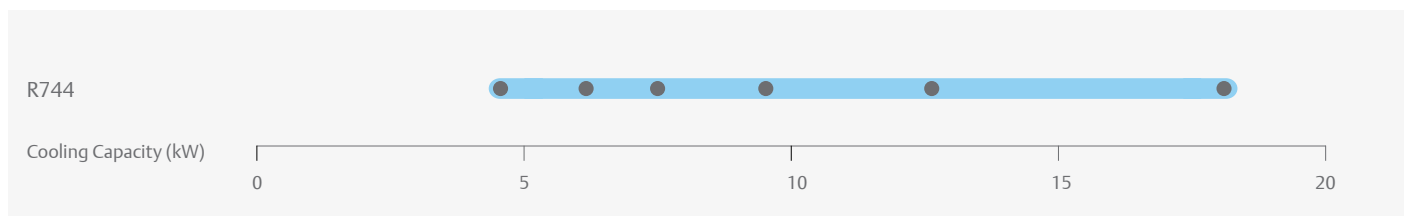
Stream series of 4 cylinder CO₂ compressors is the ideal solution for R744 low temperature cascade and booster systems requiring high standstill pressure of up to 90 bar suction. The use of transcritical compressors in medium / transcritical side as well as on the low temperature / subcritical side ensures that in case of power outage, the refrigeration system features full resilience and no operation disruption.

Stream is characterized by a design pressure of 135 bar. Refrigerant flow and heat transfer have been optimized for best performance. All compressors are equipped with CoreSense technology and offer the possibility to diagnose system-related problems faster or even before they occur.



Copeland Stream compressors for Low Temperature Applications with R744 Designed for durability and best-in-class performance in R744 subcritical applications

Stream Compressor Line-up



Conditions: EN12900 R744: Evaporating -35°C, condensing -5°C, superheat 10K, subcooling 0K

Features and Benefits

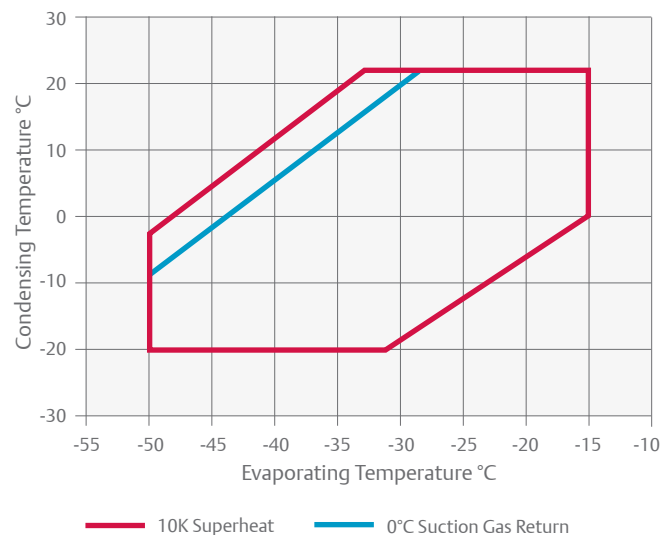
Stream provides for flexibility in pack design and operation:

- Compressor Max. Pressures (Suction/Discharge): 90 bar / 135 bar
- Compact dimensions
- Integrated low pressure relief valve
- Discharge temperature protection
- Service valve 360° rotation for ease of piping design
- 2 sight glasses for mounting of oil management control and visual inspection
- One oil port for oil equalization in parallel system
- Oil splasher system ensuring lubrication at constant and variable speed

Designed for durability and performance in R744 applications:

- Low sound, low vibration and large discharge chamber to eliminate pulsation
- Optimized motor selection for low temperature running conditions
- Burst pressures in excess of safety factor 3
- Cylinder head and discharge plenum design minimizing heat transfer to suction side
- Stepless capacity modulation via inverter from 25 to 70Hz
- CoreSense Diagnostics for advanced protection, diagnostics, communication
- Individual compressor power consumption monitoring
- CoreSense Protection available as option

Operating Envelope R744



Technical Overview

| R744 | Nominal hp | Displacement (m ³ /h) | Capacity (kw) | COP | 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 - dB(A)*** |
|----------|------------|----------------------------------|---------------|-----|------------------|--------------------------|-----------------|--------------------|-------------------------------|--------------------------|--------------------------------|
| | | | | | | | | 3 Ph** | 3 Ph** | 3 Ph** | |
| 4MSL-03X | 3.0 | 4.6 | 7.2 | 3.2 | 1.5 | 697/444/423 | | EWL | | | 76.0 |
| 4MSL-04X | 4.0 | 6.2 | 9.9 | 3.6 | 1.5 | 697/444/423 | | EWL | | | 76.0 |
| 4MSL-06X | 5.0 | 7.4 | 12.4 | 3.7 | 1.5 | 697/444/423 | | EWL | | | 76.0 |
| 4MSL-08X | 8.0 | 9.5 | 15.9 | 3.6 | 1.8 | 697/444/423 | 170.0 | AWM | 13.9 | 87.4 | 76.0 |
| 4MSL-12X | 12.0 | 12.5 | 21.0 | 3.7 | 1.8 | 697/445/422 | 170.0 | AWM | 18.7 | 145.0 | 76.0 |
| 4MSL-15X | 15.0 | 17.9 | 31.0 | 3.8 | 1.8 | 697/445/422 | 170.0 | AWM | 25.7 | 156.0 | 76.0 |

** 3 Ph: 380-420V/ 50Hz

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

Capacity Data

| R744 | Cooling Capacity (kW) | | | | R744 | Power Input (kW) | | | |
|----------|------------------------------|-------|-------|-------|----------|------------------------------|------|------|------|
| | Condensing Temperature -10°C | | | | | Condensing Temperature -10°C | | | |
| | Evaporating Temperature (°C) | | | | | Evaporating Temperature (°C) | | | |
| Model | -45 | -40 | -35 | -30 | Model | -45 | -40 | -35 | -30 |
| 4MSL-03X | 4.8* | 6.3* | 8.2* | 10.5* | 4MSL-03X | 1.9* | 2.0* | 2.0* | 1.9* |
| 4MSL-04X | 6.7* | 8.8* | 11.3* | 14.2* | 4MSL-04X | 2.5* | 2.6* | 2.5* | 2.4* |
| 4MSL-06X | 8.0* | 10.5* | 13.5* | 16.9* | 4MSL-06X | 2.9* | 3.0* | 2.9* | 2.7* |
| 4MSL-08X | 10.3* | 13.5* | 17.2* | 21.5* | 4MSL-08X | 3.8* | 4.0* | 3.9* | 3.7* |
| 4MSL-12X | 13.8* | 17.9* | 22.7* | 28.4* | 4MSL-12X | 4.9* | 5.0* | 5.0* | 4.8* |
| 4MSL-15X | 20.3* | 26.3* | 33.4* | 41.5* | 4MSL-15X | 7.0* | 7.2* | 7.2* | 7.0* |

Conditions: Suction Gas Return 20°C / Subcooling 0K

*Conditions: Suction Superheat 10K, Subcooling 0K

Preliminary Data

Service Compressors for 4 and 6 Cylinder S-Series and Discus Reciprocating Compressors

With the successful launch of Stream with CoreSense™ Diagnostics 4M and 6M compressors, Emerson has decided to consolidate product families to allow our customers to reduce product proliferation and cost of operation. As a result, Emerson will in the future only produce the most efficient semi-hermetic reciprocating compressor platforms out of its current portfolio.

With a large number of 4 and 6 cylinder S-Series and Discus compressors operating in applications around the world, Emerson recognizes the importance of providing worry-free drop-in replacement models. The range of service compressors offers easy replacement (“like for like”) without the need of system adaptations.

More detailed information is available with our “Guidelines for replacement of S-Series and Discus compressors” available from your Emerson sales office or as download under www.emersonclimate.eu

For your product selection in case of replacement needs, please refer to the cross-reference table below. In addition, our local Application Engineering and Sales team is ready to support you.



Service Compressor*

Discus Replacements

| | | |
|-----------|---|-----------|
| D4DF-100X | → | 4MFS1-13X |
| D4DA-100X | → | 4MFS1-13X |
| D4DA-200X | → | 4MAS1-22X |
| D4DL-150X | → | 4MLS1-15X |
| D4DH-150X | → | 4MLS1-15X |
| D4DH-250X | → | 4MHS1-25X |
| D4DT-220X | → | 4MMS1-20X |
| D4DJ-200X | → | 4MMS1-20X |
| D4DJ-300X | → | 4MIS1-30X |
| D6DL-270X | → | 6MLS1-27X |
| D6DH-200X | → | 6MLS1-27X |
| D6DH-350X | → | 6MHS1-35X |
| D6DT-320X | → | 6MMS1-30X |
| D6DJ-300X | → | 6MMS1-30X |
| D6DJ-400X | → | 6MIS1-40X |

*Valves are available as optional accessories.





Refrigeration Units

Refrigeration Units

Emerson offers the broadest and most reliable refrigeration unit product line-up. Leveraging the latest compressor technology, each platform provides you the option to select the refrigerant, capacity and application temperature combinations that meet your requirements. A huge variety of Copeland™ indoor and outdoor refrigeration units offer the right solution for applications in food retail and food service, commercial and industrial refrigeration.

Copeland EazyCool™ Scroll Outdoor Refrigeration Units are designed and fully equipped for a quick and easy installation and ideal to integrate into urban environments. The latest scroll technology is combined with high-quality Alco components and covered by a weatherproof housing in a unique design.

The Copeland EazyCool Refrigeration Unit ZX Series offers the highest energy efficiency available in a standard unit to lower operators' utility bills. Ranging in size from 2 to 7.5 hp, the ZX units are perfectly suited for typical food service and retail applications. The key benefits of compactness, silence and efficiency in the standard models will be enhanced by the capability of continuous capacity modulation of the ZX Digital models. This makes ZX Digital refrigeration units the perfect fit for applications with wide load variations.



Copeland Scroll™ indoor refrigeration units are equipped with the latest refrigeration scroll compressors and constitute the widest range of their kind. The modular line concept offers base units which can be adapted to the target application by various options including weather housings and fan speed controls.

Copeland Scroll Digital Receiver Units HLR are an innovative offering for food service and retail businesses. Their compact design and the power of Digital Scroll continuous capacity modulation enable optimized environmental integration with highest system efficiency.

Semi-hermetic refrigeration units: robust, reliable and efficient air-cooled refrigeration unit platforms featuring semi-hermetic reciprocating compressor technology are for use in high-medium- and low-temperature applications. Emerson has expanded its semi-hermetic product range by the innovative Stream Indoor Refrigeration Units. There with we can offer a product range from 0.8 - 40 hp with dedicated refrigerant approvals for R407A/F, R448A/ R449A, R404A, R134a, R450A and R513A.

Copeland EazyCool™ Outdoor Refrigeration Units With Scroll Compressors

Copeland™ air-cooled outdoor refrigeration units for medium-temperature and low-temperature applications.

Emerson has developed this series of refrigeration units especially for outdoor use. The latest Scroll technology is combined with high-quality components and covered by an absolutely weather-resistant synthetic resin housing in a unique design.

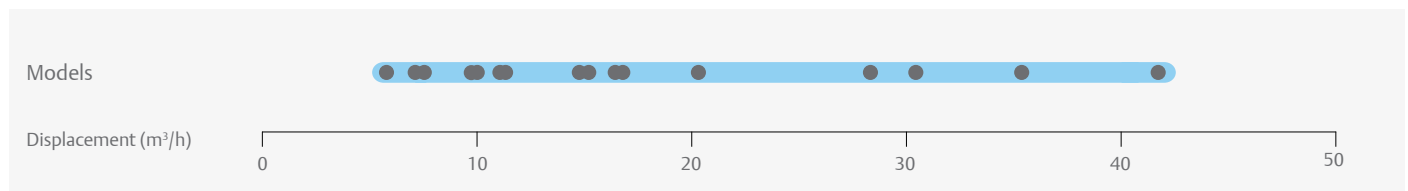
The EazyCool line-up offers state-of-the-art technology and models featuring stepless capacity control, vapor injection and fan speed control. This makes it the first choice for target applications in food retail and food service:

- Proximity and convenience stores
- Mini markets and supermarkets
- Bars, restaurants and kitchens
- Beer cellars and beverage coolers

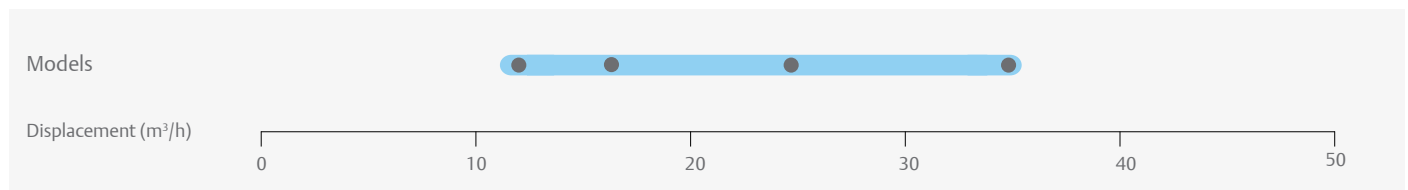


Copeland EazyCool Outdoor Refrigeration Units with Scroll Compressors

EazyCool OLQ/OMQ Line-up



EazyCool Digital Line-up



Features and Benefits

- Standard equipment: Scroll compressor(s), crankcase heater(s), condenser with thermally protected fan(s), fan speed control, HP and LP switch, liquid receiver, filter drier & sight glass, weather-resistant housing
- Suitable for multiple refrigerants: R407A/F, R448A/ R449A, R404A, R134a, R450A and R513A.
- Wide range of quality accessories
- Excellent efficiency
- Filter drier, liquid sight glass and solenoid valve in liquid line

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g)
- High Side PS 28 bar (g)

Technical Overview

| Models | Displacement (m ³ /h) | Receiver Capacity (l) | Number of Fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/Code | | Maximum Operating Current (A) | | Locked Rotor Current (A) | | Sound Pressure @10m - dB(A)*** |
|--|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-------------------------|-----------------|--------------------|--------|-------------------------------|--------|--------------------------|--------|--------------------------------|
| | | | | | | | | | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-56 | 11.5 | 17.7 | 2 | 290 | 1 3/8 | 5/8 | 2100/670/950 | 224.0 | | TWD | | 15 | | 99 | 44.0 |
| OMTQ-60 | 13.1 | 17.7 | 2 | 290 | 1 3/8 | 5/8 | 2100/670/950 | 209.0 | | TFD | | 2x10 | | 2x49 | 42.0 |
| OMTQ-76 | 15.1 | 17.7 | 2 | 290 | 1 3/8 | 5/8 | 2100/670/950 | 211.0 | | TFD | | 2x13 | | 2x66 | 43.0 |
| OMQ-75 | 15.3 | 17.7 | 2 | 290 | 1 3/8 | 5/8 | 2100/670/950 | 224.0 | | TWD | | 22 | | 127 | 44.0 |
| OMTQ-90 | 19.9 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 225.0 | | TFD | | 2x13 | | 2x74 | 45.0 |
| OMQ-92 | 20.5 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 246.0 | | TWD | | 25 | | 167 | 46.0 |
| OMQ-110 | 23.7 | 17.7 | 2 | 550 | 1 5/8 | 5/8 | 2100/670/950 | 255.0 | | TWD | | 29 | | 198 | 47.0 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | 6.2 | 8.1 | 1 | 145 | 7/8 | 1/2 | 1050/630/720 | 98.0 | | TFD | | 8 | | 52 | 36.0 |
| OMQ-45D | 9.4 | 8.1 | 1 | 145 | 7/8 | 1/2 | 1250/642/720 | 118.0 | | TFD | | 12 | | 74 | 39.0 |
| OMTQ-60D | 13.2 | 17.7 | 2 | 290 | 1 3/8 | 5/8 | 2100/670/950 | 209.0 | | TFD | | 8+10 | | | 42.0 |
| OMTQ-90D | 20.0 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 225.0 | | TFD | | 12+13 | | | 45.0 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-24V | 7.2 | 17.7 | 2 | 290 | 1 3/8 | 5/8 | 2100/670/950 | 228.0 | | TWD | | 16 | | 99 | 44.0 |
| OLTQ-26V | 8.2 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 221.0 | | TFD | | 2x9 | | 2x52 | 42.0 |
| OLQ-33V | 9.8 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 228.0 | | TWD | | 21 | | 127 | 44.0 |
| OLQ-40V | 11.8 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 238.0 | | TWD | | 27 | | 167 | 46.0 |
| OLTQ-36V | 12.1 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 235.0 | | TFD | | 2x14 | | 2x74 | 45.0 |
| OLQ-48V | 14.7 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 259.0 | | TWD | | 31 | | 198 | 47.0 |
| Digital Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-18DV | 6.1 | 17.7 | 2 | 290 | 7/8 | 5/8 | 2100/670/950 | 200.0 | | TFD | | 14 | | 74 | 39.0 |
| OLTQ-36DV | 12.1 | 17.7 | 2 | 550 | 1 3/8 | 5/8 | 2100/670/950 | 235.0 | | TFD | | 14+14 | | 2x74 | 45.0 |

* 1ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-------|-------|-------|-------|-------|------|-----------|------------------------------|------|------|-------|-------|-------|------|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-56 | | | | 7.2* | 11.1 | 13.2 | 17.8 | OMQ-56 | | | | 5.5* | 6.1 | 6.4 | 7.0 |
| OMQ-75 | | | | 10.1* | 14.6* | 17.6 | 23.2 | OMQ-75 | | | | 7.2* | 8.3* | 9.1 | 10.3 |
| OMQ-92 | | | | 13.1* | 19.8 | 23.3 | 31.3 | OMQ-92 | | | | 9.0* | 10.3 | 10.9 | 12.3 |
| OMQ-110 | | | | 15.2* | 22.3* | 27.0 | 36.1 | OMQ-110 | | | | 11.2* | 12.8* | 13.8 | 15.6 |
| OMTQ-60 | | | | 8.3* | 13.0 | 15.5 | 21.0 | OMTQ-60 | | | | 6.1* | 6.8 | 7.2 | 8.2 |
| OMTQ-76 | | | | 9.8* | 15.2 | 17.9 | | OMTQ-76 | | | | 7.8* | 8.8 | 9.4 | |
| OMTQ-90 | | | | 12.4* | 19.0 | 22.5 | 30.6 | OMTQ-90 | | | | 8.0* | 9.3 | 9.9 | 11.1 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-24V | | 5.8 | 7.2 | 10.4 | 14.3 | 16.4 | 21.0 | OLQ-24V | | 4.9 | 5.3 | 6.3 | 8.0 | 9.2 | 13.0 |
| OLQ-33V | | 7.7 | 9.8 | 14.5 | 18.7 | 20.1 | 20.4 | OLQ-33V | | 6.4 | 6.8 | 7.8 | 9.3 | 10.5 | 13.9 |
| OLQ-40V | | 10.2 | 12.6 | 18.3 | 24.7 | 28.0 | 34.5 | OLQ-40V | | 7.6 | 8.2 | 9.8 | 12.2 | 13.8 | 18.1 |
| OLTQ-36V | | 10.2* | 12.2* | 17.4* | 25.2* | 30.6* | | OLTQ-36V | | 8.0* | 8.3* | 9.1* | 10.7* | 12.2* | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | | 5.9* | 7.0* | | OMQ-30D | | | | | 3.8* | 4.1* | |
| OMQ-45D | | | | | 8.6* | 10.6 | | OMQ-45D | | | | | 4.8* | 5.2 | |
| OMTQ-60D | | | | 8.3* | 13.0 | 15.5 | 20.9 | OMTQ-60D | | | | 6.2* | 6.9 | 7.3 | 8.3 |
| OMTQ-90D | | | | 12.6 | 18.7 | 22.3 | 30.5 | OMTQ-90D | | | | 8.7 | 9.5 | 10.0 | 11.0 |
| Digital Low Temperature Models | | | | | | | | | | | | | | | |
| OLTQ-36DV | | 10.0* | 12.1* | 17.3* | 25.4* | 30.8* | | OLTQ-36DV | | 7.8* | 8.1* | 9.0* | 10.8* | 12.3* | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-------|-------|-------|------|----------|------------------------------|-----|-----|------|-------|-------|------|
| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| OMTQ-60 | | | | | 12.4* | 15.2 | | OMTQ-60 | | | | | 7.3* | 7.7 | |
| OMTQ-76 | | | | | 14.3* | 17.2* | | OMTQ-76 | | | | | 9.7* | 10.3* | |
| OMTQ-90 | | | | 11.7* | 18.6* | 22.9 | 31.8 | OMTQ-90 | | | | 9.1* | 10.3* | 10.9 | 12.2 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | | 6.1* | 7.2* | | OMQ-30D | | | | | 3.5* | 3.9* | |
| OMQ-45D | | | | | 9.1* | 11.1 | | OMQ-45D | | | | | 5.0* | 5.5 | |
| OMTQ-60D | | | | | 12.6* | 15.4 | | OMTQ-60D | | | | | 7.0* | 7.5 | |
| OMTQ-90D | | | | 11.8* | 18.9* | 23.2 | 31.7 | OMTQ-90D | | | | 8.6* | 10.0* | 10.8 | 12.4 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|------|-------|-------|-------|-------|------|---------|------------------------------|------|------|-------|-------|-------|-----|
| R448A | Cooling Capacity (kW) | | | | | | | R448A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-24V | | 5.7* | 7.1* | 10.5* | 14.8* | 17.3* | | OLQ-24V | | 4.8* | 5.2* | 5.9* | 6.6* | 7.0* | |
| OLQ-33V | | 7.9* | 9.8* | 14.6* | 20.6* | 24.1* | 32.3 | OLQ-33V | | 6.4* | 6.9* | 7.7* | 8.6* | 9.0* | 9.9 |
| OLQ-40V | | 9.5* | 12.4* | 18.6* | 25.7* | 29.7* | | OLQ-40V | | 7.6* | 8.7* | 10.6* | 11.9* | 12.6* | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | 4.1* | 6.2 | 7.3 | | OMQ-30D | | | | 2.9* | 3.5 | 3.9 | |
| OMQ-45D | | | | 6.1* | 9.5 | 11.2 | 14.9 | OMQ-45D | | | | 3.8* | 4.7 | 5.2 | 6.2 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|------|-------|-------|-------|-------|------|---------|------------------------------|------|------|-------|-------|-------|-----|
| R449A | Cooling Capacity (kW) | | | | | | | R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-24V | | 5.7* | 7.1* | 10.5* | 14.8* | 17.3* | | OLQ-24V | | 4.8* | 5.2* | 5.9* | 6.7* | 7.0* | |
| OLQ-33V | | 7.9* | 9.8* | 14.6* | 20.6* | 24.1* | 32.3 | OLQ-33V | | 6.4* | 6.9* | 7.8* | 8.6* | 9.0* | 9.9 |
| OLQ-40V | | 9.5* | 12.4* | 18.6* | 25.7* | 29.6* | | OLQ-40V | | 7.6* | 8.7* | 10.6* | 12.0* | 12.6* | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | 4.1* | 6.2 | 7.3 | | OMQ-30D | | | | 2.9* | 3.5 | 3.9 | |
| OMQ-45D | | | | 6.1* | 9.5 | 11.2 | 14.9 | OMQ-45D | | | | 3.8* | 4.7 | 5.2 | 6.2 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|------|------|------|------|------|------|-----------|------------------------------|------|------|------|------|------|------|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-56 | | | | 8.3 | 11.5 | 13.4 | 17.4 | OMQ-56 | | | | 6.2 | 6.7 | 6.9 | 7.5 |
| OMQ-75 | | | | 11.3 | 15.3 | 17.4 | 22.1 | OMQ-75 | | | | 8.2 | 9.3 | 9.8 | 10.9 |
| OMQ-92 | | | | 14.9 | 20.5 | 23.7 | 30.7 | OMQ-92 | | | | 10.2 | 11.2 | 11.8 | 13.1 |
| OMQ-110 | | | | 17.3 | 23.7 | 27.3 | 35.1 | OMQ-110 | | | | 12.7 | 14.1 | 14.8 | 16.4 |
| OMTQ-60 | | | | 9.4 | 13.1 | 15.1 | 19.6 | OMTQ-60 | | | | 7.0 | 7.5 | 7.8 | 8.4 |
| OMTQ-76 | | | | 11.1 | 15.1 | 17.3 | | OMTQ-76 | | | | 9.3 | 10.1 | 10.6 | |
| OMTQ-90 | | | | 14.2 | 19.9 | 23.1 | 30.2 | OMTQ-90 | | | | 9.6 | 10.3 | 10.7 | 11.5 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-18V | | 6.0 | 7.1 | 9.7 | 13.1 | 15.0 | | OLQ-18V | | 4.6 | 5.0 | 6.0 | 7.1 | 7.8 | |
| OLQ-24V | | 7.2 | 8.7 | 12.3 | 16.4 | 18.6 | 23.3 | OLQ-24V | | 5.6 | 6.0 | 6.8 | 7.9 | 8.5 | 10.1 |
| OLQ-33V | | 9.8 | 11.9 | 16.8 | 22.8 | 26.1 | 33.7 | OLQ-33V | | 7.4 | 7.9 | 8.8 | 10.0 | 10.7 | 12.2 |
| OLQ-40V | | 11.8 | 14.9 | 21.4 | 28.4 | 32.0 | 39.3 | OLQ-40V | | 8.7 | 9.8 | 12.0 | 14.0 | 15.1 | 17.4 |
| OLQ-48V | | 14.7 | 17.6 | 24.0 | 30.9 | 34.3 | | OLQ-48V | | 11.1 | 12.2 | 14.7 | 18.1 | 20.2 | |
| OLTQ-26V | | 8.2 | 9.9 | 14.3 | 19.8 | 23.1 | 31.1 | OLTQ-26V | | 6.4 | 6.7 | 7.4 | 8.2 | 8.7 | 9.6 |
| OLTQ-36V | | 12.1 | 14.4 | 20.0 | 27.1 | 31.4 | | OLTQ-36V | | 8.9 | 9.6 | 11.1 | 12.8 | 13.8 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | 4.6 | 6.2 | 7.0 | 8.8 | OMQ-30D | | | | 3.2 | 3.7 | 3.9 | 4.5 |
| OMQ-45D | | | | 6.9 | 9.4 | 10.8 | 13.7 | OMQ-45D | | | | 4.4 | 5.2 | 5.6 | 6.4 |
| OMTQ-60D | | | | 9.5 | 13.2 | 15.2 | 19.7 | OMTQ-60D | | | | 6.5 | 7.2 | 7.5 | 8.3 |
| OMTQ-90D | | | | 13.9 | 20.0 | 23.5 | 31.5 | OMTQ-90D | | | | 9.6 | 10.4 | 10.9 | 12.1 |
| Digital Low Temperature Models | | | | | | | | | | | | | | | |
| OLQ-18DV | | 6.1 | 7.3 | 10.2 | 13.9 | 16.1 | 21.3 | OLQ-18DV | | 4.3 | 4.7 | 5.3 | 6.0 | 6.5 | 7.4 |
| OLTQ-36DV | | 12.1 | 14.4 | 20.0 | 27.1 | 31.4 | | OLTQ-36DV | | 8.9 | 9.6 | 11.1 | 12.8 | 13.8 | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-------|-------|-------|------|---------|------------------------------|-----|-----|-------|-------|------|------|
| R407C | Cooling Capacity (kW) | | | | | | | R407C | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-56 | | | | 6.9* | 10.4* | 12.7 | 17.4 | OMQ-56 | | | | 5.3* | 5.8* | 6.1 | 6.6 |
| OMQ-75 | | | | 9.3* | 13.7* | 16.2* | 22.2 | OMQ-75 | | | | 6.7* | 7.7* | 8.2* | 9.4 |
| OMQ-92 | | | | 12.0* | 17.8* | 21.7 | 29.6 | OMQ-92 | | | | 8.4* | 9.4* | 10.0 | 11.1 |
| OMQ-110 | | | | 14.2* | 21.1* | 25.6 | 34.7 | OMQ-110 | | | | 10.6* | 12.0* | 12.8 | 14.4 |
| OMTQ-60 | | | | 7.2* | 11.3* | 13.9 | 19.3 | OMTQ-60 | | | | 5.6* | 6.2* | 6.6 | 7.4 |
| OMTQ-76 | | | | 8.1* | 12.9* | 15.7* | 22.3 | OMTQ-76 | | | | 6.8* | 7.8* | 8.4* | 9.8 |
| OMTQ-90 | | | | 10.6* | 17.0* | 21.0 | 29.3 | OMTQ-90 | | | | 7.8* | 8.6* | 9.1 | 10.1 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|-------|------|------|----------|------------------------------|-----|-----|------|------|-----|-----|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-56 | | | | 4.6* | 7.3* | 9.1 | 13.0 | OMQ-56 | | | | 3.3* | 3.6* | 3.7 | 4.0 |
| OMQ-75 | | | | 6.4* | 9.8* | 12.3 | 17.2 | OMQ-75 | | | | 4.0* | 4.6* | 4.9 | 5.6 |
| OMQ-92 | | | | 8.1* | 12.6* | 15.7 | 22.2 | OMQ-92 | | | | 5.4* | 5.9* | 6.2 | 6.8 |
| OMTQ-60 | | | | 5.1* | 8.3* | 10.5 | 15.1 | OMTQ-60 | | | | 3.8* | 4.0* | 4.2 | 4.5 |
| OMTQ-76 | | | | 6.1* | 10.0* | 12.6 | 18.0 | OMTQ-76 | | | | 4.4* | 4.9* | 5.1 | 5.7 |
| OMTQ-90 | | | | 7.7* | 12.3* | 15.6 | 22.5 | OMTQ-90 | | | | 5.5* | 5.7* | 5.9 | 6.4 |
| OMQ-110 | | | | 9.9* | 15.2* | 19.0 | 26.6 | OMQ-110 | | | | 6.6* | 7.3* | 7.8 | 8.6 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | | 4.3 | 5.1 | 7.1 | OMQ-30D | | | | | 2.0 | 2.2 | 2.5 |
| OMQ-45D | | | | | 6.2 | 7.6 | 10.7 | OMQ-45D | | | | | 2.8 | 3.0 | 3.4 |
| OMTQ-60D | | | | 5.3* | 8.7 | 10.5 | 14.9 | OMTQ-60D | | | | 3.5* | 3.9 | 4.1 | 4.6 |
| OMTQ-90D | | | | 8.3 | 12.8 | 15.6 | 22.4 | OMTQ-90D | | | | 5.1 | 5.6 | 5.9 | 6.5 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|-----|-----|------|---------|------------------------------|-----|-----|------|-----|-----|-----|
| R450A | Cooling Capacity (kW) | | | | | | | R450A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | 2.3* | 3.8 | 4.6 | 6.6 | OMQ-30D | | | | 1.5* | 1.7 | 1.8 | 2.0 |
| OMQ-45D | | | | 3.6 | 5.7 | 6.9 | 10.0 | OMQ-45D | | | | 2.1 | 2.4 | 2.5 | 2.9 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|-----|-----|------|---------|------------------------------|-----|-----|------|-----|-----|-----|
| R513A | Cooling Capacity (kW) | | | | | | | R513A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| OMQ-30D | | | | 2.7* | 4.4 | 5.3 | 7.4 | OMQ-30D | | | | 1.8* | 2.0 | 2.1 | 2.4 |
| OMQ-45D | | | | 4.0* | 6.6 | 8.0 | 11.2 | OMQ-45D | | | | 2.5* | 2.8 | 3.0 | 3.5 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

Copeland EazyCool™ ZX Outdoor Refrigeration Units With Scroll Compressors

Copeland™ compact outdoor refrigeration units are for medium-temperature and low-temperature applications.

With this new range of outdoor refrigeration units, Emerson Climate Technologies offers a solution for refrigeration applications with space and noise constraints which responds to the increasing demand for energy-efficient refrigeration solutions units.

Copeland EazyCool ZX outdoor refrigeration units feature the most complete and unique equipment. Their advanced electronic controller enables precise parameter control and displays the system status. Vapor injection and liquid injection technology significantly increase system efficiency and operation map. Electronic protection functions, oil separator and suction accumulator guarantee optimum system safety.

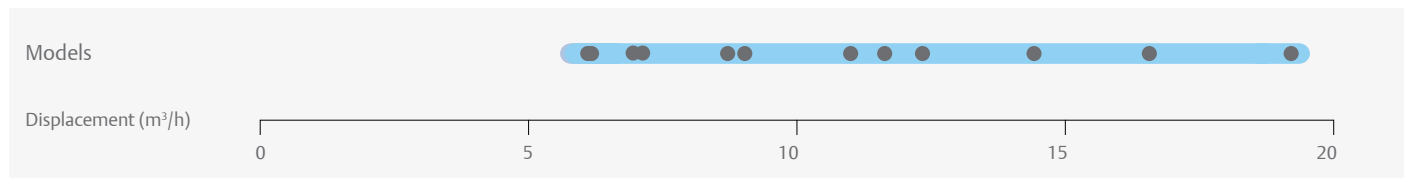
Lowest life cycle costs and comprehensive safety features make Copeland EazyCool ZX a cost efficient and reliable choice for:

- Convenience stores
- Cold rooms
- Fast food stores, bars and restaurants
- Beverage coolers

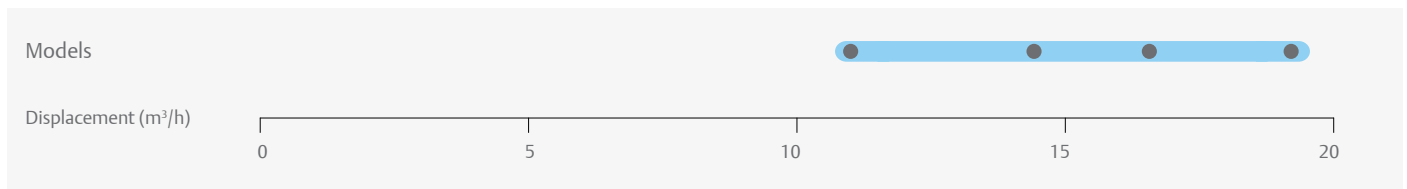


Copeland EazyCool ZX Outdoor Refrigeration Units with Scroll Compressors

Copeland EazyCool ZX Line-up



Copeland EazyCool ZX Digital Line-up



Features and Benefits

- Standard equipment: Copeland Scroll™ compressor, crankcase heater, electronic controller, fan(s) with speed control, liquid receiver, safety switches, filter drier and sight glass, oil separator and suction accumulator (LT models only)
- Copeland EazyCool ZX Digital models allow for 10% to 100% continuous capacity modulation
- Diagnostic capabilities protect the unit from over-current, phase loss and phase imbalance
- LED display shows real time system status
- Precise electronic suction pressure control
- Energy and operation cost saving due to excellent energy efficiency
- Noise attenuation due to low speed fan motors with sickle blades, fan speed control and sound jacket
- High capacity vapor injection technology for LT models
- Space saving due to compact dimensions
- Easy and quick installation
- Multiple refrigerant approvals incl. R407A/F, R448A/R449A, R404A, R134a, R450A and R513A

Maximum Allowable Pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS 28.8 bar (g)

Technical Overview

| Model | Displacement (m ³ /h) | Receiver Capacity (l) | Number of fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/ Code | | Maximum Operating Current (A) | | Locked Rotor Current (A) | | Sound Pressure @10m - dB(A)*** |
|--|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-------------------------|-----------------|---------------------|--------|-------------------------------|--------|--------------------------|--------|--------------------------------|
| | | | | | | | | | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | 5.9 | 4.4 | 1 | 116 | 3/4 | 1/2 | 1029/424/840 | 76.0 | PFJ | TFD | 13 | 5 | 58 | 26 | 39.0 |
| ZXME025E | 6.8 | 4.4 | 1 | 116 | 3/4 | 1/2 | 1029/424/840 | 79.0 | PFJ | TFD | 12 | 5 | 61 | 38 | 40.0 |
| ZXME030E | 8.6 | 4.4 | 1 | 116 | 3/4 | 1/2 | 1029/424/840 | 79.0 | PFJ | TFD | 16 | 7 | 82 | 40 | 40.0 |
| ZXME040E | 11.7 | 4.4 | 1 | 116 | 7/8 | 1/2 | 1029/424/840 | 91.0 | PFJ | TFD | 24 | 10 | 114 | 49 | 40.0 |
| ZXME040E | 14.4 | 4.4 | 1 | 116 | 7/8 | 1/2 | 1029/424/840 | 91.0 | | TFD | | 10 | | 49 | 40.0 |
| ZXME050E | 17.1 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 108.0 | | TFD | | 13 | | 66 | 41.0 |
| ZXME060E | 18.8 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 112.0 | | TFD | | 13 | | 74 | 41.0 |
| ZXME075E | 11.9 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 118.0 | | TFD | | 14 | | 101 | 42.0 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | 11.4 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 104.0 | | TFD | | 8 | | 48 | 40.0 |
| ZXDE-050E | 14.4 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 108.0 | | TFD | | 11 | | 64 | 41.0 |
| ZXDE-060E | 17.1 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 112.0 | | TFD | | 11 | | 74 | 41.0 |
| ZXDE-075E | 18.8 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 118.0 | | TFD | | 14 | | 100 | 42.0 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| ZXLE020E | 6.1 | 4.4 | 1 | 116 | 3/4 | 1/2 | 1029/424/840 | 79.0 | PFJ | TFD | 14 | 6 | 57 | 39 | 39.0 |
| ZXLE025E | 7.1 | 4.4 | 1 | 116 | 3/4 | 1/2 | 1029/424/840 | 79.0 | PFJ | TFD | 16 | 6 | 74 | 39 | 39.0 |
| ZXLE030E | 8.0 | 4.4 | 1 | 116 | 3/4 | 1/2 | 1029/424/840 | 81.0 | PFJ | TFD | 18 | 7 | 82 | 36 | 40.0 |
| ZXLE040E | 12.7 | 4.4 | 1 | 116 | 7/8 | 1/2 | 1029/424/840 | 93.0 | | TFD | | 9 | | 52 | 40.0 |
| ZXLE050E | 14.4 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 106.0 | | TFD | | 12 | | 52 | 41.0 |
| ZXLE060E | 17.1 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 116.0 | | TFD | | 14 | | 74 | 41.0 |
| ZXLE075E | 18.8 | 6.3 | 2 | 246 | 7/8 | 1/2 | 1029/424/1242 | 121.0 | | TFD | | 15 | | 101 | 41.0 |

* 1ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-----|------|------|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 | |
| Medium Temperature Models | | | | | | | | | | | | | | | | |
| ZXME020E | | | | | 3.5 | 4.1 | 5.6 | ZXME020E | | | | | | 1.7 | 1.7 | 1.7 |
| ZXME025E** | | | | | 3.9 | 4.7 | 6.6 | ZXME025E** | | | | | | 1.7 | 1.8 | 1.9 |
| ZXME030E | | | | | 4.9 | 5.9 | 8.3 | ZXME030E | | | | | | 2.3 | 2.4 | 2.6 |
| ZXME040E** | | | | | 6.0 | 7.1 | 9.9 | ZXME040E** | | | | | | 3.0 | 3.1 | 3.5 |
| ZXME040E | | | | | 6.3 | 7.5 | 10.3 | ZXME040E | | | | | | 3.2 | 3.4 | 3.8 |
| ZXME050E | | | | | 8.7 | 10.4 | 14.4 | ZXME050E | | | | | | 3.7 | 3.9 | 4.3 |
| ZXME060E | | | | | 9.8 | 11.8 | 16.4 | ZXME060E | | | | | | 4.3 | 4.5 | 5.0 |
| ZXME075E | | | | | 11.3 | 13.6 | 18.9 | ZXME075E | | | | | | 4.9 | 5.1 | 5.6 |
| Low Temperature Models | | | | | | | | | | | | | | | | |
| ZXLE020E | | 1.5 | 1.9 | 3.0 | 4.3 | 5.1 | 6.7 | ZXLE020E | | 1.4 | 1.5 | 1.6 | 1.8 | 1.8 | 2.0 | |
| ZXLE025E | | 1.8 | 2.2 | 3.4 | 5.0 | 5.9 | 7.9 | ZXLE025E | | 1.6 | 1.7 | 1.8 | 2.0 | 2.0 | 2.3 | |
| ZXLE030E | | 2.0 | 2.5 | 3.9 | 5.6 | 6.6 | 8.7 | ZXLE030E | | 1.8 | 1.9 | 2.0 | 2.2 | 2.3 | 2.5 | |
| ZXLE040E | | 3.1 | 3.9 | 5.9 | 8.3 | 9.6 | | ZXLE040E | | 2.7 | 2.9 | 3.4 | 4.0 | 4.4 | | |
| ZXLE050E | | 3.6 | 4.5 | 6.8 | 9.7 | 11.4 | 14.8 | ZXLE050E | | 3.1 | 3.2 | 3.7 | 4.3 | 4.7 | 5.4 | |
| ZXLE060E | | 4.2 | 5.3 | 7.9 | 11.3 | 13.1 | | ZXLE060E | | 3.7 | 3.9 | 4.5 | 5.3 | 5.8 | | |
| ZXLE075E | | 4.8 | 5.9 | 9.0 | 13.0 | 15.2 | 19.9 | ZXLE075E | | 3.9 | 4.1 | 4.6 | 5.4 | 5.8 | 6.7 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 4.7 | 7.3 | 8.8 | 12.5 | ZXDE-040E | | | | 2.7 | 2.8 | 2.9 | 3.1 | |
| ZXDE-050E | | | | 5.8 | 8.7 | 10.4 | 14.4 | ZXDE-050E | | | | 3.5 | 3.7 | 3.9 | 4.3 | |
| ZXDE-060E | | | | 6.4 | 9.8 | 11.8 | 16.4 | ZXDE-060E | | | | 4.0 | 4.3 | 4.5 | 5.0 | |
| ZXDE-075E | | | | 7.4 | 11.3 | 13.6 | 18.9 | ZXDE-075E | | | | 4.5 | 4.9 | 5.1 | 5.6 | |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|------|-------|------|------------|------------------------------|-----|-----|------|------|------|-----|
| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | | 3.4 | 4.0 | 5.7 | ZXME020E | | | | | 1.6 | 1.6 | 1.7 |
| ZXME025E** | | | | 3.3 | 5.0 | 6.0 | 8.4 | ZXME025E** | | | | 2.1 | 2.3 | 2.5 | 2.7 |
| ZXME030E | | | | | 4.9 | 5.9 | 8.3 | ZXME030E | | | | | 2.3 | 2.4 | 2.6 |
| ZXME040E** | | | | 4.0 | 6.0 | 7.1 | 9.9 | ZXME040E** | | | | 2.8 | 3.0 | 3.1 | 3.5 |
| ZXME040E | | | | | 6.5* | 8.0 | 10.9 | ZXME040E | | | | | 3.3* | 3.5 | 4.0 |
| ZXME050E | | | | 5.7* | 8.6 | 10.4 | 14.4 | ZXME050E | | | | 3.5* | 3.7 | 3.9 | 4.3 |
| ZXME060E | | | | 6.2* | 9.7 | 11.8 | 16.4 | ZXME060E | | | | 4.0* | 4.3 | 4.5 | 5.0 |
| ZXME075E | | | | 7.1* | 11.2 | 13.6 | 18.9 | ZXME075E | | | | 4.5* | 4.9 | 5.1 | 5.6 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| ZXLE020E | | 1.6 | 2.0 | 3.1 | 4.5 | 5.3 | 7.0 | ZXLE020E | | 1.5 | 1.6 | 1.7 | 1.9 | 1.9 | 2.2 |
| ZXLE025E | | 1.8 | 2.3 | 3.6 | 5.3 | 6.2 | 8.2 | ZXLE025E | | 1.7 | 1.8 | 1.9 | 2.1 | 2.2 | 2.4 |
| ZXLE030E | | 2.1 | 2.6 | 4.0 | 5.9 | 6.9 | 9.1 | ZXLE030E | | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.7 |
| ZXLE040E | | 3.3 | 4.1 | 6.1 | 8.6* | 10.0* | | ZXLE040E | | 2.9 | 3.1 | 3.6 | 4.3* | 4.7* | |
| ZXLE050E | | 3.8 | 4.7 | 7.1 | 10.2 | 11.9 | 15.4 | ZXLE050E | | 3.2 | 3.4 | 3.9 | 4.6 | 5.0 | 5.8 |
| ZXLE060E | | 4.4 | 5.5 | 8.3 | 11.8 | 13.7 | | ZXLE060E | | 3.9 | 4.1 | 4.8 | 5.7 | 6.2 | |
| ZXLE075E | | 5.0 | 6.2 | 9.4 | 13.6 | 15.9 | 20.8 | ZXLE075E | | 4.1 | 4.3 | 4.9 | 5.7 | 6.2 | 7.2 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 4.7 | 7.2 | 8.8 | 12.4 | ZXDE-040E | | | | 2.8 | 2.9 | 3.0 | 3.2 |
| ZXDE-050E | | | | 5.7 | 8.6 | 10.5 | 14.6 | ZXDE-050E | | | | 3.6 | 3.9 | 4.1 | 4.5 |
| ZXDE-060E | | | | 5.9 | 9.0 | 10.9 | 15.1 | ZXDE-060E | | | | 3.9 | 4.2 | 4.4 | 4.8 |
| ZXDE-075E | | | | 6.7 | 10.2 | 12.3 | 17.2 | ZXDE-075E | | | | 4.3 | 4.6 | 4.8 | 5.2 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-----|------|------|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R448A | Cooling Capacity (kW) | | | | | | | R448A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | 2.2 | 3.4 | 4.1 | 5.8 | ZXME020E | | | | 1.6 | 1.6 | 1.6 | 1.8 |
| ZXME025E** | | | | 2.6 | 4.0 | 4.8 | 6.8 | ZXME025E** | | | | 1.7 | 1.8 | 1.9 | 2.0 |
| ZXME030E | | | | 3.4 | 5.0 | 6.1 | 8.4 | ZXME030E | | | | 2.1 | 2.3 | 2.4 | 2.6 |
| ZXME040E | | | | 4.3 | 6.6 | 7.8 | 10.7 | ZXME040E | | | | 3.0 | 3.3 | 3.5 | 3.9 |
| ZXME050E | | | | 5.8 | 8.8 | 10.5 | 14.6 | ZXME050E | | | | 3.6 | 3.8 | 3.9 | 4.3 |
| ZXME060E | | | | 6.6 | 10.1 | 12.0 | 16.7 | ZXME060E | | | | 4.1 | 4.4 | 4.6 | 5.0 |
| ZXME075E | | | | 7.6 | 11.6 | 13.9 | 19.2 | ZXME075E | | | | 4.7 | 5.1 | 5.3 | 5.8 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| ZXLE020E | | 1.6 | 2.0 | 3.1 | 4.4 | 5.2 | 7.0 | ZXLE020E | | 1.4 | 1.5 | 1.7 | 1.8 | 1.8 | 1.9 |
| ZXLE025E | | 1.8 | 2.3 | 3.6 | 5.2 | 6.2 | 8.3 | ZXLE025E | | 1.6 | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| ZXLE030E | | 2.1 | 2.6 | 4.0 | 5.7 | 6.8 | 9.3 | ZXLE030E | | 1.8 | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 |
| ZXLE040E | | 3.2 | 4.0 | 6.0 | 8.3 | 9.7 | | ZXLE040E | | 2.6 | 2.9 | 3.3 | 3.7 | 3.9 | |
| ZXLE050E | | 4.0 | 5.0 | 7.3 | 10.4 | 12.1 | 16.3 | ZXLE050E | | 3.1 | 3.4 | 3.9 | 4.3 | 4.5 | 4.9 |
| ZXLE060E | | 4.7 | 5.8 | 8.5 | 12.0 | 14.0 | | ZXLE060E | | 3.7 | 4.1 | 4.7 | 5.3 | 5.6 | |
| ZXLE075E | | 5.2 | 6.5 | 9.7 | 13.7 | 16.2 | 21.8 | ZXLE075E | | 3.9 | 4.2 | 4.8 | 5.3 | 5.6 | 6.1 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 4.8 | 7.2 | 8.7 | 12.3 | ZXDE-040E | | | | 2.5 | 2.7 | 2.8 | 3.1 |
| ZXDE-050E | | | | 5.8 | 8.7 | 10.4 | 14.4 | ZXDE-050E | | | | 3.2 | 3.7 | 3.9 | 4.4 |
| ZXDE-060E | | | | 6.8 | 10.1 | 12.0 | 16.6 | ZXDE-060E | | | | 3.9 | 4.5 | 4.8 | 5.5 |
| ZXDE-075E | | | | 7.7 | 11.4 | 13.6 | 18.8 | ZXDE-075E | | | | 4.2 | 4.8 | 5.1 | 5.8 |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-----|------|------|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R449A | Cooling Capacity (kW) | | | | | | | R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | 2.2 | 3.4 | 4.1 | 5.8 | ZXME020E | | | | 1.6 | 1.6 | 1.6 | 1.8 |
| ZXME025E** | | | | 2.6 | 4.0 | 4.8 | 6.8 | ZXME025E** | | | | 1.7 | 1.8 | 1.9 | 2.0 |
| ZXME030E | | | | 3.4 | 5.0 | 6.1 | 8.4 | ZXME030E | | | | 2.1 | 2.3 | 2.4 | 2.6 |
| ZXME040E | | | | 4.3 | 6.6 | 7.8 | 10.7 | ZXME040E | | | | 3.0 | 3.3 | 3.5 | 3.9 |
| ZXME050E | | | | 5.8 | 8.8 | 10.5 | 14.6 | ZXME050E | | | | 3.6 | 3.8 | 3.9 | 4.3 |
| ZXME060E | | | | 6.6 | 10.1 | 12.0 | 16.7 | ZXME060E | | | | 4.1 | 4.4 | 4.6 | 5.0 |
| ZXME075E | | | | 7.6 | 11.6 | 13.9 | 19.2 | ZXME075E | | | | 4.7 | 5.1 | 5.3 | 5.8 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| ZXLE020E | | 1.6 | 2.0 | 3.1 | 4.4 | 5.2 | 7.0 | ZXLE020E | | 1.4 | 1.5 | 1.7 | 1.8 | 1.8 | 1.9 |
| ZXLE025E | | 1.8 | 2.3 | 3.6 | 5.2 | 6.2 | 8.3 | ZXLE025E | | 1.6 | 1.7 | 1.9 | 2.0 | 2.0 | 2.1 |
| ZXLE030E | | 2.1 | 2.6 | 4.0 | 5.7 | 6.8 | 9.3 | ZXLE030E | | 1.8 | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 |
| ZXLE040E | | 3.2 | 4.0 | 6.0 | 8.3 | 9.7 | | ZXLE040E | | 2.6 | 2.9 | 3.3 | 3.7 | 3.9 | |
| ZXLE050E | | 4.0 | 5.0 | 7.3 | 10.4 | 12.1 | 16.3 | ZXLE050E | | 3.1 | 3.4 | 3.9 | 4.3 | 4.5 | 4.9 |
| ZXLE060E | | 4.7 | 5.8 | 8.5 | 12.0 | 14.0 | | ZXLE060E | | 3.7 | 4.1 | 4.7 | 5.3 | 5.6 | |
| ZXLE075E | | 5.2 | 6.5 | 9.7 | 13.7 | 16.2 | 21.8 | ZXLE075E | | 3.9 | 4.2 | 4.8 | 5.3 | 5.6 | 6.1 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 4.8 | 7.2 | 8.7 | 12.3 | ZXDE-040E | | | | 2.5 | 2.7 | 2.8 | 3.1 |
| ZXDE-050E | | | | 5.8 | 8.7 | 10.4 | 14.4 | ZXDE-050E | | | | 3.2 | 3.7 | 3.9 | 4.4 |
| ZXDE-060E | | | | 6.8 | 10.1 | 12.0 | 16.6 | ZXDE-060E | | | | 3.9 | 4.5 | 4.8 | 5.5 |
| ZXDE-075E | | | | 7.7 | 11.4 | 13.6 | 18.8 | ZXDE-075E | | | | 4.2 | 4.8 | 5.1 | 5.8 |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|------|------|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | 2.4 | 3.6 | 4.2 | 5.7 | ZXME020E | | | | 1.8 | 1.8 | 1.8 | 1.8 |
| ZXME025E** | | | | 3.0 | 4.3 | 5.1 | 6.9 | ZXME025E** | | | | 1.9 | 2.0 | 2.0 | 2.1 |
| ZXME030E | | | | 3.7 | 5.2 | 6.2 | 8.2 | ZXME030E | | | | 2.4 | 2.5 | 2.6 | 2.7 |
| ZXME040E** | | | | 4.7 | 6.8 | 8.0 | 10.6 | ZXME040E** | | | | 3.2 | 3.4 | 3.5 | 3.8 |
| ZXME040E | | | | 4.9 | 7.0 | 8.2 | 10.8 | ZXME040E | | | | 3.2 | 3.4 | 3.5 | 3.8 |
| ZXME050E | | | | 6.4 | 9.1 | 10.7 | 14.4 | ZXME050E | | | | 4.0 | 4.2 | 4.3 | 4.5 |
| ZXME060E | | | | 7.3 | 10.4 | 12.2 | 16.2 | ZXME060E | | | | 4.6 | 4.8 | 5.0 | 5.3 |
| ZXME075E | | | | 8.4 | 11.9 | 13.9 | 18.5 | ZXME075E | | | | 5.1 | 5.4 | 5.5 | 5.9 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| ZXLE020E | | 1.9 | 2.4 | 3.5 | 4.9 | 5.7 | | ZXLE020E | | 1.6 | 1.7 | 1.9 | 2.1 | 2.1 | |
| ZXLE025E | | 2.2 | 2.8 | 4.1 | 5.8 | 6.7 | | ZXLE025E | | 1.9 | 2.0 | 2.2 | 2.4 | 2.5 | |
| ZXLE030E | | 2.6 | 3.2 | 4.6 | 6.4 | 7.4 | | ZXLE030E | | 2.1 | 2.2 | 2.4 | 2.6 | 2.6 | |
| ZXLE040E | | 4.0 | 4.9 | 7.0 | 9.6 | 11.0 | | ZXLE040E | | 3.0 | 3.2 | 3.6 | 4.1 | 4.4 | |
| ZXLE050E | | 5.0 | 6.0 | 8.5 | 11.5 | 13.2 | | ZXLE050E | | 3.6 | 3.9 | 4.4 | 5.0 | 5.4 | |
| ZXLE060E | | 5.8 | 7.0 | 9.8 | 13.2 | 15.0 | 18.9 | ZXLE060E | | 4.4 | 4.7 | 5.5 | 6.3 | 6.7 | 7.7 |
| ZXLE075E | | 6.5 | 7.9 | 11.2 | 15.3 | 17.6 | | ZXLE075E | | 4.6 | 4.9 | 5.5 | 6.2 | 6.6 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 5.3 | 7.6 | 8.9 | 12.2 | ZXDE-040E | | | | 2.7 | 3.0 | 3.1 | 3.3 |
| ZXDE-050E | | | | 6.4 | 9.0 | 10.6 | 14.1 | ZXDE-050E | | | | 3.6 | 4.0 | 4.3 | 4.7 |
| ZXDE-060E | | | | 7.4 | 10.5 | 12.2 | 16.1 | ZXDE-060E | | | | 4.3 | 4.9 | 5.2 | 5.8 |
| ZXDE-075E | | | | 8.4 | 11.9 | 13.8 | 18.3 | ZXDE-075E | | | | 4.7 | 5.3 | 5.6 | 6.3 |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-----|-----|-----|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | 1.4 | 2.3 | 2.8 | 4.0 | ZXME020E | | | | 1.0 | 1.0 | 1.0 | 1.1 |
| ZXME025E** | | | | 1.5 | 2.6 | 3.2 | 4.7 | ZXME025E** | | | | 1.2 | 1.3 | 1.3 | 1.4 |
| ZXME030E | | | | 2.1 | 3.2 | 4.0 | 5.8 | ZXME030E | | | | 1.3 | 1.4 | 1.4 | 1.5 |
| ZXME040E** | | | | 2.6 | 4.3 | 5.3 | 7.8 | ZXME040E** | | | | 2.0 | 2.1 | 2.2 | 2.4 |
| ZXME040E | | | | 2.8 | 4.4 | 5.4 | 7.8 | ZXME040E | | | | 1.7 | 1.8 | 1.9 | 2.0 |
| ZXME050E | | | | 3.4 | 5.5 | 6.8 | 9.9 | ZXME050E | | | | 2.1 | 2.3 | 2.4 | 2.5 |
| ZXME060E | | | | 4.2 | 6.5 | 8.0 | 11.7 | ZXME060E | | | | 2.5 | 2.6 | 2.7 | 3.0 |
| ZXME075E | | | | 4.8 | 7.5 | 9.1 | 13.2 | ZXME075E | | | | 3.1 | 3.2 | 3.3 | 3.6 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | | 4.3 | 5.3 | 8.0 | ZXDE-040E | | | | | 1.8 | 1.9 | 1.9 |
| ZXDE-050E | | | | | 5.3 | 6.5 | 9.7 | ZXDE-050E | | | | | 2.3 | 2.4 | 2.5 |
| ZXDE-060E | | | | | 6.3 | 7.9 | 11.7 | ZXDE-060E | | | | | 2.7 | 2.8 | 3.0 |
| ZXDE-075E | | | | | 7.2 | 8.8 | 12.7 | ZXDE-075E | | | | | 3.0 | 3.0 | 3.3 |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-----|-----|-----|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R450A | Cooling Capacity (kW) | | | | | | | R450A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | 1.2 | 2.0 | 2.5 | 3.6 | ZXME020E | | | | 0.9 | 0.9 | 0.9 | 0.9 |
| ZXME025E** | | | | 1.4 | 2.3 | 2.8 | 4.2 | ZXME025E** | | | | 1.0 | 1.0 | 1.0 | 1.1 |
| ZXME030E | | | | 1.8 | 2.9 | 3.6 | 5.3 | ZXME030E | | | | 1.2 | 1.2 | 1.2 | 1.3 |
| ZXME040E | | | | 2.5 | 3.9 | 4.9 | 7.1 | ZXME040E | | | | 1.6 | 1.6 | 1.6 | 1.7 |
| ZXME050E | | | | 3.1 | 5.0 | 6.1 | 9.1 | ZXME050E | | | | 2.0 | 2.1 | 2.1 | 2.2 |
| ZXME060E | | | | 3.6 | 5.8 | 7.1 | 10.5 | ZXME060E | | | | 2.3 | 2.4 | 2.4 | 2.5 |
| ZXME075E | | | | 4.0 | 6.5 | 8.0 | 11.8 | ZXME075E | | | | 2.6 | 2.7 | 2.7 | 2.9 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 2.5 | 3.9 | 4.9 | 7.1 | ZXDE-040E | | | | 1.6 | 1.6 | 1.6 | 1.7 |
| ZXDE-050E | | | | 3.1 | 5.0 | 6.1 | 9.1 | ZXDE-050E | | | | 2.0 | 2.1 | 2.1 | 2.2 |
| ZXDE-060E | | | | 3.6 | 5.8 | 7.1 | 10.5 | ZXDE-060E | | | | 2.3 | 2.4 | 2.4 | 2.5 |
| ZXDE-075E | | | | 4.0 | 6.5 | 8.0 | 11.8 | ZXDE-075E | | | | 2.6 | 2.7 | 2.7 | 2.9 |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

Preliminary Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-----|-----|-----|------|------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R513A | Cooling Capacity (kW) | | | | | | | R513A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXME020E | | | | 1.5 | 2.3 | 2.9 | 4.2 | ZXME020E | | | | 1.0 | 1.0 | 1.0 | 1.1 |
| ZXME025E** | | | | 1.7 | 2.7 | 3.3 | 4.9 | ZXME025E** | | | | 1.2 | 1.2 | 1.2 | 1.3 |
| ZXME030E | | | | 2.2 | 3.4 | 4.2 | 6.0 | ZXME030E | | | | 1.4 | 1.4 | 1.5 | 1.6 |
| ZXME040E | | | | 3.0 | 4.6 | 5.7 | 8.2 | ZXME040E | | | | 1.9 | 1.9 | 2.0 | 2.1 |
| ZXME050E | | | | 3.8 | 5.9 | 7.2 | 10.5 | ZXME050E | | | | 2.4 | 2.5 | 2.5 | 2.6 |
| ZXME060E | | | | 4.4 | 6.8 | 8.4 | 12.1 | ZXME060E | | | | 2.8 | 2.8 | 2.9 | 3.0 |
| ZXME075E | | | | 4.9 | 7.7 | 9.4 | 13.5 | ZXME075E | | | | 3.1 | 3.2 | 3.2 | 3.4 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| ZXDE-040E | | | | 3.0 | 4.6 | 5.7 | 8.2 | ZXDE-040E | | | | 1.9 | 1.9 | 2.0 | 2.1 |
| ZXDE-050E | | | | 3.8 | 5.9 | 7.2 | 10.5 | ZXDE-050E | | | | 2.4 | 2.5 | 2.5 | 2.6 |
| ZXDE-060E | | | | 4.4 | 6.8 | 8.4 | 12.1 | ZXDE-060E | | | | 2.8 | 2.8 | 2.9 | 3.0 |
| ZXDE-075E | | | | 4.9 | 7.7 | 9.4 | 13.5 | ZXDE-075E | | | | 3.1 | 3.2 | 3.2 | 3.4 |

Suction Gas Return 20°C / Subcooling 0K

** Single Phase Only

Preliminary Data

Copeland™ Outdoor Refrigeration Units for R744-Transcritical Applications

With this range of outdoor refrigeration units, Emerson offers a solution which responds to the increasing demand for future proof refrigeration technology.

These models are designed for operation with the natural refrigerant CO₂ which has a very low global warming potential (GWP) of only 1.

The range features the latest technology like Stream series compressors which are characterized by their silent and reliable operation. The integrated frequency inverter controls the compressor speed exactly to the capacity demand of the application. EC-fans remove the heat from the gas cooler in the most efficient and silent way.

The state of the art electronic controller allows for precise adjustment and control of all relevant parameters and comprises numerous electronic protection functions for highly reliable operation.

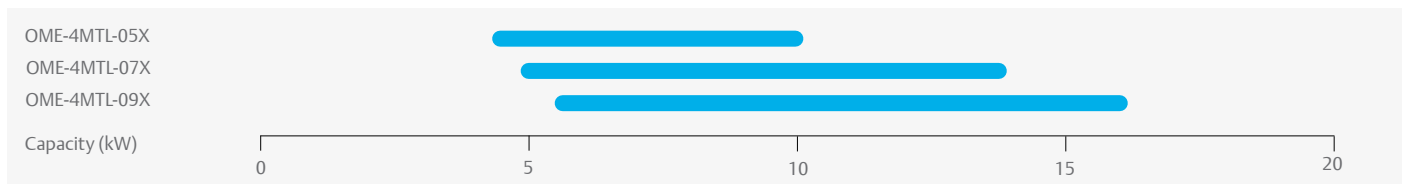
The refrigeration units are future-proof choice for various target applications:

- Convenience stores
- Forecourt sites
- Cold rooms
- Fast food stores, bars and restaurants



Copeland™ Outdoor Refrigeration Unit for R744-Transcritical Applications

Refrigeration Unit Line-up



Technical Overview

| Model | Displacement @ 50 Hz [m ³ /h] | Cooling Capacity @ 50 Hz [kW] | Receiver Capacity (l) | Suction Tube Diameter inch | Discharge Tube Diameter inch | Dimensions W / D / H (mm) | Design Pressure High/Med/Low (bar) | Net Weight [kg] | Power Supply | Nominal Current (A) | Sound Pressure 10 m dB (A) |
|--------------|--|-------------------------------|-----------------------|----------------------------|------------------------------|---------------------------|------------------------------------|-----------------|------------------------------|---------------------|----------------------------|
| OME-4MTL-05X | 4.6 | 8.72 | 20 | 3/4 | 1/2 | 1574/900/1120 | 120/90/90 | 440 | 3/N/PE~50Hz 400/230V TN-S | 19 | 42 - 44 |
| OME-4MTL-07X | 6.2 | 11.81 | 20 | 3/4 | 5/8 | 1574/900/1120 | 120/90/90 | 440 | 3/N/PE~50Hz 400/230V TN-S | 22 | 42 - 44 |
| OME-4MTL-09X | 7.4 | 14.65 | 25 | 7/8 | 5/8 | 1574/900/1120 | 120/90/90 | 460 | 3/N/PE~50Hz 400/230V TN-S | 27 | 42 - 44 |

Features and Benefits

- Future-proof solution with natural GWP 1 refrigerant, not impacted by F-Gas legislation
- Low carbon footprint
- Silent operation due to special attenuation on panels and sound optimized EC fans
- High energy efficiency through inverter controlled compressor and EC fans
- Space saving design
- Time saving commissioning by pre-set parameters
- High reliability with electronic protection against incorrect voltage, phase, current and discharge temperature
- State of the art controller for precise system control
- Modbus communication and monitoring functionality
- LCD Display to show the operation status
- OilWatch maintains correct system oil level
- Controller prepared for heat recovery
- Easy access for time saving service
- Built and tested in advanced industrial processes
- Individual compressor power consumption monitoring

Design Pressure:

- 90 bar in receiver and liquid line
- 120 bar on high-pressure side



Copeland Scroll™ Indoor Refrigeration Units for Refrigeration

Copeland™ air-cooled refrigeration units for medium temperature and low temperature applications.

Copeland Scroll refrigeration units are equipped with the latest refrigeration scroll compressors and build the widest range of its kind. The modular line concept offers base units which can be adapted to the target application by various options including weather housings and fan speed controls.

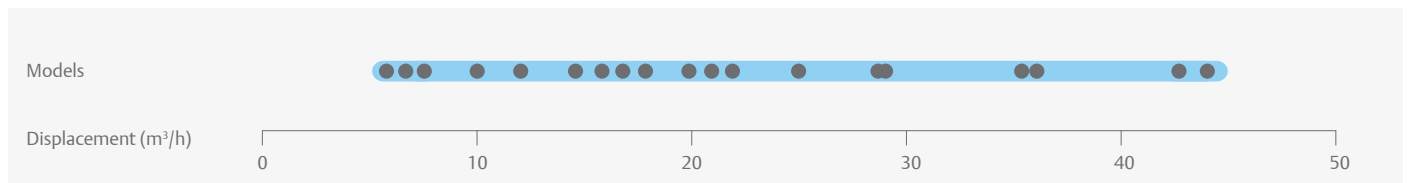
Copeland Scroll refrigeration units are available with normal or high capacity condensers to ensure optimum performance even under extreme conditions. They are equipped with dedicated medium or low temperature compressors which makes them suitable for all general refrigeration applications, such as:

- Mini markets and supermarkets
- Bars, restaurants and kitchens
- Beer cellars and beverage coolers
- Cold rooms
- Milk cooling tank

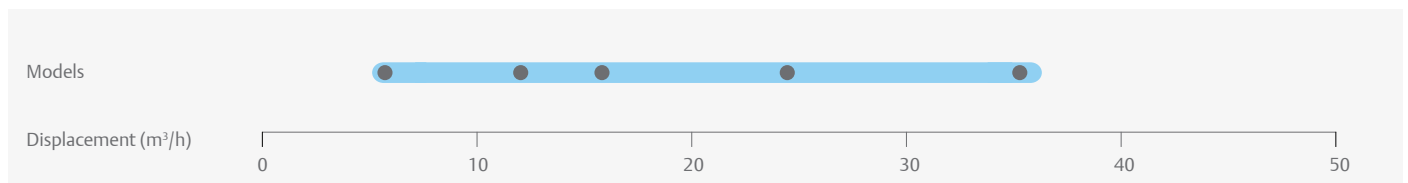


Copeland Scroll
Indoor Refrigeration Unit

Copeland Scroll Refrigeration Units Line-up



Copeland Scroll Digital Refrigeration Units Line-up



Features and Benefits

- Standard equipment: base plate, scroll compressor, crank case heater, condenser with 1 ph fan(s), HP and LP switch, liquid receiver with rotalock-valve, suction- and discharge shut-off valves
- Suitable for multiple refrigerants: R407A/F, R448A/R449A, R404A, R134a, R450A and R513A
- Wide range of quality accessories
- Excellent efficiency and reliability

Maximum Allowable Pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS = 28 bar (g)

Technical Overview

| Model | Displacement (m ³ /h) | Receiver Capacity (l) | Number of fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/Code | | Maximum Operating Current (A) | | Locked Rotor Current (A) | | Sound Pressure @10m - dB(A)*** |
|--|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-------------------------|-----------------|--------------------|--------|-------------------------------|--------|--------------------------|--------|--------------------------------|
| | | | | | | | | | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | 5.9 | 3.9 | 1 | 110 | 3/4 | 1/2 | 560/570/446 | 48.0 | PFJ | TFD | 13 | 5 | 58 | 26 | 45.8 |
| MC-H8-ZB15KE | 5.9 | 7.9 | 1 | 235 | 3/4 | 1/2 | 735/680/533 | 57.0 | PFJ | TFD | 13 | 5 | 58 | 26 | 48.6 |
| MC-D8-ZB19KE | 6.8 | 3.9 | 1 | 110 | 3/4 | 1/2 | 560/570/446 | 49.0 | PFJ | TFD | 13 | 7 | 61 | 32 | 45.9 |
| MC-K9-ZB19KE | 6.8 | 7.9 | 2 | 220 | 3/4 | 1/2 | 950/640/454 | 66.5 | PFJ | TFD | 13 | 7 | 61 | 32 | 47.5 |
| MC-H8-ZB19KE | 6.8 | 7.9 | 1 | 235 | 3/4 | 1/2 | 735/680/533 | 61.0 | PFJ | TFD | 13 | 7 | 61 | 32 | 48.7 |
| MC-D8-ZB21KE | 8.6 | 3.9 | 1 | 110 | 7/8 | 1/2 | 560/570/446 | 50.0 | PFJ | TFD | 16 | 7 | 82 | 40 | 46.4 |
| MC-H8-ZB21KE | 8.6 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 61.0 | PFJ | TFD | 16 | 7 | 82 | 40 | 48.9 |
| MC-K9-ZB21KE | 8.6 | 7.9 | 2 | 220 | 7/8 | 1/2 | 950/640/454 | 67.5 | PFJ | TFD | 16 | 7 | 82 | 40 | 47.8 |
| MC-K9-ZB26KE | 10.0 | 7.9 | 2 | 220 | 7/8 | 1/2 | 950/640/454 | 68.0 | PFJ | TFD | 18 | 9 | 97 | 46 | 47.8 |
| MC-H8-ZB26KE | 10.0 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 62.0 | PFJ | TFD | 18 | 9 | 97 | 46 | 48.9 |
| MC-H8-ZB30KE | 11.7 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 74.0 | PFJ | TFD | 26 | 10 | 142 | 49 | 49.1 |
| MC-M8-ZB30KE | 11.7 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 86.5 | PFJ | TFD | 26 | 10 | 142 | 49 | 48.6 |
| MC-P8-ZB30KE | 11.7 | 7.9 | 2 | 220 | 7/8 | 1/2 | 950/640/633 | 86.5 | | TFD | | 10 | | 49 | 48.5 |
| MC-H8-ZB38KE | 14.4 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 77.0 | PFJ | TFD | 32 | 13 | 142 | 66 | 49.2 |
| MC-M8-ZB38KE | 14.4 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 89.0 | PFJ | TFD | 32 | 13 | 142 | 66 | 48.8 |
| MC-P8-ZB38KE | 14.4 | 7.9 | 2 | 220 | 7/8 | 1/2 | 950/640/633 | 89.0 | PFJ | TFD | 32 | 13 | 142 | 66 | 48.7 |
| MC-M8-ZB42KE | 16.2 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 91.0 | PFJ | | 36 | | 150 | | 49.4 |
| MC-R7-ZB42KE | 16.2 | 7.9 | 2 | 470 | 7/8 | 1/2 | 1130/680/633 | 101.0 | PFJ | | 36 | | 150 | | 52.7 |
| MC-M8-ZB45KE | 17.1 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 91.0 | | TFD | | 13 | | 74 | 49.4 |
| MC-M9-ZB45KE | 17.1 | 7.9 | 1 | 400 | 7/8 | 1/2 | 735/730/708 | 95.5 | | TFD | | 13 | | 74 | 49.4 |
| MC-R7-ZB45KE | 17.1 | 7.9 | 2 | 470 | 7/8 | 1/2 | 1130/680/633 | 101.0 | | TFD | | 13 | | 74 | 49.5 |
| MC-R7-ZB50KE | 19.8 | 7.9 | 2 | 470 | 1 3/8 | 1/2 | 1130/820/621 | 110.0 | | TFD | | 15 | | 100 | 49.3 |
| MC-S9-ZB50KE | 22.1 | 11.7 | 2 | 470 | 1 3/8 | 5/8 | 1130/820/703 | 113.0 | | TFD | | 15 | | 100 | 49.7 |
| MC-R7-ZB58KE | 22.1 | 7.9 | 2 | 470 | 1 3/8 | 1/2 | 1130/820/621 | 110.0 | | TFD | | 16 | | 95 | |
| MC-S9-ZB58KE | 22.1 | 11.7 | 2 | 470 | 1 3/8 | 5/8 | 1130/820/703 | 113.0 | | TFD | | 16 | | 95 | |
| MC-S9-ZB66KE | 24.9 | 11.7 | 2 | 470 | 1 3/8 | 5/8 | 1130/820/707 | 116.0 | | TFD | | 18 | | 111 | 50.3 |
| MC-V9-ZB66KE | 24.9 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1330/820/821 | 150.0 | | TFD | | 18 | | 111 | 50.2 |
| MC-V9-ZB76KE | 29.1 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1330/820/835 | 151.0 | | TFD | | 20 | | 118 | 50.2 |
| MC-V6-ZB76KE | 29.1 | 15.8 | 2 | 800 | 1 3/8 | 3/4 | 1330/820/835 | 168.0 | | TFD | | 20 | | 118 | 54.7 |
| MC-V9-ZB95KE | 36.4 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1330/820/835 | 155.0 | | TFD | | 28 | | 140 | 50.7 |
| MC-V6-ZB95KE | 36.4 | 15.8 | 2 | 800 | 1 3/8 | 3/4 | 1330/820/835 | 172.0 | | TFD | | 28 | | 140 | 54.7 |
| MC-V6-ZB114KE | 43.3 | 15.8 | 2 | 800 | 1 3/8 | 3/4 | 1330/820/835 | 174.0 | | TFD | | 33 | | 174 | 54.7 |
| MC-W9-ZB114KE | 43.3 | 15.8 | 2 | 800 | 1 3/8 | 3/4 | 1640/820/864 | 174.0 | | TFD | | 33 | | 174 | 54.7 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | 11.7 | 11.7 | 1 | 235 | 7/8 | 5/8 | 735/730/708 | 86.5 | | TFD | | 8 | | 52 | 48.6 |
| MC-M9-ZBD45 | 17.1 | 11.7 | 1 | 400 | 7/8 | 5/8 | 735/730/708 | 95.5 | | TFD | | 12 | | 74 | 49.4 |
| MC-V6-ZBDT60 | 23.4 | 18.9 | 2 | 800 | 1 3/8 | 3/4 | 1330/820/835 | 207.0 | | TFD | | 8+10 | | | 57.4 |
| MC-V6-ZBDT90 | 34.1 | 18.9 | 2 | 800 | 1 3/8 | 3/4 | 1330/820/835 | 218.0 | | TFD | | 12+13 | | | 57.4 |
| MC-S9-ZF48KE | 11.7 | 11.7 | 2 | 470 | 1 3/8 | 5/8 | 1130/820/708 | 189.0 | | TWD | | 29 | | 198 | 54.7 |

* 1ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Technical Overview

| Models | Displacement (m ³ /h) | Receiver Capacity (l) | Number of Fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/Code | | Maximum Operating Current (A) | | Locked Rotor Current (A) | | Sound Pressure @10m - dB(A)*** |
|-------------------------------|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-------------------------|-----------------|--------------------|--------|-------------------------------|--------|--------------------------|--------|--------------------------------|
| | | | | | | | | | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | |
| Low Temperature Models | | | | | | | | | | | | | | | |
| MC-B8-ZF06KE | 3.3 | 3.3 | 1 | 85 | 7/8 | 1/2 | 560/570/396 | 64.0 | | TFD | | 5 | | 26 | 46.7 |
| MC-D8-ZF09KE | 3.9 | 3.9 | 1 | 110 | 7/8 | 1/2 | 560/570/446 | 64.0 | | TFD | | 6 | | 40 | 46.7 |
| MC-H8-ZF09KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 66.0 | | TFD | | 6 | | 40 | 49.1 |
| MC-H8-ZF11KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 67.0 | | TFD | | 7 | | 46 | 49.4 |
| MC-H8-ZF13KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 77.0 | | TFD | | 8 | | 52 | 49.5 |
| MC-M8-ZF13KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 85.0 | | TFD | | 8 | | 52 | 49.0 |
| MC-M9-ZF13KE | 7.9 | 7.9 | 1 | 400 | 7/8 | 1/2 | 735/730/708 | 95.5 | | TFD | | 8 | | 52 | |
| MC-H8-ZF15KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 83.0 | | TFD | | 10 | | 64 | 50.0 |
| MC-M8-ZF15KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 86.0 | | TFD | | 10 | | 64 | 49.6 |
| MC-R7-ZF15KE | 7.9 | 7.9 | 2 | 470 | 1 3/8 | 1/2 | 1130/680/708 | 105.0 | | TFD | | 10 | | 64 | 52.0 |
| MC-M8-ZF18KE | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/730/708 | 88.0 | | TFD | | 13 | | 74 | 49.9 |
| MC-M9-ZF18KE | 7.9 | 7.9 | 1 | 400 | 7/8 | 1/2 | 735/730/708 | 95.5 | | TFD | | 13 | | 74 | 50.0 |
| MC-S9-ZF18KE | 7.9 | 7.9 | 2 | 470 | 1 3/8 | 1/2 | 1130/680/708 | 168.0 | | TFD | | 13 | | 74 | |
| MC-S9-ZF25K5 | 11.7 | 11.7 | 2 | 470 | 1 1/8 | 5/8 | 1130/680/703 | 117.0 | | TFD | | 16 | | 102 | 54.7 |
| MC-S9-ZF34K5 | 11.7 | 11.7 | 2 | 470 | 1 1/8 | 5/8 | 1130/680/703 | 141.0 | | TFD | | 25 | | 100 | 54.7 |
| MC-V6-ZF41K5 | 11.7 | 11.7 | 2 | 800 | 1 3/8 | 5/8 | 1330/820/830 | 168.0 | | TFD | | 29 | | 118 | 57.4 |
| MC-V6-ZF49K5 | 11.7 | 11.7 | 2 | 800 | 1 3/8 | 3/4 | 1330/820/830 | 185.0 | | TFD | | 30 | | 139 | 57.4 |

* 1ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|------|-------|------|------|----------------|------------------------------|-----|-----|------|-------|------|------|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-H8-ZB15KE | | | | | 3.5 | 4.2 | 5.9 | MC-H8-ZB15KE | | | | | 1.7 | 1.8 | 1.9 |
| MC-D8-ZB15KE | | | | | 3.2 | 3.8 | 5.3 | MC-D8-ZB15KE | | | | | 1.8 | 1.9 | 2.1 |
| MC-D8-ZB19KE | | | | | 3.7* | 4.5 | 6.1 | MC-D8-ZB19KE | | | | | 2.2* | 2.3 | 2.5 |
| MC-K9-ZB19KE | | | | | 4.1 | 4.9 | 6.8 | MC-K9-ZB19KE | | | | | 2.1 | 2.1 | 2.3 |
| MC-H8-ZB19KE | | | | | 4.1 | 4.9 | 6.9 | MC-H8-ZB19KE | | | | | 2.1 | 2.2 | 2.3 |
| MC-K9-ZB21KE | | | | | 4.8 | 5.8 | 8.0 | MC-K9-ZB21KE | | | | | 2.5 | 2.6 | 2.8 |
| MC-H8-ZB21KE | | | | | 4.8 | 5.8 | 8.0 | MC-H8-ZB21KE | | | | | 2.5 | 2.6 | 2.8 |
| MC-D8-ZB21KE | | | | | 4.2* | 5.1 | | MC-D8-ZB21KE | | | | | 2.7* | 3.0 | |
| MC-K9-ZB26KE | | | | | 5.4 | 6.4 | 8.8 | MC-K9-ZB26KE | | | | | 2.9 | 3.0 | 3.4 |
| MC-H8-ZB26KE | | | | | 5.4 | 6.4 | 8.9 | MC-H8-ZB26KE | | | | | 2.9 | 3.0 | 3.4 |
| MC-M8-ZB30KE | | | | | 6.4 | 7.8 | 10.8 | MC-M8-ZB30KE | | | | | 3.3 | 3.4 | 3.7 |
| MC-P8-ZB30KE | | | | | 6.5 | 7.8 | 10.9 | MC-P8-ZB30KE | | | | | 3.2 | 3.4 | 3.7 |
| MC-H8-ZB30KE | | | | | 5.9* | 7.3 | | MC-H8-ZB30KE | | | | | 3.5* | 3.7 | |
| MC-H8-ZB38KE | | | | | 7.2* | 8.6* | | MC-H8-ZB38KE | | | | | 4.5* | 4.9* | |
| MC-P8-ZB38KE | | | | | 7.8* | 9.6 | 13.0 | MC-P8-ZB38KE | | | | | 4.1* | 4.4 | 5.0 |
| MC-M8-ZB38KE | | | | | 7.7* | 9.5 | | MC-M8-ZB38KE | | | | | 4.2* | 4.5 | |
| MC-R7-ZB42KE** | | | | 6.0* | 9.3 | 11.1 | 15.3 | MC-R7-ZB42KE** | | | | 4.4* | 4.8 | 5.0 | 5.3 |
| MC-M8-ZB42KE** | | | | 5.6* | 8.2* | 10.0 | 13.4 | MC-M8-ZB42KE** | | | | 4.6* | 5.1* | 5.5 | 6.0 |
| MC-M8-ZB45KE | | | | | 8.5* | 10.3 | | MC-M8-ZB45KE | | | | | 5.2* | 5.6 | |
| MC-R7-ZB45KE | | | | | 9.6 | 11.5 | 15.7 | MC-R7-ZB45KE | | | | | 4.9 | 5.1 | 5.5 |
| MC-M9-ZB45KE | | | | | 9.3 | 11.0 | 14.9 | MC-M9-ZB45KE | | | | | 5.1 | 5.3 | 5.8 |
| MC-R7-ZB50KE | | | | | 11.0 | 13.2 | 18.0 | MC-R7-ZB50KE | | | | | 6.0 | 6.3 | 6.9 |
| MC-S9-ZB50KE | | | | | 11.4 | 13.7 | 19.0 | MC-S9-ZB50KE | | | | | 5.7 | 5.9 | 6.4 |
| MC-R7-ZB58KE | | | | | 11.1* | 13.8 | | MC-R7-ZB58KE | | | | | 6.6* | 7.1 | |
| MC-S9-ZB58KE | | | | | 11.9 | 14.5 | 20.4 | MC-S9-ZB58KE | | | | | 6.3 | 6.7 | 7.4 |
| MC-V9-ZB66KE | | | | | 13.8 | 16.7 | 23.2 | MC-V9-ZB66KE | | | | | 6.9 | 7.3 | 8.1 |
| MC-S9-ZB66KE | | | | | 13.2 | 15.9 | 21.9 | MC-S9-ZB66KE | | | | | 7.3 | 7.7 | 8.7 |
| MC-V9-ZB76KE | | | | | 15.8 | 19.0 | 26.3 | MC-V9-ZB76KE | | | | | 8.2 | 8.7 | 9.8 |
| MC-V6-ZB76KE | | | | | 16.7 | 20.2 | 28.4 | MC-V6-ZB76KE | | | | | 8.0 | 8.4 | 9.2 |
| MC-V6-ZB95KE | | | | | 19.5 | 23.5 | 32.6 | MC-V6-ZB95KE | | | | | 10.7 | 11.3 | 12.6 |
| MC-V9-ZB95KE | | | | | 17.4* | 21.5 | | MC-V9-ZB95KE | | | | | 11.3* | 12.1 | |
| MC-V6-ZB114KE | | | | | 21.4* | 26.8 | | MC-V6-ZB114KE | | | | | 13.0* | 13.9 | |
| MC-W9-ZB114KE | | | | | 22.5 | 27.4 | 38.4 | MC-W9-ZB114KE | | | | | 12.9 | 13.6 | 15.4 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|------|------|------|------|-------|--------------|------------------------------|-----|-----|------|------|------|------|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| MC-H8-ZF09KE | | 1.7 | 2.1 | 3.2 | 4.7 | 5.5 | 7.6 | MC-H8-ZF09KE | | 1.7 | 1.7 | 1.8 | 2.1 | 2.3 | 2.7 |
| MC-D8-ZF09KE | | 1.6 | 2.0 | 3.0 | 4.3 | 5.0 | 6.6* | MC-D8-ZF09KE | | 1.7 | 1.7 | 1.9 | 2.1 | 2.3 | 2.8* |
| MC-M9-ZF13KE | | 2.3 | 2.9 | 4.5 | 6.7 | 8.0 | 11.1 | MC-M9-ZF13KE | | 2.5 | 2.6 | 2.8 | 3.2 | 3.4 | 4.1 |
| MC-H8-ZF13KE | | 2.3 | 2.8 | 4.3 | 6.3 | 7.4 | 10.0 | MC-H8-ZF13KE | | 2.5 | 2.6 | 2.9 | 3.4 | 3.7 | 4.6 |
| MC-M8-ZF13KE | | 2.3 | 2.9 | 4.4 | 6.5 | 7.7 | 10.6 | MC-M8-ZF13KE | | 2.4 | 2.5 | 2.8 | 3.2 | 3.4 | 4.2 |
| MC-M8-ZF15KE | | 2.8 | 3.5 | 5.3 | 7.6 | 9.0 | 12.2 | MC-M8-ZF15KE | | 2.9 | 3.1 | 3.6 | 4.2 | 4.7 | 5.8 |
| MC-R7-ZF15KE | | 2.9 | 3.6 | 5.6 | 8.2 | 9.7 | 13.5 | MC-R7-ZF15KE | | 3.0 | 3.1 | 3.5 | 4.0 | 4.4 | 5.3 |
| MC-H8-ZF15KE | | 2.7 | 3.4 | 5.1 | 7.2 | 8.5 | | MC-H8-ZF15KE | | 3.0 | 3.3 | 3.8 | 4.6 | 5.1 | |
| MC-S9-ZF18KE | | 3.5 | 4.4 | 6.7 | 9.9 | 11.8 | 16.3 | MC-S9-ZF18KE | | 3.5 | 3.7 | 4.1 | 4.6 | 4.9 | 5.8 |
| MC-M8-ZF18KE | | 3.3 | 4.2 | 6.2 | 8.9 | 10.4 | 13.7* | MC-M8-ZF18KE | | 3.6 | 3.8 | 4.4 | 5.1 | 5.6 | 6.8* |
| MC-M9-ZF18KE | | 3.4 | 4.3 | 6.5 | 9.3 | 11.1 | 14.9 | MC-M9-ZF18KE | | 3.6 | 3.8 | 4.3 | 4.9 | 5.3 | 6.4 |
| MC-S9-ZF25K5 | | 4.4 | 5.5 | 8.5 | 12.4 | 14.8 | | MC-S9-ZF25K5 | | 4.3 | 4.6 | 5.3 | 6.2 | 6.7 | |
| MC-S9-ZF34K5 | | 5.9 | 7.5 | 11.4 | 16.4 | 19.4 | | MC-S9-ZF34K5 | | 5.6 | 6.2 | 7.4 | 9.0 | 9.9 | |
| MC-V6-ZF41K5 | | 7.4 | 9.4 | 14.2 | 20.6 | 24.4 | | MC-V6-ZF41K5 | | 6.8 | 7.4 | 8.7 | 10.2 | 11.1 | |
| MC-V6-ZF49K5 | | 8.7 | 11.1 | 16.9 | 24.5 | 29.1 | | MC-V6-ZF49K5 | | 8.3 | 9.1 | 10.8 | 12.8 | 13.9 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | | 6.8 | 8.1 | 11.1 | MC-M8-ZBD30 | | | | | 3.4 | 3.6 | 4.0 |
| MC-M9-ZBD45 | | | | | 9.2 | 11.0 | 15.0 | MC-M9-ZBD45 | | | | | 4.9 | 5.2 | 5.8 |
| MC-V6-ZBDT60 | | | | 9.4 | 14.4 | 17.4 | 24.3 | MC-V6-ZBDT60 | | | | 6.0 | 6.4 | 6.7 | 7.3 |
| MC-V6-ZBDT90 | | | | 12.7 | 19.1 | 22.8 | 31.4 | MC-V6-ZBDT90 | | | | 8.8 | 9.5 | 9.9 | 10.9 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-------|-------|-------|------|---------------|------------------------------|-----|-----|-------|-------|------|------|
| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-H8-ZB15KE | | | | | 3.4 | 4.1 | 5.7 | MC-H8-ZB15KE | | | | | 1.8 | 1.9 | 1.9 |
| MC-D8-ZB15KE | | | | | 3.0 | 3.7 | 5.0 | MC-D8-ZB15KE | | | | | 2.0 | 2.0 | 2.2 |
| MC-H8-ZB19KE | | | | | 4.0 | 4.8 | 6.7 | MC-H8-ZB19KE | | | | | 2.2 | 2.3 | 2.5 |
| MC-K9-ZB19KE | | | | | 4.0 | 4.8 | 6.7 | MC-K9-ZB19KE | | | | | 2.2 | 2.3 | 2.5 |
| MC-D8-ZB19KE | | | | | 3.5* | 4.3 | 5.9 | MC-D8-ZB19KE | | | | | 2.4* | 2.5 | 2.8 |
| MC-K9-ZB21KE | | | | | 4.7 | 5.6 | 7.7 | MC-K9-ZB21KE | | | | | 2.7 | 2.9 | 3.1 |
| MC-H8-ZB21KE | | | | | 3.9* | 4.7* | | MC-H8-ZB21KE | | | | | 3.0* | 3.2* | |
| MC-H8-ZB26KE | | | | | 5.1* | 6.3 | 8.6 | MC-H8-ZB26KE | | | | | 3.3* | 3.5 | 3.9 |
| MC-K9-ZB26KE | | | | | 5.1* | 6.3 | 8.6 | MC-K9-ZB26KE | | | | | 3.3* | 3.5 | 3.9 |
| MC-M8-ZB30KE | | | | 4.1* | 6.6 | 8.0 | 11.2 | MC-M8-ZB30KE | | | | 3.3* | 3.5 | 3.7 | 4.1 |
| MC-P8-ZB30KE | | | | 4.1* | 6.6 | 8.0 | 11.3 | MC-P8-ZB30KE | | | | 3.2* | 3.5 | 3.6 | 4.0 |
| MC-H8-ZB30KE | | | | | 6.1* | 7.5 | | MC-H8-ZB30KE | | | | | 3.8* | 4.0 | |
| MC-M8-ZB38KE | | | | | 7.6* | 9.3 | | MC-M8-ZB38KE | | | | | 4.7* | 4.9 | |
| MC-P8-ZB38KE | | | | | 7.7* | 9.4 | | MC-P8-ZB38KE | | | | | 4.6* | 4.9 | |
| MC-H8-ZB38KE | | | | | 7.0* | 8.4* | | MC-H8-ZB38KE | | | | | 5.0* | 5.3* | |
| MC-R7-ZB45KE | | | | 5.9* | 9.7 | 11.8 | 16.4 | MC-R7-ZB45KE | | | | 4.7* | 5.2 | 5.5 | 6.0 |
| MC-M9-ZB45KE | | | | | 9.1* | 11.2 | 15.5 | MC-M9-ZB45KE | | | | | 5.4* | 5.7 | 6.4 |
| MC-M8-ZB45KE | | | | | 8.4* | 10.2* | | MC-M8-ZB45KE | | | | | 5.6* | 6.0* | |
| MC-R7-ZB58KE | | | | | 11.7* | 14.6 | | MC-R7-ZB58KE | | | | | 7.1* | 7.6 | |
| MC-S9-ZB58KE | | | | 7.1* | 12.4* | 15.4 | 21.5 | MC-S9-ZB58KE | | | | 6.0* | 6.7* | 7.2 | 8.1 |
| MC-V9-ZB66KE | | | | 8.7* | 14.6 | 17.7 | 24.6 | MC-V9-ZB66KE | | | | 6.6* | 7.4 | 7.8 | 8.7 |
| MC-S9-ZB66KE | | | | | 13.6* | 16.8 | | MC-S9-ZB66KE | | | | | 7.7* | 8.3 | |
| MC-V9-ZB76KE | | | | 9.8* | 16.3* | 20.1 | 27.8 | MC-V9-ZB76KE | | | | 7.6* | 8.7* | 9.4 | 10.7 |
| MC-V6-ZB76KE | | | | 10.6* | 17.8 | 21.6 | 30.2 | MC-V6-ZB76KE | | | | 7.6* | 8.5 | 8.9 | 9.9 |
| MC-W9-ZB114KE | | | | 13.3* | 23.2* | 29.0 | | MC-W9-ZB114KE | | | | 12.1* | 13.7* | 14.7 | |
| MC-V6-ZB114KE | | | | | 22.6* | 28.2 | | MC-V6-ZB114KE | | | | | 14.0* | 15.1 | |
| Low Temperature Models | | | | | | | | | | | | | | | |
| MC-B8-ZF06KE | | 1.2 | 1.4 | 2.1 | | | | MC-B8-ZF06KE | | 1.5 | 1.6 | 1.8 | | | |
| MC-H8-ZF09KE | | 1.7 | 2.2 | 3.3 | 4.9 | 5.8 | 7.9 | MC-H8-ZF09KE | | 1.8 | 1.8 | 1.9 | 2.2 | 2.4 | 2.8 |
| MC-D8-ZF09KE | | 1.7 | 2.1 | 3.1 | 4.4 | 5.2 | | MC-D8-ZF09KE | | 1.8 | 1.8 | 2.0 | 2.3 | 2.5 | |
| MC-H8-ZF11KE | | 2.2 | 2.7 | 4.1 | 5.9 | 6.9 | 9.3 | MC-H8-ZF11KE | | 2.1 | 2.2 | 2.4 | 2.7 | 3.0 | 3.5 |
| MC-M9-ZF13KE | | 2.4 | 3.1 | 4.7 | 7.0 | 8.3 | 11.6 | MC-M9-ZF13KE | | 2.6 | 2.7 | 3.0 | 3.3 | 3.6 | 4.3 |
| MC-M8-ZF13KE | | 2.4 | 3.0 | 4.6 | 6.8 | 8.1 | 11.0 | MC-M8-ZF13KE | | 2.5 | 2.6 | 2.9 | 3.4 | 3.7 | 4.5 |
| MC-H8-ZF13KE | | 2.4 | 3.0 | 4.5 | 6.5 | 7.7 | | MC-H8-ZF13KE | | 2.6 | 2.8 | 3.1 | 3.6 | 4.0 | |
| MC-H8-ZF15KE | | 2.8 | 3.6 | 5.3 | 7.5 | | | MC-H8-ZF15KE | | 3.2 | 3.5 | 4.1 | 5.0 | | |
| MC-R7-ZF15KE | | 3.0 | 3.8 | 5.8 | 8.5 | 10.2 | 14.0 | MC-R7-ZF15KE | | 3.1 | 3.3 | 3.7 | 4.2 | 4.6 | 5.6 |
| MC-M8-ZF15KE | | 2.9 | 3.7 | 5.5 | 8.0 | 9.4 | | MC-M8-ZF15KE | | 3.0 | 3.3 | 3.8 | 4.5 | 5.0 | |
| MC-M8-ZF18KE | | 3.5 | 4.3 | 6.5 | 9.2 | 10.8 | | MC-M8-ZF18KE | | 3.8 | 4.1 | 4.7 | 5.5 | 6.0 | |
| MC-M9-ZF18KE | | 3.5 | 4.5 | 6.8 | 9.7 | 11.5 | | MC-M9-ZF18KE | | 3.8 | 4.0 | 4.6 | 5.2 | 5.7 | |
| MC-S9-ZF18KE | | 3.6 | 4.6 | 7.1 | 10.4 | 12.3 | 17.0 | MC-S9-ZF18KE | | 3.7 | 3.9 | 4.3 | 4.9 | 5.2 | 6.1 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 4.6* | 6.8 | 8.1 | 10.9 | MC-M8-ZBD30 | | | | 2.8* | 3.3 | 3.6 | 4.1 |
| MC-M9-ZBD45 | | | | | 9.4* | 11.6 | 15.5 | MC-M9-ZBD45 | | | | | 5.1* | 5.5 | 6.6 |
| MC-V6-ZBDT60 | | | | 9.1* | 14.3 | 17.2 | 24.0 | MC-V6-ZBDT60 | | | | 6.1* | 6.7 | 6.9 | 7.6 |
| MC-V6-ZBDT90 | | | | 12.1* | 19.7 | 23.7 | 32.6 | MC-V6-ZBDT90 | | | | 8.7* | 10.1 | 10.7 | 12.2 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-------|------|------|------|----------------|------------------------------|-----|-----|-------|------|------|------|
| R448A | Cooling Capacity (kW) | | | | | | | R448A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | | | | 2.1 | 3.2 | 3.8 | 5.3 | MC-D8-ZB15KE | | | | 1.7 | 1.8 | 1.8 | 2.0 |
| MC-H8-ZB15KE | | | | 2.2 | 3.5 | 4.2 | 5.9 | MC-H8-ZB15KE | | | | 1.7 | 1.7 | 1.7 | 1.8 |
| MC-D8-ZB19KE | | | | 2.3* | 3.7 | 4.4 | 6.0 | MC-D8-ZB19KE | | | | 2.0* | 2.1 | 2.2 | 2.5 |
| MC-H8-ZB19KE | | | | 2.6 | 4.0 | 4.8 | 6.6 | MC-H8-ZB19KE | | | | 1.9 | 2.0 | 2.1 | 2.3 |
| MC-K9-ZB19KE | | | | 2.6 | 3.9 | 4.7 | 6.6 | MC-K9-ZB19KE | | | | 1.9 | 2.0 | 2.0 | 2.3 |
| MC-D8-ZB21KE | | | | 2.9* | 4.5 | 5.3 | 7.0 | MC-D8-ZB21KE | | | | 2.4* | 2.8 | 3.0 | 3.4 |
| MC-H8-ZB21KE | | | | 3.3 | 4.9 | 5.9 | 8.1 | MC-H8-ZB21KE | | | | 2.3 | 2.5 | 2.6 | 2.8 |
| MC-K9-ZB21KE | | | | 3.3 | 4.9 | 5.9 | 8.1 | MC-K9-ZB21KE | | | | 2.3 | 2.5 | 2.6 | 2.9 |
| MC-H8-ZB26KE | | | | 3.8 | 5.6 | 6.7 | 9.2 | MC-H8-ZB26KE | | | | 2.8 | 3.0 | 3.1 | 3.5 |
| MC-K9-ZB26KE | | | | 3.7 | 5.6 | 6.6 | 9.1 | MC-K9-ZB26KE | | | | 2.8 | 3.0 | 3.2 | 3.5 |
| MC-H8-ZB30KE | | | | 4.0* | 6.4 | 7.5 | 10.3 | MC-H8-ZB30KE | | | | 3.2* | 3.6 | 3.8 | 4.2 |
| MC-P8-ZB30KE | | | | 4.4 | 6.7 | 8.0 | 11.0 | MC-P8-ZB30KE | | | | 3.1 | 3.3 | 3.4 | 3.8 |
| MC-M8-ZB30KE | | | | 4.4 | 6.7 | 8.0 | 10.9 | MC-M8-ZB30KE | | | | 3.1 | 3.3 | 3.5 | 3.9 |
| MC-H9-ZB38KE | | | | 4.7* | 7.5 | 8.8 | | MC-H9-ZB38KE | | | | 4.3* | 4.8 | 5.1 | |
| MC-P8-ZB38KE | | | | 5.1* | 8.0 | 9.5 | 13.0 | MC-P8-ZB38KE | | | | 3.9* | 4.3 | 4.5 | 5.1 |
| MC-M8-ZB38KE | | | | 5.0* | 8.0 | 9.4 | 12.8 | MC-M8-ZB38KE | | | | 4.0* | 4.4 | 4.6 | 5.2 |
| MC-M8-ZB42KE** | | | | 5.5* | 8.7 | 10.3 | 13.9 | MC-M8-ZB42KE** | | | | 4.6* | 5.2 | 5.5 | 6.2 |
| MC-R7-ZB42KE** | | | | 6.3 | 9.5 | 11.4 | 15.7 | MC-R7-ZB42KE** | | | | 4.4 | 4.7 | 4.9 | 5.4 |
| MC-M8-ZB45KE | | | | 5.7* | 9.0 | 10.6 | 14.3 | MC-M8-ZB45KE | | | | 4.7* | 5.2 | 5.5 | 6.3 |
| MC-R7-ZB45KE | | | | 6.5 | 9.8 | 11.8 | 16.1 | MC-R7-ZB45KE | | | | 4.5 | 4.8 | 5.0 | 5.5 |
| MC-M9-ZB45KE | | | | 6.3 | 9.5 | 11.3 | 15.4 | MC-M9-ZB45KE | | | | 4.6 | 5.0 | 5.2 | 5.9 |
| MC-R7-ZB58KE | | | | 7.1* | 12.0 | 14.4 | 19.7 | MC-R7-ZB58KE | | | | 6.1* | 6.8 | 7.2 | 8.1 |
| MC-S9-ZB58KE | | | | 7.5* | 12.5 | 15.1 | 20.8 | MC-S9-ZB58KE | | | | 5.9* | 6.4 | 6.7 | 7.5 |
| MC-S9-ZB66KE | | | | 8.6* | 13.9 | 16.5 | 22.4 | MC-S9-ZB66KE | | | | 6.7* | 7.4 | 7.8 | 8.7 |
| MC-V9-ZB66KE | | | | 9.0* | 14.5 | 17.3 | 23.7 | MC-V9-ZB66KE | | | | 6.5* | 7.0 | 7.3 | 8.1 |
| MC-V6-ZB76KE | | | | 10.9* | 17.4 | 21.0 | 29.0 | MC-V6-ZB76KE | | | | 7.4* | 8.0 | 8.4 | 9.3 |
| MC-V9-ZB76KE | | | | 10.3* | 16.6 | 19.8 | 26.9 | MC-V9-ZB76KE | | | | 7.5* | 8.3 | 8.8 | 10.0 |
| MC-V9-ZB95KE | | | | 11.2* | 18.8 | 22.5 | 30.2 | MC-V9-ZB95KE | | | | 10.2* | 11.5 | 12.3 | 14.2 |
| MC-W9-ZB114KE | | | | 14.1* | 23.6 | 28.5 | 39.3 | MC-W9-ZB114KE | | | | 11.9* | 13.1 | 13.8 | 15.6 |
| MC-V6-ZB114KE | | | | 13.8* | 23.1 | 27.9 | 38.3 | MC-V6-ZB114KE | | | | 12.2* | 13.4 | 14.1 | 16.1 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZF09KE | | 1.7 | 2.2 | 3.2 | 4.5 | 5.2 | | MC-D8-ZF09KE | | 2.0 | 2.0 | 2.2 | 2.5 | 2.7 | |
| MC-H8-ZF09KE | | 1.8 | 2.3 | 3.4 | 4.9 | 5.7 | | MC-H8-ZF09KE | | 1.9 | 1.9 | 2.0 | 2.3 | 2.5 | |
| MC-H8-ZF13KE | | 2.5 | 3.1 | 4.7 | 6.7 | 7.8 | | MC-H8-ZF13KE | | 2.6 | 2.6 | 2.9 | 3.4 | 3.7 | |
| MC-M8-ZF13KE | | 2.6 | 3.2 | 4.9 | 7.0 | 8.2 | | MC-M8-ZF13KE | | 2.5 | 2.5 | 2.8 | 3.1 | 3.4 | |
| MC-M9-ZF13KE | | 2.6 | 3.3 | 5.0 | 7.2 | 8.5 | | MC-M9-ZF13KE | | 2.6 | 2.6 | 2.8 | 3.1 | 3.4 | |
| MC-H8-ZF15KE | | 3.0 | 3.8 | 5.5 | 7.6 | | | MC-H8-ZF15KE | | 3.4 | 3.6 | 4.2 | 5.0 | | |
| MC-M8-ZF15KE | | 3.1 | 3.9 | 5.8 | 8.1 | 9.4 | | MC-M8-ZF15KE | | 3.3 | 3.4 | 3.9 | 4.5 | 5.0 | |
| MC-R7-ZF15KE | | 3.2 | 4.0 | 6.1 | 8.7 | 10.3 | | MC-R7-ZF15KE | | 3.3 | 3.4 | 3.7 | 4.3 | 4.6 | |
| MC-M8-ZF18KE | | 3.6 | 4.5 | 6.7 | 9.3 | 10.8 | | MC-M8-ZF18KE | | 4.1 | 4.2 | 4.6 | 5.4 | 5.9 | |
| MC-M9-ZF18KE | | 3.7 | 4.6 | 6.9 | 9.8 | 11.5 | | MC-M9-ZF18KE | | 4.0 | 4.0 | 4.4 | 5.0 | 5.4 | |
| MC-S9-ZF18KE | | 3.8 | 4.8 | 7.2 | 10.4 | 12.3 | | MC-S9-ZF18KE | | 3.8 | 3.8 | 4.1 | 4.6 | 4.9 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 4.5 | 6.8 | 8.1 | 11.1 | MC-M8-ZBD30 | | | | 2.7 | 3.2 | 3.5 | 4.1 |
| MC-M9-ZBD45 | | | | 6.5 | 9.7 | 11.6 | 15.6 | MC-M9-ZBD45 | | | | 4.0 | 4.8 | 5.2 | 6.1 |
| MC-V6-ZBDT60 | | | | 9.4 | 14.3 | 17.1 | 23.8 | MC-V6-ZBDT60 | | | | 5.8 | 6.3 | 6.6 | 7.4 |
| MC-V6-ZBDT90 | | | | 13.2 | 19.9 | 23.6 | 32.4 | MC-V6-ZBDT90 | | | | 8.3 | 9.3 | 9.9 | 11.3 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|-------|------|------|------|----------------|------------------------------|-----|-----|-------|------|------|------|
| R449A | Cooling Capacity (kW) | | | | | | | R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | | | | 2.1 | 3.2 | 3.8 | 5.3 | MC-D8-ZB15KE | | | | 1.7 | 1.8 | 1.8 | 2.0 |
| MC-H8-ZB15KE | | | | 2.2 | 3.5 | 4.2 | 5.9 | MC-H8-ZB15KE | | | | 1.7 | 1.7 | 1.7 | 1.8 |
| MC-D8-ZB19KE | | | | 2.3* | 3.7 | 4.4 | 6.0 | MC-D8-ZB19KE | | | | 2.0* | 2.1 | 2.2 | 2.5 |
| MC-H8-ZB19KE | | | | 2.6 | 4.0 | 4.8 | 6.6 | MC-H8-ZB19KE | | | | 1.9 | 2.0 | 2.1 | 2.3 |
| MC-K9-ZB19KE | | | | 2.6 | 3.9 | 4.7 | 6.6 | MC-K9-ZB19KE | | | | 1.9 | 2.0 | 2.0 | 2.3 |
| MC-D8-ZB21KE | | | | 2.9* | 4.5 | 5.3 | 7.0 | MC-D8-ZB21KE | | | | 2.4* | 2.8 | 3.0 | 3.4 |
| MC-H8-ZB21KE | | | | 3.3 | 4.9 | 5.9 | 8.1 | MC-H8-ZB21KE | | | | 2.3 | 2.5 | 2.6 | 2.8 |
| MC-K9-ZB21KE | | | | 3.3 | 4.9 | 5.9 | 8.1 | MC-K9-ZB21KE | | | | 2.3 | 2.5 | 2.6 | 2.9 |
| MC-H8-ZB26KE | | | | 3.8 | 5.6 | 6.7 | 9.2 | MC-H8-ZB26KE | | | | 2.8 | 3.0 | 3.1 | 3.5 |
| MC-K9-ZB26KE | | | | 3.7 | 5.6 | 6.6 | 9.1 | MC-K9-ZB26KE | | | | 2.8 | 3.0 | 3.2 | 3.5 |
| MC-H8-ZB30KE | | | | 4.0* | 6.4 | 7.5 | 10.3 | MC-H8-ZB30KE | | | | 3.2* | 3.6 | 3.8 | 4.2 |
| MC-P8-ZB30KE | | | | 4.4 | 6.7 | 8.0 | 11.0 | MC-P8-ZB30KE | | | | 3.1 | 3.3 | 3.4 | 3.8 |
| MC-M8-ZB30KE | | | | 4.4 | 6.7 | 8.0 | 10.9 | MC-M8-ZB30KE | | | | 3.1 | 3.3 | 3.5 | 3.9 |
| MC-P8-ZB38KE | | | | 5.1* | 8.0 | 9.5 | 13.0 | MC-P8-ZB38KE | | | | 3.9* | 4.3 | 4.5 | 5.1 |
| MC-M8-ZB38KE | | | | 5.0* | 8.0 | 9.4 | 12.8 | MC-M8-ZB38KE | | | | 4.0* | 4.4 | 4.6 | 5.2 |
| MC-H8-ZB38KE | | | | 4.7* | 7.5 | 8.8 | | MC-H8-ZB38KE | | | | 4.3* | 4.8 | 5.1 | |
| MC-M8-ZB42KE** | | | | 5.5* | 8.7 | 10.3 | 13.9 | MC-M8-ZB42KE** | | | | 4.6* | 5.2 | 5.5 | 6.2 |
| MC-R7-ZB42KE** | | | | 6.3 | 9.5 | 11.4 | 15.7 | MCR7-ZB42KE** | | | | 4.4 | 4.7 | 4.9 | 5.4 |
| MC-M8-ZB45KE | | | | 5.7* | 9.0 | 10.6 | 14.3 | MC-M8-ZB45KE | | | | 4.7* | 5.2 | 5.5 | 6.3 |
| MC-R7-ZB45KE | | | | 6.5 | 9.8 | 11.8 | 16.1 | MC-R7-ZB45KE | | | | 4.5 | 4.8 | 5.0 | 5.5 |
| MC-M9-ZB45KE | | | | 6.3 | 9.5 | 11.3 | 15.4 | MC-M9-ZB45KE | | | | 4.6 | 5.0 | 5.2 | 5.9 |
| MC-R7-ZB58KE | | | | 7.1* | 12.0 | 14.4 | 19.7 | MC-R7-ZB58KE | | | | 6.1* | 6.8 | 7.2 | 8.1 |
| MC-S9-ZB58KE | | | | 7.5* | 12.5 | 15.1 | 20.8 | MC-S9-ZB58KE | | | | 5.9* | 6.4 | 6.7 | 7.5 |
| MC-S9-ZB66KE | | | | 8.6* | 13.9 | 16.5 | 22.4 | MC-S9-ZB66KE | | | | 6.7* | 7.4 | 7.8 | 8.7 |
| MC-V9-ZB66KE | | | | 9.0* | 14.5 | 17.3 | 23.7 | MC-V9-ZB66KE | | | | 6.4* | 7.0 | 7.3 | 8.1 |
| MC-V6-ZB76KE | | | | 10.9* | 17.4 | 21.0 | 29.0 | MC-V6-ZB76KE | | | | 7.4* | 8.0 | 8.4 | 9.3 |
| MC-V9-ZB76KE | | | | 10.3* | 16.6 | 19.8 | 26.9 | MC-V9-ZB76KE | | | | 7.5* | 8.3 | 8.8 | 10.0 |
| MC-V6-ZB95KE | | | | 12.3* | 20.5 | 24.5 | 33.4 | MC-V6-ZB95KE | | | | 9.9* | 10.8 | 11.4 | 12.8 |
| MC-V9-ZB95KE | | | | 11.2* | 18.8 | 22.5 | 30.2 | MC-V9-ZB95KE | | | | 10.2* | 11.5 | 12.3 | 14.2 |
| MC-V6-ZB114KE | | | | 13.7* | 23.1 | 27.9 | 38.3 | MC-V6-ZB114KE | | | | 12.2* | 13.4 | 14.1 | 16.1 |
| MC-W9-ZB114KE | | | | 14.1* | 23.6 | 28.5 | 39.3 | MC-W9-ZB114KE | | | | 11.9* | 13.1 | 13.8 | 15.6 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZF09KE | | 1.7 | 2.2 | 3.2 | 4.5 | 5.2 | | MC-D8-ZF09KE | | 2.0 | 2.0 | 2.2 | 2.5 | 2.7 | |
| MC-H8-ZF09KE | | 1.8 | 2.3 | 3.4 | 4.9 | 5.7 | | MC-H8-ZF09KE | | 1.9 | 1.9 | 2.0 | 2.3 | 2.5 | |
| MC-H8-ZF13KE | | 2.5 | 3.1 | 4.7 | 6.7 | 7.8 | | MC-H8-ZF13KE | | 2.6 | 2.6 | 2.9 | 3.4 | 3.7 | |
| MC-M8-ZF13KE | | 2.6 | 3.2 | 4.9 | 7.0 | 8.2 | | MC-M8-ZF13KE | | 2.5 | 2.5 | 2.8 | 3.1 | 3.4 | |
| MC-M9-ZF13KE | | 2.6 | 3.3 | 5.0 | 7.2 | 8.5 | | MC-M9-ZF13KE | | 2.6 | 2.6 | 2.8 | 3.1 | 3.4 | |
| MC-H8-ZF15KE | | 3.0 | 3.8 | 5.5 | 7.6 | | | MC-H8-ZF15KE | | 3.4 | 3.6 | 4.2 | 5.0 | | |
| MC-M8-ZF15KE | | 3.1 | 3.9 | 5.8 | 8.1 | 9.4 | | MC-M8-ZF15KE | | 3.3 | 3.4 | 3.9 | 4.5 | 5.0 | |
| MC-R7-ZF15KE | | 3.2 | 4.0 | 6.1 | 8.7 | 10.3 | | MCR7-ZF15KE | | 3.3 | 3.4 | 3.7 | 4.3 | 4.6 | |
| MC-M8-ZF18KE | | 3.6 | 4.5 | 6.7 | 9.3 | 10.8 | | MC-M8-ZF18KE | | 4.1 | 4.2 | 4.6 | 5.4 | 5.9 | |
| MC-M9-ZF18KE | | 3.7 | 4.6 | 6.9 | 9.8 | 11.5 | | MC-M9-ZF18KE | | 4.0 | 4.0 | 4.4 | 5.0 | 5.4 | |
| MC-S9-ZF18KE | | 3.8 | 4.8 | 7.2 | 10.4 | 12.3 | | MC-S9-ZF18KE | | 3.8 | 3.8 | 4.1 | 4.6 | 4.9 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 4.5 | 6.8 | 8.1 | 11.1 | MC-M8-ZBD30 | | | | 2.7 | 3.2 | 3.5 | 4.1 |
| MC-M9-ZBD45 | | | | 6.5 | 9.7 | 11.6 | 15.6 | MC-M9-ZBD45 | | | | 4.0 | 4.8 | 5.2 | 6.1 |
| MC-V6-ZBDT60 | | | | 9.4 | 14.3 | 17.1 | 23.8 | MC-V6-ZBDT60 | | | | 5.8 | 6.3 | 6.6 | 7.4 |
| MC-V6-ZBDT90 | | | | 13.2 | 19.9 | 23.6 | 32.4 | MC-V6-ZBDT90 | | | | 8.3 | 9.3 | 9.9 | 11.3 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-------|------|------|------|----------------|------------------------------|-----|-----|-------|------|------|------|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-H8-ZB15KE | | | | 2.5 | 3.6 | 4.3 | 5.8 | MC-H8-ZB15KE | | | | 1.9 | 1.9 | 1.9 | 1.9 |
| MC-D8-ZB15KE | | | | 2.2 | 3.3 | 3.8 | 5.0 | MC-D8-ZB15KE | | | | 1.9 | 2.0 | 2.0 | 2.1 |
| MC-K9-ZB19KE | | | | 2.9 | 4.1 | 4.8 | 6.5 | MC-K9-ZB19KE | | | | 2.1 | 2.2 | 2.2 | 2.4 |
| MC-H8-ZB19KE | | | | 2.9 | 4.1 | 4.8 | 6.5 | MC-H8-ZB19KE | | | | 2.1 | 2.2 | 2.3 | 2.4 |
| MC-D8-ZB19KE | | | | 2.6 | 3.7 | 4.3 | 5.6 | MC-D8-ZB19KE | | | | 2.2 | 2.4 | 2.5 | 2.6 |
| MC-H8-ZB21KE | | | | 3.6 | 5.1 | 5.9 | 7.8 | MC-H8-ZB21KE | | | | 2.6 | 2.7 | 2.8 | 3.0 |
| MC-K9-ZB21KE | | | | 3.6 | 5.1 | 5.9 | 7.8 | MC-K9-ZB21KE | | | | 2.6 | 2.7 | 2.8 | 3.0 |
| MC-D8-ZB21KE | | | | 3.2 | 4.4 | 5.0 | 6.4 | MC-D8-ZB21KE | | | | 2.8 | 3.1 | 3.2 | 3.5 |
| MC-K9-ZB26KE | | | | 4.1 | 5.7 | 6.6 | 8.7 | MC-K9-ZB26KE | | | | 3.1 | 3.3 | 3.4 | 3.6 |
| MC-H8-ZB26KE | | | | 4.1 | 5.7 | 6.6 | 8.6 | MC-H8-ZB26KE | | | | 3.1 | 3.3 | 3.4 | 3.7 |
| MC-H8-ZB30KE | | | | 4.6 | 6.4 | 7.4 | 9.6 | MC-H8-ZB30KE | | | | 3.7 | 3.9 | 4.1 | 4.4 |
| MC-P8-ZB30KE | | | | 5.0 | 7.1 | 8.3 | 11.1 | MC-P8-ZB30KE | | | | 3.3 | 3.5 | 3.5 | 3.8 |
| MC-M8-ZB30KE | | | | 4.8 | 6.8 | 7.9 | 10.5 | MC-M8-ZB30KE | | | | 3.4 | 3.6 | 3.7 | 4.0 |
| MC-H8-ZB38KE | | | | 5.3 | 7.3 | 8.4 | 10.7 | MC-H8-ZB38KE | | | | 4.8 | 5.2 | 5.4 | 6.0 |
| MC-P8-ZB38KE | | | | 6.0 | 8.4 | 9.7 | 12.9 | MC-P8-ZB38KE | | | | 4.2 | 4.5 | 4.7 | 5.1 |
| MC-M8-ZB38KE | | | | 5.7 | 8.0 | 9.2 | 12.0 | MC-M8-ZB38KE | | | | 4.4 | 4.8 | 5.0 | 5.4 |
| MC-R7-ZB42KE** | | | | 6.9 | 9.8 | 11.4 | 15.1 | MC-R7-ZB42KE** | | | | 4.8 | 5.1 | 5.2 | 5.6 |
| MC-M8-ZB42KE** | | | | 6.3 | 8.7 | 10.0 | 12.8 | MC-M8-ZB42KE** | | | | 5.1 | 5.6 | 5.8 | 6.3 |
| MC-R7-ZB45KE | | | | 7.1 | 10.1 | 11.8 | 15.6 | MC-R7-ZB45KE | | | | 5.0 | 5.3 | 5.4 | 5.8 |
| MC-M8-ZB45KE | | | | 6.5 | 8.9 | 10.3 | 13.2 | MC-M8-ZB45KE | | | | 5.3 | 5.7 | 6.0 | 6.5 |
| MC-M9-ZB45KE | | | | 6.9 | 9.6 | 11.1 | 14.5 | MC-M9-ZB45KE | | | | 5.1 | 5.5 | 5.7 | 6.1 |
| MC-S9-ZB50KE | | | | 7.9 | 12.0 | 14.2 | 18.9 | MC-S9-ZB50KE | | | | 5.8 | 6.1 | 6.3 | 6.7 |
| MC-R7-ZB50KE | | | | 7.5 | 11.4 | 13.4 | 17.7 | MC-R7-ZB50KE | | | | 6.0 | 6.5 | 6.7 | 7.2 |
| MC-R7-ZB58KE | | | | 8.5 | 12.4 | 14.5 | 18.8 | MC-R7-ZB58KE | | | | 6.7 | 7.3 | 7.6 | 8.3 |
| MC-S9-ZB58KE | | | | 8.9 | 13.1 | 15.4 | 20.3 | MC-S9-ZB58KE | | | | 6.4 | 6.9 | 7.1 | 7.7 |
| MC-S9-ZB66KE | | | | 10.3 | 14.5 | 16.8 | 21.7 | MC-S9-ZB66KE | | | | 7.4 | 7.9 | 8.2 | 8.9 |
| MC-V9-ZB66KE | | | | 10.7 | 15.1 | 17.6 | 23.0 | MC-V9-ZB66KE | | | | 7.1 | 7.6 | 7.8 | 8.5 |
| MC-V6-ZB76KE | | | | 12.9 | 18.5 | 21.6 | 28.7 | MC-V6-ZB76KE | | | | 8.0 | 8.6 | 8.9 | 9.6 |
| MC-V9-ZB76KE | | | | 12.2 | 17.2 | 19.9 | 25.8 | MC-V9-ZB76KE | | | | 8.3 | 9.0 | 9.4 | 10.3 |
| MC-V6-ZB95KE | | | | 14.9 | 21.5 | 25.2 | 33.1 | MC-V6-ZB95KE | | | | 10.7 | 11.4 | 11.9 | 13.0 |
| MC-V9-ZB95KE | | | | 12.2* | 19.3 | 22.4 | 28.7 | MC-V9-ZB95KE | | | | 11.2* | 12.4 | 13.0 | 14.3 |
| MC-W9-ZB114KE | | | | 16.8 | 24.6 | 28.8 | 38.0 | MC-W9-ZB114KE | | | | 13.2 | 14.1 | 14.6 | 16.0 |
| MC-V6-ZB114KE | | | | 15.1* | 24.3 | 28.4 | 37.3 | MC-V6-ZB114KE | | | | 13.1* | 14.3 | 14.8 | 16.2 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|------|------|------|------|------|------|--------------|------------------------------|-----|-----|------|------|------|------|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Low Temperature Models | | | | | | | | | | | | | | | |
| MC-B8-ZF06KE | | 1.3 | 1.6 | 2.2 | 2.9 | 3.2 | | MC-B8-ZF06KE | | 1.7 | 1.8 | 2.1 | 2.4 | 2.6 | |
| MC-D8-ZF09KE | | 1.9 | 2.3 | 3.3 | 4.4 | 5.0 | 6.3 | MC-D8-ZF09KE | | 2.0 | 2.1 | 2.3 | 2.6 | 2.8 | 3.2 |
| MC-H8-ZF09KE | | 2.0 | 2.5 | 3.6 | 4.9 | 5.7 | 7.5 | MC-H8-ZF09KE | | 2.0 | 2.0 | 2.2 | 2.5 | 2.6 | 3.0 |
| MC-H8-ZF11KE | | 2.5 | 3.0 | 4.3 | 5.8 | 6.7 | 8.7 | MC-H8-ZF11KE | | 2.4 | 2.5 | 2.7 | 3.1 | 3.3 | 3.8 |
| MC-M9-ZF13KE | | 2.9 | 3.6 | 5.3 | 7.3 | 8.5 | 11.2 | MC-M9-ZF13KE | | 2.6 | 2.7 | 3.0 | 3.4 | 3.6 | 4.1 |
| MC-H8-ZF13KE | | 2.8 | 3.4 | 4.9 | 6.6 | 7.6 | 9.7 | MC-H8-ZF13KE | | 2.6 | 2.7 | 3.1 | 3.5 | 3.8 | 4.3 |
| MC-M8-ZF13KE | | 2.8 | 3.5 | 5.1 | 7.0 | 8.1 | 10.6 | MC-M8-ZF13KE | | 2.5 | 2.6 | 2.9 | 3.3 | 3.6 | 4.1 |
| MC-R7-ZF15KE | | 3.5 | 4.4 | 6.4 | 8.9 | 10.4 | 13.6 | MC-R7-ZF15KE | | 3.4 | 3.6 | 4.0 | 4.5 | 4.9 | 5.7 |
| MC-M8-ZF15KE | | 3.4 | 4.2 | 5.9 | 8.1 | 9.2 | 11.7 | MC-M8-ZF15KE | | 3.3 | 3.5 | 4.0 | 4.7 | 5.1 | 6.0 |
| MC-H8-ZF15KE | | 3.3 | 4.0 | 5.6 | 7.4 | 8.4 | | MC-H8-ZF15KE | | 3.4 | 3.7 | 4.3 | 5.0 | 5.5 | |
| MC-M8-ZF18KE | | 3.9 | 4.8 | 6.8 | 9.2 | 10.5 | 13.3 | MC-M8-ZF18KE | | 4.0 | 4.3 | 4.8 | 5.5 | 5.9 | 6.8 |
| MC-M9-ZF18KE | | 4.0 | 5.0 | 7.2 | 9.8 | 11.3 | 14.6 | MC-M9-ZF18KE | | 4.0 | 4.2 | 4.6 | 5.2 | 5.6 | 6.4 |
| MC-S9-ZF18KE | | 4.2 | 5.2 | 7.6 | 10.6 | 12.4 | 16.5 | MC-S9-ZF18KE | | 3.8 | 4.0 | 4.4 | 4.9 | 5.2 | 5.9 |
| MC-S9-ZF25K5 | | 5.3 | 6.5 | 9.3 | 13.0 | 15.1 | 19.8 | MC-S9-ZF25K5 | | 4.2 | 4.5 | 5.2 | 6.1 | 6.5 | 7.5 |
| MC-S9-ZF34K5 | | 6.7 | 8.3 | 11.9 | 16.1 | 18.5 | | MC-S9-ZF34K5 | | 5.6 | 6.0 | 7.1 | 8.3 | 9.1 | |
| MC-V6-ZF41K5 | | 8.6 | 10.6 | 15.4 | 21.4 | 24.8 | 32.6 | MC-V6-ZF41K5 | | 7.0 | 7.5 | 8.7 | 10.1 | 10.8 | 12.4 |
| MC-V6-ZF49K5 | | 10.2 | 12.5 | 18.1 | 24.8 | 28.7 | | MC-V6-ZF49K5 | | 8.4 | 8.9 | 10.3 | 12.1 | 13.1 | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 5.0 | 6.9 | 8.0 | 10.5 | MC-M8-ZBD30 | | | | 3.0 | 3.4 | 3.6 | 4.0 |
| MC-M9-ZBD45 | | | | 7.1 | 9.8 | 11.4 | 14.6 | MC-M9-ZBD45 | | | | 4.5 | 5.2 | 5.6 | 6.4 |
| MC-V6-ZBDT60 | | | | 10.4 | 14.9 | 17.6 | 23.6 | MC-V6-ZBDT60 | | | | 6.3 | 6.7 | 7.0 | 7.5 |
| MC-V6-ZBDT90 | | | | 14.1 | 20.4 | 24.1 | 32.5 | MC-V6-ZBDT90 | | | | 9.6 | 10.4 | 10.8 | 11.9 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-------|------|------|------|----------------|------------------------------|-----|-----|-------|------|------|------|
| R407C | Cooling Capacity (kW) | | | | | | | R407C | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | | | | 1.8* | 3.0 | 3.6 | 5.1 | MC-D8-ZB15KE | | | | 1.6* | 1.6 | 1.7 | 1.8 |
| MC-H8-ZB15KE | | | | 1.9* | 3.2 | 3.9 | 5.6 | MC-H8-ZB15KE | | | | 1.6* | 1.6 | 1.6 | 1.7 |
| MC-H8-ZB19KE | | | | 2.2* | 3.5 | 4.3 | 6.3 | MC-H8-ZB19KE | | | | 1.7* | 1.8 | 1.9 | 2.0 |
| MC-D8-ZB19KE | | | | 2.0* | 3.2* | 4.0 | 5.7 | MC-D8-ZB19KE | | | | 1.7* | 1.9* | 2.0 | 2.2 |
| MC-K9-ZB19KE | | | | 2.2* | 3.5 | 4.3 | 6.3 | MC-K9-ZB19KE | | | | 1.7* | 1.8 | 1.9 | 2.0 |
| MC-H8-ZB21KE | | | | 2.9* | 4.6 | 5.5 | 7.8 | MC-H8-ZB21KE | | | | 2.1* | 2.3 | 2.4 | 2.6 |
| MC-K9-ZB21KE | | | | 2.8* | 4.6 | 5.5 | 7.7 | MC-K9-ZB21KE | | | | 2.1* | 2.3 | 2.4 | 2.6 |
| MC-D8-ZB21KE | | | | 2.6* | 4.0* | 4.9* | 6.8 | MC-D8-ZB21KE | | | | 2.2* | 2.5* | 2.6* | 3.0 |
| MC-H8-ZB26KE | | | | 3.3* | 5.1* | 6.3 | 8.8 | MC-H8-ZB26KE | | | | 2.5* | 2.7* | 2.9 | 3.2 |
| MC-K9-ZB26KE | | | | 3.3* | 5.1* | 6.2 | 8.7 | MC-K9-ZB26KE | | | | 2.5* | 2.7* | 2.9 | 3.2 |
| MC-M8-ZB30KE | | | | 4.2* | 6.2* | 7.5 | 10.4 | MC-M8-ZB30KE | | | | 2.8* | 3.2* | 3.3 | 3.7 |
| MC-H8-ZB30KE | | | | 4.0* | 5.9* | 7.1 | 9.7 | MC-H8-ZB30KE | | | | 3.0* | 3.4* | 3.6 | 4.0 |
| MC-P8-ZB30KE | | | | 4.2* | 6.3 | 7.5 | 10.5 | MC-P8-ZB30KE | | | | 2.8* | 3.1 | 3.3 | 3.6 |
| MC-M8-ZB38KE | | | | 4.9* | 7.5* | 9.1 | 12.3 | MC-M8-ZB38KE | | | | 3.6* | 3.9* | 4.2 | 4.7 |
| MC-H8-ZB38KE | | | | | 7.0* | 8.4* | 11.4 | MC-H8-ZB38KE | | | | | 4.3* | 4.5* | 5.3 |
| MC-P8-ZB38KE | | | | 4.9* | 7.5* | 9.1 | 12.5 | MC-P8-ZB38KE | | | | 3.6* | 3.9* | 4.1 | 4.6 |
| MC-R7-ZB42KE** | | | | 5.7* | 8.8 | 10.5 | 14.7 | MC-R7-ZB42KE** | | | | 4.3* | 4.6 | 4.7 | 4.8 |
| MC-M8-ZB42KE** | | | | 5.3* | 7.9* | 9.4* | 13.0 | MC-M8-ZB42KE** | | | | 4.5* | 4.9* | 5.1* | 5.6 |
| MC-R7-ZB45KE | | | | 5.8* | 9.1 | 11.1 | 15.5 | MC-R7-ZB45KE | | | | 4.1* | 4.5 | 4.7 | 5.1 |
| MC-M8-ZB45KE | | | | 5.4* | 8.2* | 9.8* | 13.8 | MC-M8-ZB45KE | | | | 4.3* | 4.8* | 5.1* | 5.9 |
| MC-M9-ZB45KE | | | | 5.6* | 8.7* | 10.7 | 14.8 | MC-M9-ZB45KE | | | | 4.2* | 4.6* | 4.9 | 5.5 |
| MC-S9-ZB50KE | | | | 6.3* | 10.5 | 12.8 | 17.8 | MC-S9-ZB50KE | | | | 4.9* | 5.2 | 5.4 | 6.0 |
| MC-R7-ZB50KE | | | | 5.9* | 10.0 | 12.3 | 17.1 | MC-R7-ZB50KE | | | | 5.1* | 5.5 | 5.7 | 6.3 |
| MC-V9-ZB66KE | | | | 9.0* | 13.8 | 16.5 | 23.0 | MC-V9-ZB66KE | | | | 5.8* | 6.4 | 6.7 | 7.3 |
| MC-S9-ZB66KE | | | | | 13.3 | 15.9 | 22.0 | MC-S9-ZB66KE | | | | | 6.7 | 7.1 | 7.9 |
| MC-V6-ZB76KE | | | | 10.4* | 16.3 | 19.7 | 27.6 | MC-V6-ZB76KE | | | | 6.9* | 7.5 | 7.7 | 8.5 |
| MC-V9-ZB76KE | | | | 10.0* | 15.6 | 18.7 | 26.0 | MC-V9-ZB76KE | | | | 6.9* | 7.7 | 8.1 | 9.1 |
| MC-W9-ZB114KE | | | | 13.6* | 22.2 | 26.9 | 37.7 | MC-W9-ZB114KE | | | | 10.7* | 11.9 | 12.5 | 14.0 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|------|------|------|----------------|------------------------------|-----|-----|------|-----|-----|-----|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | | | | 1.4 | 2.2 | 2.7 | 3.9 | MC-D8-ZB15KE | | | | 1.0 | 1.0 | 1.1 | 1.2 |
| MC-H8-ZB15KE | | | | 1.4 | 2.3 | 2.8 | 4.1 | MC-H8-ZB15KE | | | | 1.1 | 1.1 | 1.1 | 1.2 |
| MC-H8-ZB19KE | | | | 1.6 | 2.6 | 3.2 | 4.7 | MC-H8-ZB19KE | | | | 1.2 | 1.3 | 1.3 | 1.4 |
| MC-K9-ZB19KE | | | | 1.6 | 2.6 | 3.2 | 4.7 | MC-K9-ZB19KE | | | | 1.2 | 1.2 | 1.3 | 1.3 |
| MC-D8-ZB19KE | | | | 1.6 | 2.5 | 3.1 | 4.4 | MC-D8-ZB19KE | | | | 1.1 | 1.2 | 1.3 | 1.4 |
| MC-H8-ZB21KE | | | | 2.1 | 3.2 | 4.0 | 5.7 | MC-H8-ZB21KE | | | | 1.5 | 1.5 | 1.6 | 1.7 |
| MC-K9-ZB21KE | | | | 2.1 | 3.2 | 4.0 | 5.8 | MC-K9-ZB21KE | | | | 1.4 | 1.5 | 1.6 | 1.7 |
| MC-D8-ZB21KE | | | | 1.9* | 3.1 | 3.7 | 5.3 | MC-D8-ZB21KE | | | | 1.4* | 1.5 | 1.6 | 1.8 |
| MC-H8-ZB26KE | | | | 2.3 | 3.7 | 4.5 | 6.5 | MC-H8-ZB26KE | | | | 1.7 | 1.8 | 1.8 | 2.0 |
| MC-K9-ZB26KE | | | | 2.4 | 3.7 | 4.5 | 6.5 | MC-K9-ZB26KE | | | | 1.6 | 1.7 | 1.8 | 1.9 |
| MC-M8-ZB30KE | | | | 2.8 | 4.4 | 5.3 | 7.7 | MC-M8-ZB30KE | | | | 1.9 | 2.0 | 2.0 | 2.2 |
| MC-P8-ZB30KE | | | | 2.8 | 4.4 | 5.4 | 7.8 | MC-P8-ZB30KE | | | | 1.8 | 1.9 | 2.0 | 2.1 |
| MC-H8-ZB30KE | | | | 2.7 | 4.2 | 5.2 | 7.4 | MC-H8-ZB30KE | | | | 1.9 | 2.0 | 2.1 | 2.3 |
| MC-P8-ZB38KE | | | | 3.3 | 5.4 | 6.6 | 9.5 | MC-P8-ZB38KE | | | | 2.2 | 2.4 | 2.5 | 2.7 |
| MC-M8-ZB38KE | | | | 3.3 | 5.3 | 6.5 | 9.3 | MC-M8-ZB38KE | | | | 2.2 | 2.4 | 2.5 | 2.8 |
| MC-H8-ZB38KE | | | | 3.0* | 5.1 | 6.3 | 8.9 | MC-H8-ZB38KE | | | | 2.3* | 2.6 | 2.7 | 3.0 |
| MC-R7-ZB42KE** | | | | 3.9 | 6.1 | 7.5 | 10.8 | MC-R7-ZB42KE** | | | | 2.8 | 2.9 | 2.9 | 2.9 |
| MC-M8-ZB42KE** | | | | 3.8 | 5.9 | 7.1 | 10.1 | MC-M8-ZB42KE** | | | | 2.8 | 2.9 | 3.0 | 3.1 |
| MC-M8-ZB45KE | | | | 4.0 | 6.2 | 7.6 | 10.9 | MC-M8-ZB45KE | | | | 2.7 | 2.9 | 3.0 | 3.3 |
| MC-M9-ZB45KE | | | | 4.1 | 6.4 | 7.8 | 11.3 | MC-M9-ZB45KE | | | | 2.7 | 2.9 | 3.0 | 3.3 |
| MC-R7-ZB45KE | | | | 4.2 | 6.5 | 8.0 | 11.6 | MC-R7-ZB45KE | | | | 2.8 | 2.9 | 3.0 | 3.2 |
| MC-R7-ZB50KE | | | | 4.7 | 7.3 | 8.9 | 12.8 | MC-R7-ZB50KE | | | | 3.4 | 3.5 | 3.7 | 4.0 |
| MC-S9-ZB50KE | | | | 4.8 | 7.5 | 9.1 | 13.1 | MC-S9-ZB50KE | | | | 3.3 | 3.4 | 3.5 | 3.8 |
| MC-S9-ZB58KE | | | | 5.3 | 8.3 | 10.2 | 14.6 | MC-S9-ZB58KE | | | | 3.7 | 3.8 | 4.0 | 4.3 |
| MC-R7-ZB58KE | | | | 5.2 | 8.1 | 9.9 | 14.1 | MC-R7-ZB58KE | | | | 3.8 | 4.0 | 4.1 | 4.5 |
| MC-S9-ZB66KE | | | | 6.1 | 9.4 | 11.4 | 16.4 | MC-S9-ZB66KE | | | | 4.1 | 4.3 | 4.5 | 4.9 |
| MC-V9-ZB66KE | | | | 6.2 | 9.5 | 11.6 | 16.7 | MC-V9-ZB66KE | | | | 4.0 | 4.2 | 4.4 | 4.7 |
| MC-V9-ZB76KE | | | | 7.0 | 10.8 | 13.1 | 18.8 | MC-V9-ZB76KE | | | | 4.7 | 4.9 | 5.2 | 5.6 |
| MC-V6-ZB76KE | | | | 7.1 | 11.1 | 13.6 | 19.6 | MC-V6-ZB76KE | | | | 4.9 | 5.0 | 5.2 | 5.6 |
| MC-V9-ZB95KE | | | | 8.3 | 13.3 | 16.2 | 22.9 | MC-V9-ZB95KE | | | | 5.9 | 6.4 | 6.7 | 7.4 |
| MC-V6-ZB95KE | | | | 8.6 | 13.8 | 16.9 | 24.2 | MC-V6-ZB95KE | | | | 5.9 | 6.3 | 6.5 | 7.1 |
| MC-V6-ZB114KE | | | | 9.9 | 16.1 | 19.8 | 28.4 | MC-V6-ZB114KE | | | | 7.2 | 7.6 | 8.0 | 8.7 |
| MC-W9-ZB114KE | | | | 9.9 | 16.2 | 20.0 | 28.7 | MC-W9-ZB114KE | | | | 7.1 | 7.6 | 7.9 | 8.6 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 2.9 | 4.5 | 5.4 | 7.6 | MC-M8-ZBD30 | | | | 1.8 | 2.0 | 2.1 | 2.4 |
| MC-M9-ZBD45 | | | | 3.9* | 6.4 | 7.7 | 11.0 | MC-M9-ZBD45 | | | | 2.6* | 3.0 | 3.1 | 3.5 |
| MC-V6-ZBDT60 | | | | 5.8 | 9.1 | 11.1 | 16.0 | MC-V6-ZBDT60 | | | | 3.9 | 4.1 | 4.3 | 4.6 |
| MC-V6-ZBDT90 | | | | 8.4 | 13.0 | 15.9 | 22.9 | MC-V6-ZBDT90 | | | | 5.2 | 5.7 | 6.0 | 6.6 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|-----|------|------|------|------|----------------|------------------------------|-----|-----|------|-----|-----|-----|
| R450A | Cooling Capacity (kW) | | | | | | | R450A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | | | | 1.2 | 1.9 | 2.4 | 3.5 | MC-D8-ZB15KE | | | | 0.9 | 0.9 | 0.9 | 0.9 |
| MC-H8-ZB15KE | | | | 1.2 | 2.0 | 2.5 | 3.7 | MC-H8-ZB15KE | | | | 1.0 | 1.0 | 1.0 | 1.0 |
| MC-D8-ZB19KE | | | | 1.4 | 2.2 | 2.7 | 4.0 | MC-D8-ZB19KE | | | | 1.1 | 1.1 | 1.1 | 1.2 |
| MC-H8-ZB19KE | | | | 1.4 | 2.3 | 2.8 | 4.2 | MC-H8-ZB19KE | | | | 1.1 | 1.1 | 1.1 | 1.2 |
| MC-K9-ZB19KE | | | | 1.4 | 2.3 | 2.8 | 4.2 | MC-K9-ZB19KE | | | | 1.1 | 1.1 | 1.1 | 1.2 |
| MC-D8-ZB21KE | | | | 1.6* | 2.8 | 3.4 | 4.9 | MC-D8-ZB21KE | | | | 1.3* | 1.3 | 1.4 | 1.5 |
| MC-H8-ZB21KE | | | | 1.8 | 2.9 | 3.6 | 5.3 | MC-H8-ZB21KE | | | | 1.3 | 1.4 | 1.4 | 1.4 |
| MC-K9-ZB21KE | | | | 1.8 | 2.9 | 3.6 | 5.3 | MC-K9-ZB21KE | | | | 1.3 | 1.3 | 1.3 | 1.4 |
| MC-H8-ZB26KE | | | | 2.1 | 3.3 | 4.1 | 6.0 | MC-H8-ZB26KE | | | | 1.5 | 1.6 | 1.6 | 1.7 |
| MC-K9-ZB26KE | | | | 2.1 | 3.3 | 4.1 | 6.0 | MC-K9-ZB26KE | | | | 1.5 | 1.5 | 1.6 | 1.7 |
| MC-H8-ZB30KE | | | | 2.4 | 3.8 | 4.7 | 6.9 | MC-H8-ZB30KE | | | | 1.8 | 1.8 | 1.8 | 1.9 |
| MC-M8-ZB30KE | | | | 2.4 | 3.9 | 4.9 | 7.1 | MC-M8-ZB30KE | | | | 1.7 | 1.7 | 1.8 | 1.8 |
| MC-P8-ZB30KE | | | | 2.5 | 4.0 | 4.9 | 7.2 | MC-P8-ZB30KE | | | | 1.7 | 1.7 | 1.7 | 1.8 |
| MC-H9-ZB38KE | | | | 2.7* | 4.6 | 5.7 | 8.2 | MC-H9-ZB38KE | | | | 2.2* | 2.3 | 2.4 | 2.6 |
| MC-M8-ZB38KE | | | | 3.0 | 4.8 | 5.9 | 8.6 | MC-M8-ZB38KE | | | | 2.1 | 2.2 | 2.2 | 2.4 |
| MC-P8-ZB38KE | | | | 3.0 | 4.8 | 6.0 | 8.7 | MC-P8-ZB38KE | | | | 2.1 | 2.1 | 2.2 | 2.3 |
| MC-M8-ZB42KE** | | | | 3.3 | 5.3 | 6.5 | 9.4 | MC-M8-ZB42KE** | | | | 2.4 | 2.5 | 2.5 | 2.7 |
| MC-R7-ZB42KE** | | | | 3.4 | 5.5 | 6.8 | 10.0 | MC-R7-ZB42KE** | | | | 2.5 | 2.5 | 2.6 | 2.7 |
| MC-M8-ZB45KE | | | | 3.5 | 5.5 | 6.8 | 9.8 | MC-M8-ZB45KE | | | | 2.5 | 2.5 | 2.6 | 2.8 |
| MC-M9-ZB45KE | | | | 3.5 | 5.7 | 7.0 | 10.2 | MC-M9-ZB45KE | | | | 2.6 | 2.6 | 2.7 | 2.8 |
| MC-R7-ZB45KE | | | | 3.6 | 5.8 | 7.1 | 10.5 | MC-R7-ZB45KE | | | | 2.6 | 2.6 | 2.7 | 2.8 |
| MC-R7-ZB58KE | | | | 4.5 | 7.2 | 8.8 | 12.7 | MC-R7-ZB58KE | | | | 3.3 | 3.6 | 3.8 | 4.1 |
| MC-S9-ZB58KE | | | | 4.6 | 7.3 | 8.9 | 13.0 | MC-S9-ZB58KE | | | | 3.3 | 3.5 | 3.7 | 4.0 |
| MC-S9-ZB66KE | | | | 5.1 | 8.1 | 9.9 | 14.4 | MC-S9-ZB66KE | | | | 3.6 | 3.9 | 4.1 | 4.5 |
| MC-V9-ZB66KE | | | | 5.2 | 8.2 | 10.1 | 14.6 | MC-V9-ZB66KE | | | | 3.6 | 3.9 | 4.0 | 4.4 |
| MC-V6-ZB76KE | | | | 6.0 | 9.7 | 11.9 | 17.4 | MC-V6-ZB76KE | | | | 4.4 | 4.7 | 4.9 | 5.2 |
| MC-V9-ZB76KE | | | | 5.9 | 9.4 | 11.6 | 16.9 | MC-V9-ZB76KE | | | | 4.1 | 4.5 | 4.7 | 5.2 |
| MC-V6-ZB95KE | | | | 7.3 | 11.8 | 14.5 | 21.3 | MC-V6-ZB95KE | | | | 5.4 | 5.7 | 6.0 | 6.7 |
| MC-V9-ZB95KE | | | | 7.1 | 11.3 | 14.0 | 20.3 | MC-V9-ZB95KE | | | | 5.3 | 5.7 | 6.0 | 6.8 |
| MC-V6-ZB114KE | | | | 8.4 | 13.8 | 17.0 | 24.8 | MC-V6-ZB114KE | | | | 6.5 | 7.0 | 7.3 | 8.1 |
| MC-W9-ZB114KE | | | | 8.5 | 13.8 | 17.1 | 25.0 | MC-W9-ZB114KE | | | | 6.5 | 7.0 | 7.3 | 8.0 |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 2.5 | 4.0 | 4.9 | 7.1 | MC-M8-ZBD30 | | | | 1.5 | 1.7 | 1.8 | 2.0 |
| MC-M9-ZBD45 | | | | 3.6 | 5.8 | 7.1 | 10.2 | MC-M9-ZBD45 | | | | 2.3 | 2.6 | 2.7 | 3.0 |
| MC-V6-ZBDT60 | | | | 5.0 | 8.1 | 10.1 | 14.8 | MC-V6-ZBDT60 | | | | 3.5 | 3.6 | 3.7 | 4.0 |
| MC-V6-ZBDT90 | | | | 7.3 | 11.6 | 14.3 | 21.0 | MC-V6-ZBDT90 | | | | 4.8 | 5.1 | 5.2 | 5.7 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|-----------------------------------|------------------------------|-----|------|------|------|------|------|----------------|------------------------------|-----|-----|------|-----|-----|-----|
| R513A | Cooling Capacity (kW) | | | | | | | R513A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| | -45 | -35 | -30 | -20 | -10 | -5 | +5 | | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-D8-ZB15KE | | | | 1.4 | 2.3 | 2.8 | 4.0 | MC-D8-ZB15KE | | | | 1.1 | 1.1 | 1.1 | 1.1 |
| MC-H8-ZB15KE | | | | 1.5 | 2.4 | 2.9 | 4.2 | MC-H8-ZB15KE | | | | 1.1 | 1.1 | 1.1 | 1.1 |
| MC-D8-ZB19KE | | | | 1.6* | 2.6 | 3.2 | 4.4 | MC-D8-ZB19KE | | | | 1.2* | 1.3 | 1.3 | 1.4 |
| MC-H8-ZB19KE | | | | 1.8 | 2.8 | 3.3 | 4.8 | MC-H8-ZB19KE | | | | 1.3 | 1.3 | 1.3 | 1.4 |
| MC-K9-ZB19KE | | | | 1.8 | 2.8 | 3.4 | 4.8 | MC-K9-ZB19KE | | | | 1.3 | 1.3 | 1.3 | 1.4 |
| MC-D8-ZB21KE | | | | 2.0* | 3.3 | 3.9 | 5.3 | MC-D8-ZB21KE | | | | 1.5* | 1.6 | 1.7 | 1.8 |
| MC-H8-ZB21KE | | | | 2.3 | 3.5 | 4.2 | 5.9 | MC-H8-ZB21KE | | | | 1.5 | 1.6 | 1.6 | 1.7 |
| MC-K9-ZB21KE | | | | 2.3 | 3.5 | 4.2 | 5.9 | MC-K9-ZB21KE | | | | 1.5 | 1.6 | 1.6 | 1.7 |
| MC-H8-ZB26KE | | | | 2.5 | 3.9 | 4.7 | 6.8 | MC-H8-ZB26KE | | | | 1.8 | 1.9 | 1.9 | 2.0 |
| MC-K9-ZB26KE | | | | 2.5 | 3.9 | 4.8 | 6.8 | MC-K9-ZB26KE | | | | 1.8 | 1.8 | 1.9 | 2.0 |
| MC-H8-ZB30KE | | | | 2.7* | 4.5 | 5.5 | 7.8 | MC-H8-ZB30KE | | | | 2.0* | 2.1 | 2.2 | 2.4 |
| MC-M8-ZB30KE | | | | 3.0 | 4.6 | 5.7 | 8.2 | MC-M8-ZB30KE | | | | 2.0 | 2.0 | 2.1 | 2.2 |
| MC-P8-ZB30KE | | | | 3.0 | 4.7 | 5.8 | 8.3 | MC-P8-ZB30KE | | | | 1.9 | 2.0 | 2.0 | 2.1 |
| MC-H9-ZB38KE | | | | 3.2* | 5.4 | 6.5 | 9.2 | MC-H9-ZB38KE | | | | 2.6* | 2.8 | 2.9 | 3.1 |
| MC-M8-ZB38KE | | | | 3.4* | 5.6 | 6.8 | 9.7 | MC-M8-ZB38KE | | | | 2.5* | 2.6 | 2.7 | 2.9 |
| MC-P8-ZB38KE | | | | 3.7 | 5.7 | 7.0 | 10.0 | MC-P8-ZB38KE | | | | 2.5 | 2.6 | 2.6 | 2.8 |
| MC-M8-ZB42KE** | | | | 3.7* | 6.2 | 7.6 | 10.7 | MC-M8-ZB42KE** | | | | 2.8* | 3.0 | 3.1 | 3.3 |
| MC-R7-ZB42KE** | | | | 4.2 | 6.6 | 8.0 | 11.5 | MC-R7-ZB42KE** | | | | 2.9 | 3.0 | 3.0 | 3.2 |
| MC-M8-ZB45KE | | | | 3.9* | 6.5 | 7.8 | 11.1 | MC-M8-ZB45KE | | | | 2.9* | 3.1 | 3.2 | 3.4 |
| MC-M9-ZB45KE | | | | 4.3 | 6.7 | 8.1 | 11.6 | MC-M9-ZB45KE | | | | 3.0 | 3.1 | 3.2 | 3.4 |
| MC-R7-ZB45KE | | | | 4.4 | 6.8 | 8.3 | 12.0 | MC-R7-ZB45KE | | | | 3.0 | 3.1 | 3.1 | 3.3 |
| MC-R7-ZB58KE | | | | 5.5 | 8.4 | 10.2 | 14.4 | MC-R7-ZB58KE | | | | 3.9 | 4.1 | 4.3 | 4.7 |
| MC-S9-ZB58KE | | | | 5.5 | 8.6 | 10.5 | 14.9 | MC-S9-ZB58KE | | | | 3.9 | 4.0 | 4.1 | 4.5 |
| MC-S9-ZB66KE | | | | 6.2 | 9.6 | 11.6 | 16.4 | MC-S9-ZB66KE | | | | 4.3 | 4.5 | 4.7 | 5.1 |
| MC-V9-ZB66KE | | | | 6.3 | 9.7 | 11.8 | 16.8 | MC-V9-ZB66KE | | | | 4.3 | 4.4 | 4.5 | 4.9 |
| MC-V6-ZB76KE | | | | 7.4 | 11.5 | 14.0 | 20.2 | MC-V6-ZB76KE | | | | 5.1 | 5.3 | 5.5 | 5.8 |
| MC-V9-ZB76KE | | | | 7.2 | 11.2 | 13.6 | 19.3 | MC-V9-ZB76KE | | | | 4.9 | 5.2 | 5.4 | 5.9 |
| MC-V6-ZB95KE | | | | 8.9 | 14.0 | 17.1 | 24.3 | MC-V6-ZB95KE | | | | 6.4 | 6.7 | 6.9 | 7.4 |
| MC-V9-ZB95KE | | | | 8.6 | 13.4 | 16.2 | 22.8 | MC-V9-ZB95KE | | | | 6.3 | 6.8 | 7.1 | 7.8 |
| MC-V6-ZB114KE | | | | 10.1 | 16.3 | 19.9 | 28.1 | MC-V6-ZB114KE | | | | 7.8 | 8.2 | 8.5 | 9.1 |
| MC-W9-ZB114KE | | | | 10.2 | 16.4 | 20.0 | 28.3 | MC-W9-ZB114KE | | | | 7.7 | 8.2 | 8.4 | 9.0 |
| MC-V6-ZB114KE | | | 10.2 | | | | | MC-V6-ZB114KE | | | | | | | |
| Digital Medium Temperature Models | | | | | | | | | | | | | | | |
| MC-M8-ZBD30 | | | | 3.0 | 4.7 | 5.7 | 8.1 | MC-M8-ZBD30 | | | | 1.8 | 2.0 | 2.1 | 2.3 |
| MC-M9-ZBD45 | | | | 4.4 | 6.8 | 8.2 | 11.6 | MC-M9-ZBD45 | | | | 2.7 | 3.0 | 3.2 | 3.6 |
| MC-V6-ZBDT60 | | | | 6.2 | 9.6 | 11.9 | 17.2 | MC-V6-ZBDT60 | | | | 4.0 | 4.2 | 4.3 | 4.6 |
| MC-V6-ZBDT90 | | | | 8.8 | 13.7 | 16.8 | 24.0 | MC-V6-ZBDT90 | | | | 5.6 | 6.0 | 6.2 | 6.7 |

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K, Subcooling 0K

** Single Phase Only

Preliminary Data

Copeland Scroll Digital™ Receiver Unit HLR

Copeland Scroll Digital Receiver Units are the perfect choice for remote condenser systems.

These Scroll Digital Receiver Units are an innovative offering by Emerson for food service and retail businesses. Their compact design and the power of Digital Scroll continuous capacity modulation allow for optimized environmental integration at highest system efficiency.

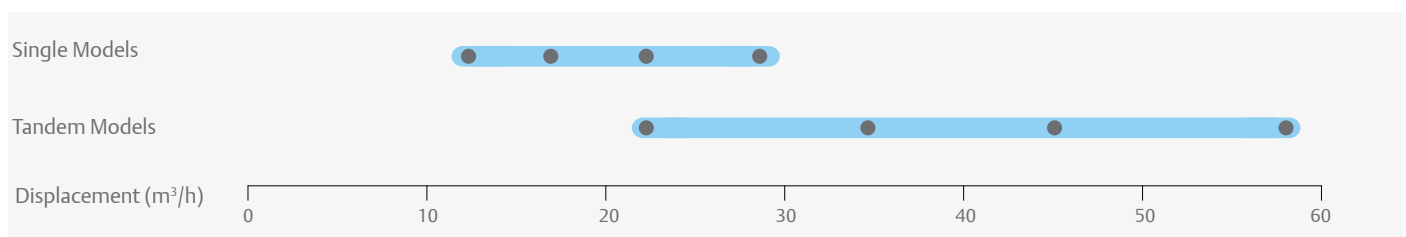
Eight models with single or tandem compressors cover the need of medium temperature refrigeration capacities in various applications. The continuous capacity modulation always provides the right performance, especially for systems with multiple evaporators and variable loads. The remote condenser concept allows for optimal building integration.



Digital Receiver Unit HLR



Digital Receiver Unit HLR Line-up



Features and Benefits

- Standard equipment: Digital Scroll compressor, liquid receiver, liquid line with filter drier and sight glass, HP/LP switch, complete electrical box including controller with overload protection and communication interface
- Continuous capacity modulation 10-100 % (Single) or 5-100 % (Tandem)
- Precise suction pressure control
- Maximum system flexibility by free choice of third party condensers
- Excellent energy efficiency
- High reliability
- Easy and quick installation
- Suitable for multiple refrigerants: R407A/F, R448A/R449A, R404A, R134a, R450A and R513A

Maximum Allowable Pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS = 28/32 bar (g)

Technical Overview

| Models | Displacement (m ³ /h) | Receiver Capacity (l) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/Code | | Maximum Operating Current (A) | | Locked Rotor Current (A) | | Sound Pressure @1 m - dB(A)*** | |
|--------------------------------------|----------------------------------|-----------------------|------------------------------|-----------------------------|-------------------------|-----------------|--------------------|--------|-------------------------------|--------|--------------------------|--------|--------------------------------|------------------|
| | | | | | | | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | Without Sound Shell | With Sound Shell |
| Single Compressor Unit Models | | | | | | | | | | | | | | |
| HLR13-ZBD30KE | 11.7 | 13 | 7/8 | 5/8 | 690/400/710 | 72 | TFD | | 8 | | 52 | | 59 | 49 |
| HLR13-ZBD45KE | 17.1 | 13 | 7/8 | 5/8 | 690/400/710 | 75 | TFD | | 12 | | 74 | | 61 | 51 |
| HLR13-ZBD58KE | 22.1 | 13 | 1 1/8 | 3/4 | 725/400/710 | 84 | TFD | | 15 | | 95 | | 65 | 55 |
| HLR13-ZBD76KE | 28.8 | 13 | 1 3/8 | 3/4 | 725/400/710 | 90 | TFD | | 20 | | 118 | | 66 | 56 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | |
| HLR31-ZBDT60KE | 23.4 | 31 | 1 3/8 | 7/8 | 970/480/910 | 130 | TFD | | 8+8 | | 52 + 52 | | 62 | - |
| HLR31-ZBDT90KE | 34.1 | 31 | 1 3/8 | 7/8 | 970/480/910 | 138 | TFD | | 12 + 12 | | 74 + 74 | | 64 | - |
| HLR31-ZBDT116KE | 44.2 | 31 | 1 5/8 | 1 1/8 | 970/480/870 | 165 | TFD | | 15 + 15 | | 95 + 95 | | 68 | - |
| HLR31-ZBDT152KE | 58.2 | 31 | 1 5/8 | 1 3/8 | 970/480/870 | 175 | TFD | | 20 + 20 | | 118 + 118 | | 69 | - |

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|-------|------|------|------|-----------------|------------------------------|-----|-----|------|-----|-----|-----|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | 4.0* | 6.8 | 8.4 | 12.4 | HLR13-ZBD30KCE | | | | 3.2* | 3.1 | 3.2 | 3.2 |
| HLR13-ZBD45KCE | | | | 5.5* | 9.4 | 11.7 | 17.2 | HLR13-ZBD45KCE | | | | 4.4* | 4.3 | 4.4 | 4.4 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | 8.0* | 13.6 | 16.8 | 24.6 | HLR31-ZBDT60KCE | | | | 6.2* | 6.2 | 6.2 | 6.3 |
| HLR31-ZBDT90KCE | | | | 11.4* | 18.9 | 23.2 | 34.1 | HLR31-ZBDT90KCE | | | | 8.7* | 8.8 | 8.8 | 8.8 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K

Preliminary Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|------------------------------|------------------------------|-----|------|-------|------|------|------|-----------------|------------------------------|-----|------|------|-----|-----|-----|
| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| HLR13-ZBD30KCE | | | 2.8* | 4.8 | 7.3 | 8.8 | 12.8 | HLR13-ZBD30KCE | | | 2.0* | 2.5 | 2.8 | 2.9 | 3.1 |
| HLR13-ZBD45KCE | | | | 6.4* | 10.8 | 13.2 | 18.9 | HLR13-ZBD45KCE | | | | 3.7* | 4.1 | 4.3 | 4.6 |
| HLR31-ZBDT60KCE | | | | 8.9* | 14.5 | 17.7 | 25.7 | HLR31-ZBDT60KCE | | | | 5.4* | 5.7 | 5.8 | 6.0 |
| HLR31-ZBDT90KCE | | | | 12.4* | 21.2 | 26.1 | 37.9 | HLR31-ZBDT90KCE | | | | 7.8* | 8.4 | 8.5 | 8.8 |

Conditions: EN12900: Condensing Temperature 45°C, Suction Gas Return 20°C, Subcooling 0K

*Conditions: EN12900: Condensing Temperature 45°C, Suction Superheat 10K

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|-------|------|-------|------|------------------|------------------------------|-----|-----|-------|------|-------|------|
| R448A | Cooling Capacity (kW) | | | | | | | R448A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | 4.1* | 6.8 | 8.3 | 12.1 | HLR13-ZBD30KCE | | | | 2.7* | 3.0 | 3.1 | 3.4 |
| HLR13-ZBD45KCE | | | | 6.0* | 10.0 | 12.2 | 17.7 | HLR13-ZBD45KCE | | | | 3.8* | 4.2 | 4.4 | 4.8 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | 8.2* | 13.5 | 16.6 | 24.2 | HLR31-ZBDT60KCE | | | | 5.4* | 5.9 | 6.2 | 6.8 |
| HLR31-ZBDT90KCE | | | | 12.0* | 20 | 24.4 | 35.4 | HLR31-ZBDT90KCE | | | | 7.6* | 8.4 | 8.8 | 9.6 |
| HLR31-ZBDT116KCE | | | | 13.7* | 25.5 | 31.7 | 46.2 | HLR31-ZBDT116KCE | | | | 11.9* | 11.8 | 11.9 | 12.1 |
| HLR31-ZBDT152KCE | | | | 19.8* | 34.9 | 43.10 | 62.5 | HLR31-ZBDT152KCE | | | | 15.8* | 16.0 | 16.10 | 16.5 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K

Preliminary Data

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|-------|------|-------|------|------------------|------------------------------|-----|-----|-------|------|-------|------|
| R449A | Cooling Capacity (kW) | | | | | | | R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | 4.1* | 6.8 | 8.3 | 12.1 | HLR13-ZBD30KCE | | | | 2.7* | 3.0 | 3.1 | 3.4 |
| HLR13-ZBD45KCE | | | | 6.0* | 10.0 | 12.2 | 17.7 | HLR13-ZBD45KCE | | | | 3.8* | 4.2 | 4.4 | 4.8 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | 8.2* | 13.5 | 16.6 | 24.2 | HLR31-ZBDT60KCE | | | | 5.4* | 5.9 | 6.2 | 6.8 |
| HLR31-ZBDT90KCE | | | | 11.9* | 20.0 | 24.4 | 35.4 | HLR31-ZBDT90KCE | | | | 7.6* | 8.4 | 8.8 | 9.6 |
| HLR31-ZBDT116KCE | | | | 13.7* | 25.5 | 31.7 | 46.2 | HLR31-ZBDT116KCE | | | | 11.9* | 11.8 | 11.9 | 12.1 |
| HLR31-ZBDT152KCE | | | | 19.7* | 34.9 | 43.10 | 62.5 | HLR31-ZBDT152KCE | | | | 15.8* | 16.0 | 16.10 | 16.5 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K

Preliminary Data

| Condensing Temperature: 45°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|------|------|------|------|------|-----------------|------------------------------|-----|-------|------|------|------|------|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | 2.7* | 4.8 | 7.0 | 8.4 | 11.8 | HLR13-ZBD30KCE | | | 2.4* | 2.9 | 3.1 | 3.2 | 3.5 |
| HLR13-ZBD45KCE | | | 3.4* | 6.6 | 10.2 | 12.5 | 18.0 | HLR13-ZBD45KCE | | | 4.4* | 4.6 | 4.8 | 4.9 | 5.2 |
| HLR13-ZBD58KCE | | | | 8.6 | 13.5 | 16.3 | 22.9 | HLR13-ZBD58KCE | | | | 6.4 | 6.4 | 6.4 | 6.4 |
| HLR13-ZBD76KCE | | | | 11.8 | 17.9 | 21.4 | 30.2 | HLR13-ZBD76KCE | | | | 8.1 | 8.3 | 8.3 | 8.4 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | 5.4* | 9.6 | 14.1 | 16.9 | 23.6 | HLR31-ZBDT60KCE | | | 4.9* | 5.8 | 6.3 | 6.5 | 6.9 |
| HLR31-ZBDT90KCE | | | 7.0* | 13.4 | 20.3 | 24.5 | 35.0 | HLR31-ZBDT90KCE | | | 9.2* | 9.4 | 9.6 | 9.7 | 9.9 |
| HLR31-ZBDT116KE | | | 6.4* | 17.0 | 26.7 | 32.4 | 45.8 | HLR31-ZBDT116KE | | | 13.1* | 12.7 | 12.7 | 12.7 | 12.8 |
| HLR31-ZBDT152KE | | | | 23.7 | 35.7 | 42.9 | 60.3 | HLR31-ZBDT152KE | | | | 16.2 | 16.4 | 16.5 | 16.8 |

Conditions: EN12900: Condensing Temperature 45°C, Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN12900: Condensing Temperature 45°C, Suction Superheat 10K

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|-----|-------|------|------|-----------------|------------------------------|-----|-----|-----|------|-----|-----|
| R407C | Cooling Capacity (kW) | | | | | | | R407C | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | | 6.2 | 7.6 | 11.1 | HLR13-ZBD30KCE | | | | | 3.0 | 3.0 | 3.0 |
| HLR13-ZBD45KCE | | | | | 8.9 | 11.1 | 16.5 | HLR13-ZBD45KCE | | | | | 4.1 | 4.1 | 4.2 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | | 12.2* | 15.2 | 22.2 | HLR31-ZBDT60KCE | | | | | 6.0* | 6.0 | 6.1 |
| HLR31-ZBDT90KCE | | | | | 17.5* | 22.2 | 32.9 | HLR31-ZBDT90KCE | | | | | 8.3* | 8.3 | 8.4 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K

Capacity Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|-----|------|------|------|------------------|------------------------------|-----|-----|-----|-----|-----|------|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | | 4.3 | 5.2 | 7.5 | HLR13-ZBD30KCE | | | | | 1.9 | 2.0 | 2.2 |
| HLR13-ZBD45KCE | | | | | 6.0 | 7.5 | 11.2 | HLR13-ZBD45KCE | | | | | 2.7 | 2.9 | 3.1 |
| HLR13-ZBD58KCE | | | | | 7.8 | 9.7 | 14.4 | HLR13-ZBD58KCE | | | | | 3.8 | 3.8 | 3.9 |
| HLR31-ZBD76KCE | | | | | 10.2 | 12.7 | 18.9 | HLR31-ZBD76KCE | | | | | 4.9 | 5.0 | 5.1 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | | 8.3 | 10.3 | 15.2 | HLR31-ZBDT60KCE | | | | | 3.9 | 4.0 | 4.2 |
| HLR31-ZBDT90KCE | | | | | 12.1 | 15.1 | 22.6 | HLR31-ZBDT90KCE | | | | | 5.5 | 5.6 | 5.9 |
| HLR31-ZBDT116KCE | | | | | 15.6 | 19.4 | 28.8 | HLR31-ZBDT116KCE | | | | | 7.5 | 7.6 | 7.8 |
| HLR31-ZBDT152KCE | | | | | 20.4 | 25.3 | 37.8 | HLR31-ZBDT152KCE | | | | | 9.8 | 9.9 | 10.2 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
Preliminary Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|------|------|------|------|-----------------|------------------------------|-----|-----|------|-----|-----|-----|
| R450A | Cooling Capacity (kW) | | | | | | | R450A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | 2.0* | 3.6 | 4.6 | 6.9 | HLR13-ZBD30KCE | | | | 1.5* | 1.6 | 1.7 | 1.8 |
| HLR13-ZBD45KCE | | | | 3.0* | 5.4 | 6.7 | 10.2 | HLR13-ZBD45KCE | | | | 2.2* | 2.4 | 2.5 | 2.8 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | 4.1* | 7.3 | 9.1 | 13.8 | HLR31-ZBDT60KCE | | | | 3.0* | 3.2 | 3.3 | 3.6 |
| HLR31-ZBDT90KCE | | | | 5.9* | 10.8 | 13.5 | 20.3 | HLR31-ZBDT90KCE | | | | 4.4* | 4.7 | 4.9 | 5.3 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
Preliminary Data

| Condensing Temperature: 40°C | | | | | | | | | | | | | | | |
|-------------------------------|------------------------------|-----|-----|------|------|------|------|-----------------|------------------------------|-----|-----|------|-----|-----|-----|
| R513A | Cooling Capacity (kW) | | | | | | | R513A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Single Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR13-ZBD30KCE | | | | 2.5* | 4.3 | 5.4 | 8.0 | HLR13-ZBD30KCE | | | | 1.8* | 1.9 | 2.0 | 2.1 |
| HLR13-ZBD45KCE | | | | 3.6* | 6.4 | 7.9 | 11.9 | HLR13-ZBD45KCE | | | | 2.6* | 2.8 | 2.9 | 3.1 |
| Tandem Compressor Unit Models | | | | | | | | | | | | | | | |
| HLR31-ZBDT60KCE | | | | 5.0* | 8.7 | 10.8 | 16.0 | HLR31-ZBDT60KCE | | | | 3.5* | 3.9 | 4.0 | 4.2 |
| HLR31-ZBDT90KCE | | | | 7.3* | 12.8 | 15.9 | 23.7 | HLR31-ZBDT90KCE | | | | 5.1* | 5.6 | 5.8 | 6.3 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
Preliminary Data



Semi-Hermetic Refrigeration Units K/L Compressors

Copeland™ air-cooled indoor refrigeration units for medium temperature and low temperature applications.

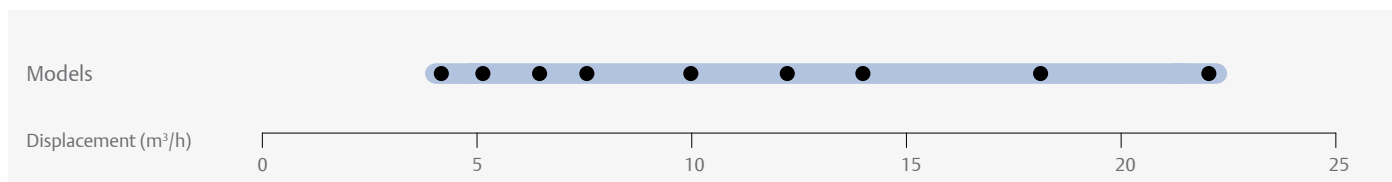
Long-term engineering and manufacturing experience has led to these refrigeration units with reed valve technology compressors. Their excellent quality and reliability is traditionally well known in the refrigeration industry.

This series of refrigeration units is equipped with single fan or twin fans which allows for very compact dimensions. The wide range of models offers solutions for most applications including operation in extreme conditions like high evaporation temperatures and high ambient temperatures.



Semi-Hermetic Refrigeration Unit K/L
Compressors

Semi-Hermetic K & L Refrigeration Units Line-up



Features and Benefits

- Standard equipment: compressor, condenser with thermally protected fan(s), discharge line with flexible pipe loop or vibration absorber, liquid receiver with shut-off-valve, HP/LP switch with automatic reset
- Suitable for a broad range of refrigerants: R407A/F, R404A and R134a
- Wide range of quality accessories
- Proven reliability

Maximum Allowable Pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS = 28 bar (g)

Technical Overview

| Models | Displacement (m ³ /h) | Receiver Capacity (l) | Number of fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/Code | | Maximum Operating Current (A) | | Locked Rotor Current (A) | | Sound Pressure @10m - dB(A)*** |
|--------------|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-------------------------|-----------------|--------------------|--------|-------------------------------|--------|--------------------------|--------|--------------------------------|
| | | | | | | | | | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | 1 Ph* | 3 Ph** | |
| B8-KJ-10X-B | 3.3 | 3.3 | 1 | 85 | 5/8 | 1/2 | 560/570/396 | 57.5 | CAG | EWL | 7 | 3 | 32 | 16 | 39.0 |
| B8-KJ-7X-B | 3.3 | 3.3 | 1 | 85 | 5/8 | 1/2 | 560/570/396 | 57.5 | CAG | EWL | 6 | 2 | 35 | 12 | |
| B8-KL-15X-B | 3.3 | 3.3 | 1 | 85 | 5/8 | 1/2 | 560/570/396 | 57.5 | CAG | EWL | 8 | 3 | 43 | 19 | 39.5 |
| B8-KM-5X-B | 3.3 | 3.3 | 1 | 85 | 5/8 | 1/2 | 560/570/396 | 56.0 | CAG | EWL | 5 | 2 | 24 | 12 | 39.0 |
| B8-KM-7X-B | 3.3 | 3.3 | 1 | 85 | 1/2 | 1/2 | 560/570/396 | 57.5 | CAG | EWL | 6 | 2 | 35 | 12 | |
| B8-KSJ-10X-B | 3.3 | 3.3 | 1 | 85 | 5/8 | 1/2 | 560/570/396 | 58.5 | CAG | EWL | 7 | 3 | 32 | 16 | |
| D8-KSJ-15X-B | 3.9 | 3.9 | 1 | 110 | 7/8 | 1/2 | 560/570/446 | 62.0 | CAG | EWL | 9 | 3 | 43 | 19 | 45.6 |
| D8-KSL-20X-B | 3.9 | 3.9 | 1 | 110 | 5/8 | 1/2 | 560/570/446 | 60.0 | | EWL | | 5 | | 23 | |
| D8-LE-20X-B | 3.9 | 3.9 | 1 | 110 | 5/8 | 1/2 | 560/715/446 | 96.5 | | EWL | | 6 | | 38 | |
| D8-LF-20X-B | 3.9 | 3.9 | 1 | 110 | 5/8 | 1/2 | 560/715/446 | 98.5 | | EWL | | 6 | | 38 | |
| H8-KSL-20X-B | 7.9 | 7.9 | 1 | 235 | 5/8 | 1/2 | 735/680/533 | 60.0 | | EWL | | 5 | | 23 | |
| H8-LE-20X-B | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 108.0 | | EWL | | 6 | | 38 | |
| H8-LF-30X-B | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 108.0 | | EWL | | 7 | | 51 | 48.5 |
| H8-LJ-20X-B | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 103.0 | | EWL | | 6 | | 38 | |
| H8-LJ-30X-B | 7.9 | 7.9 | 1 | 235 | 7/8 | 1/2 | 735/680/533 | 108.0 | | EWL | | 7 | | 51 | 48.5 |
| H8-LL-30X-B | 7.9 | 7.9 | 1 | 235 | 1 1/8 | 1/2 | 735/680/533 | 110.0 | | EWL | | 7 | | 53 | 48.5 |
| H8-LL-40X-B | 7.9 | 7.9 | 1 | 235 | 1 1/8 | 1/2 | 735/680/533 | 112.0 | | EWL | | 10 | | 59 | 48.6 |
| H8-LSG-40X-B | 7.9 | 7.9 | 1 | 235 | 1 1/8 | 1/2 | 735/680/533 | 116.0 | | EWL | | 9 | | 69 | |
| K9-LL-30X-B | 7.9 | 7.9 | 2 | 220 | 1 1/8 | 1/2 | 950/640/454 | 134.0 | | EWL | | 7 | | 53 | 47.2 |
| K9-LSG-40X-B | 7.9 | 7.9 | 2 | 220 | 1 1/8 | 1/2 | 950/640/454 | 131.0 | | EWL | | 9 | | 69 | 50.9 |
| P8-LF-30X-B | 7.9 | 7.9 | 2 | 220 | 1 1/8 | 1/2 | 950/640/633 | 127.0 | | EWL | | 7 | | 51 | 47.8 |
| P8-LJ-30X-B | 7.9 | 7.9 | 2 | 220 | 7/8 | 1/2 | 950/640/633 | 127.0 | | EWL | | 7 | | 51 | 47.8 |
| P8-LL-40X-B | 7.9 | 7.9 | 2 | 220 | 1 1/8 | 1/2 | 950/640/633 | 128.0 | | EWL | | 10 | | 59 | 48.0 |

* 1ph: 230V/ 50Hz

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-----|-----|------|------|--------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| B8-KM-5X-B | | 0.5 | 0.7 | 1.2 | | | | B8-KM-5X-B | | 0.5 | 0.6 | 0.7 | | | |
| B8-KM-7X-B | | 0.5 | 0.7 | 1.2 | 1.8 | 2.2 | 3.0 | B8-KM-7X-B | | 0.6 | 0.6 | 0.8 | 0.9 | 1.0 | 1.2 |
| B8-KJ-7X-B | | 0.7 | 0.9 | 1.5 | | | | B8-KJ-7X-B | | 0.7 | 0.8 | 1.0 | | | |
| B8-KJ-10X-B | | 0.7 | 0.9 | 1.5 | 2.3 | 2.7 | | B8-KJ-10X-B | | 0.6 | 0.7 | 0.9 | 1.2 | 1.4 | |
| D8-KSJ-15X-B | | 0.9 | 1.2 | 2.0 | 3.0 | 3.6 | | D8-KSJ-15X-B | | 0.9 | 1.0 | 1.3 | 1.5 | 1.7 | |
| B8-KSJ-10X-B | | 0.9 | 1.2 | 1.9 | | | | B8-KSJ-10X-B | | 0.9 | 1.0 | 1.3 | | | |
| B8-KL-15X-B | | 1.0 | 1.3 | 2.1 | | | | B8-KL-15X-B | | 1.0 | 1.1 | 1.4 | | | |
| D8-LE-20X-B | | 0.9 | 1.4 | 2.6 | 4.1 | 5.0 | | D8-LE-20X-B | | 0.9 | 1.1 | 1.5 | 2.0 | 2.2 | |
| H8-LE-20X-B | | 0.9 | 1.5 | 2.8 | 4.6 | 5.6 | 7.9 | H8-LE-20X-B | | 1.0 | 1.2 | 1.6 | 2.1 | 2.3 | 2.7 |
| H8-LF-30X-B | | 1.3 | 2.0 | 3.7 | 5.9 | 7.1 | | H8-LF-30X-B | | 1.4 | 1.6 | 2.2 | 2.8 | 3.1 | |
| P8-LF-30X-B | | 1.4 | 2.1 | 3.9 | 6.2 | 7.5 | 10.6 | P8-LF-30X-B | | 1.3 | 1.6 | 2.2 | 2.7 | 3.0 | 3.6 |
| D8-LF-20X-B | | 1.3 | 1.8 | 3.2 | | | | D8-LF-20X-B | | 1.2 | 1.5 | 2.0 | | | |
| P8-LJ-30X-B | | 1.9 | 2.6 | 4.5 | 6.9 | 8.3 | | P8-LJ-30X-B | | 1.7 | 1.9 | 2.6 | 3.2 | 3.6 | |
| H8-LJ-20X-B | | 1.6 | 2.3 | 4.2 | | | | H8-LJ-20X-B | | 1.5 | 1.8 | 2.5 | | | |
| H8-LJ-30X-B | | 1.8 | 2.6 | 4.3 | 6.6 | 7.9 | | H8-LJ-30X-B | | 1.7 | 2.0 | 2.6 | 3.3 | 3.7 | |
| H8-LL-40X-B | | 2.1 | 3.1 | 5.3 | 8.0 | 9.5 | | H8-LL-40X-B | | 1.9 | 2.2 | 3.1 | 4.1 | 4.6 | |
| H8-LL-30X-B | | 2.1 | 3.0 | 5.2 | | | | H8-LL-30X-B | | 1.8 | 2.2 | 3.1 | | | |
| P8-LL-40X-B | | 2.2 | 3.2 | 5.6 | 8.6 | 10.4 | | P8-LL-40X-B | | 1.9 | 2.2 | 3.1 | 4.0 | 4.5 | |
| K9-LSG-40X-B | | 2.7 | 3.8 | 6.3 | | | | K9-LSG-40X-B | | 2.3 | 2.7 | 3.8 | | | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-----|-----|------|------|--------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| B8-KM-7X-B | 0.3 | 0.6 | 0.8 | 1.3 | 1.9 | 2.2 | 3.0 | B8-KM-7X-B | 0.4 | 0.6 | 0.7 | 0.8 | 1.0 | 1.1 | 1.3 |
| B8-KM-5X-B | 0.3 | 0.6 | 0.8 | 1.3 | | | | B8-KM-5X-B | 0.5 | 0.6 | 0.6 | 0.8 | | | |
| B8-KJ-7X-B | 0.4 | 0.8 | 1.1 | 1.7 | | | | B8-KJ-7X-B | 0.6 | 0.8 | 0.9 | 1.1 | | | |
| B8-KJ-10X-B | 0.4 | 0.8 | 1.1 | 1.7 | 2.4 | 2.8 | 3.6 | B8-KJ-10X-B | 0.5 | 0.8 | 0.9 | 1.1 | 1.4 | 1.5 | 1.8 |
| D8-KSJ-15X-B | 0.6 | 1.1 | 1.4 | 2.2 | 3.2 | 3.8 | | D8-KSJ-15X-B | 0.7 | 1.0 | 1.1 | 1.4 | 1.8 | 1.9 | |
| B8-KSJ-10X-B | 0.6 | 1.1 | 1.3 | | | | | B8-KSJ-10X-B | 0.8 | 1.0 | 1.2 | | | | |
| B8-KL-15X-B | 0.7 | 1.2 | 1.5 | 2.3 | | | | B8-KL-15X-B | 0.9 | 1.1 | 1.3 | 1.6 | | | |
| H8-KSL-20X-B | 0.9 | 1.7 | 2.2 | 3.3 | 4.8 | 5.7 | | H8-KSL-20X-B | 1.1 | 1.5 | 1.7 | 2.1 | 2.6 | 2.8 | |
| D8-KSL-20X-B | 0.9 | 1.6 | 2.0 | 3.1 | 4.3 | | | D8-KSL-20X-B | 1.0 | 1.3 | 1.5 | 2.0 | 2.6 | | |
| H8-LE-20X-B | | 1.3 | 1.9 | 3.2 | 4.8 | 5.8 | 7.8 | H8-LE-20X-B | | 1.2 | 1.4 | 1.9 | 2.3 | 2.5 | 3.0 |
| D8-LE-20X-B | | 1.2 | 1.7 | 2.9 | 4.3 | 5.0 | | D8-LE-20X-B | | 1.1 | 1.3 | 1.7 | 2.2 | 2.5 | |
| H8-LF-30X-B | 0.9 | 2.1 | 2.7 | 4.4 | 6.3 | 7.4 | | H8-LF-30X-B | 1.3 | 1.9 | 2.1 | 2.7 | 3.3 | 3.6 | |
| P8-LF-30X-B | 1.0 | 2.1 | 2.9 | 4.7 | 6.9 | 8.2 | 11.1 | P8-LF-30X-B | 1.3 | 1.9 | 2.1 | 2.6 | 3.2 | 3.4 | 4.0 |
| D8-LF-20X-B | | 1.7 | 2.2 | 3.5 | | | | D8-LF-20X-B | | 1.5 | 1.8 | 2.4 | | | |
| H8-LJ-20X-B | | 2.1 | 2.9 | | | | | H8-LJ-20X-B | | 1.8 | 2.2 | | | | |
| P8-LJ-30X-B | 1.1 | 2.4 | 3.2 | 5.1 | 7.5 | 8.9 | 11.9 | P8-LJ-30X-B | 1.4 | 2.0 | 2.3 | 3.0 | 3.6 | 4.0 | 4.6 |
| H8-LJ-30X-B | 1.1 | 2.3 | 3.0 | 4.7 | 6.8 | 7.9 | | H8-LJ-30X-B | 1.4 | 2.0 | 2.4 | 3.0 | 3.8 | 4.2 | |
| H8-LL-40X-B | 1.4 | 2.8 | 3.6 | 5.7 | 8.1 | 9.4 | | H8-LL-40X-B | 1.7 | 2.4 | 2.8 | 3.7 | 4.7 | 5.3 | |
| H8-LL-30X-B | 1.2 | 2.7 | 3.6 | 5.7 | | | | H8-LL-30X-B | 1.5 | 2.2 | 2.7 | 3.6 | | | |
| P8-LL-40X-B | 1.4 | 2.9 | 3.9 | 6.2 | 9.1 | 10.8 | | P8-LL-40X-B | 1.7 | 2.4 | 2.8 | 3.6 | 4.5 | 5.0 | |
| K9-LL-30X-B | 1.2 | 2.7 | 3.6 | 5.7 | | | | K9-LL-30X-B | 1.5 | 2.2 | 2.6 | 3.6 | | | |
| H8-LSG-40X-B | 1.7 | 3.4 | 4.4 | 6.7 | | | | H8-LSG-40X-B | 1.9 | 2.8 | 3.3 | 4.5 | | | |
| K9-LSG-40X-B | 1.7 | 3.4 | 4.4 | 6.7 | | | | K9-LSG-40X-B | 1.9 | 2.8 | 3.3 | 4.5 | | | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-----|-----|-----|------|--------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| B8-KM-5X-B | | | | 0.8 | 1.2 | 1.5 | 2.2 | B8-KM-5X-B | | | | 0.6 | 0.6 | 0.6 | 0.6 |
| B8-KJ-7X-B | | | | 1.0 | 1.6 | 1.9 | 2.8 | B8-KJ-7X-B | | | | 0.8 | 0.8 | 0.8 | 0.8 |
| B8-KSJ-10X-B | | | | 1.2 | 1.9 | 2.4 | 3.4 | B8-KSJ-10X-B | | | | 0.8 | 0.9 | 1.0 | 0.8 |
| B8-KL-15X-B | | | | 1.4 | 2.2 | 2.6 | 3.7 | B8-KL-15X-B | | | | 0.9 | 1.2 | 1.3 | 1.2 |
| D8-KSL-20X-B | | | | 1.8 | 2.9 | 3.5 | 5.0 | D8-KSL-20X-B | | | | 1.1 | 1.4 | 1.5 | 1.8 |
| H8-KSL-20X-B | | | | 1.9 | 3.0 | 3.7 | 5.4 | H8-KSL-20X-B | | | | 1.2 | 1.5 | 1.6 | 1.8 |
| D8-LE-20X-B | | | | 1.6 | 2.7 | 3.4 | 4.9 | D8-LE-20X-B | | | | 1.4 | 1.4 | 1.4 | 1.4 |
| H8-LE-20X-B | | | | 1.7 | 2.9 | 3.6 | 5.4 | H8-LE-20X-B | | | | 1.5 | 1.5 | 1.5 | 1.5 |
| D8-LF-20X-B | | | | 2.2 | 3.6 | 4.4 | 6.2 | D8-LF-20X-B | | | | 1.7 | 1.7 | 1.7 | 1.7 |
| H8-LJ-20X-B | | | | 2.7 | 4.3 | 5.2 | 7.5 | H8-LJ-20X-B | | | | 2.2 | 2.2 | 2.2 | 2.2 |
| H8-LL-30X-B | | | | 3.2 | 5.2 | 6.4 | 9.2 | H8-LL-30X-B | | | | 2.1 | 2.1 | 2.1 | 2.1 |
| K9-LL-30X-B | | | | 3.2 | 5.3 | 6.5 | 9.3 | K9-LL-30X-B | | | | 2.1 | 2.6 | 2.1 | 2.1 |
| H8-LSG-40X-B | | | | 4.2 | 6.5 | 7.9 | 11.0 | H8-LSG-40X-B | | | | 3.2 | 3.2 | 3.2 | 3.2 |
| K9-LSG-40X-B | | | | 4.2 | 6.6 | 8.0 | 11.1 | K9-LSG-40X-B | | | | 2.5 | 3.2 | 3.6 | 3.6 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

Refrigeration Units With Semi-Hermetic Discus™ Compressors

Copeland™ air-cooled indoor refrigeration units for medium temperature and low temperature applications.

In a further approach to improve compressor performance and reduce compression losses, Emerson engineers developed the Discus valve technology.

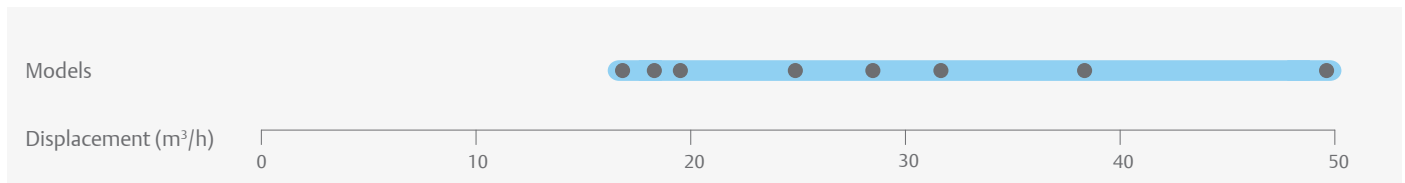
This series of refrigeration units is equipped with 2 or 3 cylinder semi-hermetic compressors with Discus valve technology. The models are specifically suitable for those applications where high efficiency and low energy consumption is required.

The wide range of compressor models combined with 2 or 4 fan high capacity condensers covers most application needs of low temperature and medium temperature applications.



Refrigeration Units with Semi-Hermetic Discus Compressors

Discus Refrigeration Units Line-up



Features and Benefits

- Standard equipment: Discus compressor, condenser with thermally protected fan(s), discharge line with flexible pipe loop or vibration absorber, liquid receiver with shut-off-valve, HP/LP switch with automatic reset, oil pressure safety control OPS2
- Suitable for multiple refrigerants: R407A/F, R448A/R449A, R404A, R134a, R450A and R513A
- Wide range of quality accessories
- Excellent efficiency
- Proven reliability

Maximum Allowable Pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS = 28 bar (g)

Technical Overview

| Model | Displacement (m ³ /h) | Receiver Capacity (l) | Number of fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Width/Depth/Height (mm) | Net Weight (kg) | Motor Version/ Code | Maximum Operating Current (A) | Locked Rotor Current (A) | Sound Pressure @10m - dB(A)*** |
|---------------|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-------------------------|-----------------|---------------------|-------------------------------|--------------------------|--------------------------------|
| | | | | | | | | | 3 Ph** | 3 Ph** | 3 Ph** | |
| P8-2DC-50X-B | 17 | 11.7 | 2 | 220 | 1 3/8 | 5/8 | 950/740/633 | 186.0 | AWM | 9 | 55 | |
| R7-2DD-50X-B | 19 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1130/820/633 | 196.0 | AWM | 10 | 55 | |
| P8-2DL-75X-B | 24 | 11.7 | 2 | 220 | 1 3/8 | 5/8 | 950/740/633 | | AWM | 14 | 82 | 50.0 |
| R7-2DL-75X-B | 24 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1130/820/708 | 205.0 | AWM | 14 | 82 | |
| P8-2DB-50X-B | 28 | 11.7 | 2 | 220 | 1 3/8 | 5/8 | 950/740/633 | 186.0 | AWM | 13 | 55 | 49.6 |
| P8-2DB-75X-B | 28 | 11.7 | 2 | 220 | 1 3/8 | 5/8 | 950/740/633 | 191.0 | AWM | 16 | 82 | 52.0 |
| S9-2DB-75X-B | 28 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1130/820/708 | 212.0 | AWM | 16 | 82 | |
| P8-3DA-50X-B | 32 | 11.7 | 2 | 220 | 1 3/8 | 5/8 | 950/740/633 | 205.0 | AWM | 16 | 55 | 51.6 |
| P8-3DA-75X-B | 32 | 11.7 | 2 | 220 | 1 3/8 | 5/8 | 950/740/633 | 211.0 | AWM | 18 | 106 | 52.0 |
| S9-3DA-75X-B | 32 | 18.9 | 2 | 470 | 1 3/8 | 7/8 | 1330/820/835 | 259.0 | AWM | 18 | 106 | |
| R7-3DC-100X-B | 38 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1129/820/633 | 234.0 | AWM | 21 | 121 | 56.0 |
| R7-3DC-75X-B | 38 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1130/820/633 | 278.0 | AWM | 18 | 82 | 54.6 |
| S9-3DS-100X-B | 50 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1130/820/708 | 239.0 | AWM | 24 | 121 | 54.0 |
| S9-3DS-150X-B | 50 | 15.8 | 2 | 470 | 1 3/8 | 3/4 | 1129/820/708 | 243.0 | AWM | 29 | 123 | 57.0 |

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|------|------|------|------|------|------|---------------|------------------------------|------|------|-----|------|------|------|
| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| P8-2DC-50X-B | | 1.8 | 2.6 | 4.5 | 7.1 | 8.7 | 12.3 | P8-2DC-50X-B | | 1.6 | 1.9 | 2.5 | 3.2 | 3.6 | 4.5 |
| R7-2DD-50X-B | | 2.4 | 3.4 | 5.8 | 9.1 | 11.0 | 15.5 | R7-2DD-50X-B | | 2.2 | 2.5 | 3.2 | 4.0 | 4.4 | 5.2 |
| R7-2DL-75X-B | | | | 7.1 | 10.9 | 13.1 | 18.2 | R7-2DL-75X-B | | | | 4.0 | 5.0 | 5.5 | 6.6 |
| P8-2DB-75X-B | | | | 7.9 | 11.4 | 13.2 | | P8-2DB-75X-B | | | | 4.8 | 6.3 | 7.1 | |
| S9-2DB-75X-B | | | | 8.7 | 13.2 | 15.7 | 21.4 | S9-2DB-75X-B | | | | 4.9 | 6.1 | 6.8 | 8.1 |
| P8-2DB-50X-B | | 3.3* | 4.5* | 7.9 | 11.3 | 13.2 | | P8-2DB-50X-B | | 3.0* | 3.5* | 4.7 | 6.2 | 7.1 | |
| S9-3DA-75X-B | | | | 9.8 | 14.7 | 17.5 | 23.7 | S9-3DA-75X-B | | | | 5.6 | 7.0 | 7.8 | 9.4 |
| P8-3DA-50X-B | | 3.7* | 5.0* | 8.7 | 12.1 | 13.9 | | P8-3DA-50X-B | | 3.4* | 4.1* | 5.6 | 7.4 | 8.5 | |
| P8-3DA-75X-B | | | | 8.5 | 12.2 | 14.2 | | P8-3DA-75X-B | | | | 5.5 | 7.2 | 8.2 | |
| R7-3DC-75X-B | | 4.7* | 6.3* | 11.1 | 15.8 | 18.3 | | R7-3DC-75X-B | | 4.3* | 5.1* | 6.8 | 8.8 | 9.9 | |
| V6-3DC-100X-B | | | | 12.6 | 19.1 | 22.9 | 31.5 | V6-3DC-100X-B | | | | 6.6 | 8.2 | 9.0 | 10.6 |
| R7-3DC-100X-B | | | | 11.1 | 16.2 | 18.9 | | R7-3DC-100X-B | | | | 6.5 | 8.5 | 9.6 | |
| V6-3DS-150X-B | | | | 16.1 | 23.8 | 28.2 | 37.8 | V6-3DS-150X-B | | | | 8.9 | 11.2 | 12.4 | 15.0 |
| S9-3DS-100X-B | | 6.3* | 8.5* | 14.7 | 20.5 | 23.6 | | S9-3DS-100X-B | | 5.7* | 6.7* | 9.0 | 11.8 | 13.4 | |
| W9-3DS-150X-B | | | | 16.3 | 24.2 | 28.7 | 38.8 | W9-3DS-150X-B | | | | 8.8 | 11.1 | 12.3 | 14.7 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
 * Conditions: EN13215: Suction Superheat 10K

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|------|-------|------|------|------|------|-------------|------------------------------|------|------|-----|------|------|------|
| R448A | Cooling Capacity (kW) | | | | | | | R448A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| P8-2DC-50X | | 1.7* | 2.8 | 4.9 | 7.6 | 9.1 | 12.6 | P8-2DC-50X | | 1.6* | 2.0 | 2.7 | 3.4 | 3.8 | 4.6 |
| R7-2DD-50X | | 2.0* | 3.3 | 5.9 | 9.2 | 11.1 | 15.6 | R7-2DD-50X | | 2.1* | 2.5 | 3.3 | 4.1 | 4.5 | 5.3 |
| P8-2DL-75X | | 2.6* | 3.7* | 6.7 | 10.1 | 12.0 | | P8-2DL-75X | | 2.5* | 2.9* | 3.8 | 4.9 | 5.6 | |
| R7-2DL-75X | | 2.8* | 4.2 | 7.1 | 11.0 | 13.4 | 18.8 | R7-2DL-75X | | 2.8* | 3.1 | 4.0 | 5.0 | 5.5 | 6.8 |
| P8-2DB-50X | | 3.6* | 4.8* | 8.0 | 11.4 | 13.3 | | P8-2DB-50X | | 3.1* | 3.6* | 4.8 | 6.4 | 7.2 | |
| P8-2DB-75X | | 3.7* | 5.0* | 8.2 | 11.7 | 13.5 | | P8-2DB-75X | | 3.2* | 3.7* | 5.0 | 6.4 | 7.3 | |
| S9-2DB-75X | | 4.0* | 5.4* | 9.2 | 13.6 | 16.3 | 22.1 | S9-2DB-75X | | 3.4* | 3.9* | 5.0 | 6.2 | 6.8 | 8.3 |
| P8-3DA-50X | | 4.0* | 5.2* | 8.6 | 12.2 | | | P8-3DA-50X | | 3.5* | 4.1* | 5.6 | 7.4 | | |
| P8-3DA-75X | | 3.8* | 5.3* | 9.0 | 13.0 | 15.1 | | P8-3DA-75X | | 3.6* | 4.2* | 5.7 | 7.4 | 8.3 | |
| S9-3DA-75X | | 4.2* | 5.9* | 10.4 | 15.5 | 18.4 | 25.1 | S9-3DA-75X | | 3.8* | 4.4* | 5.8 | 7.1 | 7.9 | 9.4 |
| R7-3DC-100X | | 4.6* | 6.6* | 11.5 | 16.5 | 19.2 | | R7-3DC-100X | | 4.1* | 4.8* | 6.6 | 8.5 | 9.6 | |
| V6-3DC-100X | | 5.2* | 7.8 | 13.1 | 19.7 | 23.4 | 32.0 | V6-3DC-100X | | 4.4* | 5.2 | 6.7 | 8.2 | 9.1 | 10.8 |
| R7-3DC-75X | | 5.1* | 6.7* | 11.0 | 15.8 | 18.4 | | R7-3DC-75X | | 4.5* | 5.1* | 6.8 | 8.7 | 9.8 | |
| S9-3DS-100X | | 7.0* | 9.0* | 14.8 | 21.2 | | | S9-3DS-100X | | 5.8* | 6.8* | 9.1 | 11.9 | | |
| S9-3DS-150X | | 7.3* | 9.5* | 15.3 | 21.2 | 24.3 | | S9-3DS-150X | | 6.1* | 7.0* | 9.3 | 11.9 | 13.3 | |
| V6-3DS-150X | | 7.8* | 10.3* | 16.9 | 24.5 | 28.8 | 38.2 | V6-3DS-150X | | 6.3* | 7.2* | 9.2 | 11.4 | 12.6 | 15.2 |
| W9-3DS-150X | | 7.8* | 10.4* | 17.2 | 24.9 | 29.4 | 39.2 | W9-3DS-150X | | 6.3* | 7.2* | 9.1 | 11.3 | 12.5 | 15.0 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K
 * Conditions: EN13215: Suction Superheat 10K

Preliminary Data

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|------|-------|------|------|------|------|-------------|------------------------------|------|------|-----|------|------|------|
| R449A | Cooling Capacity (kW) | | | | | | | R449A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| P8-2DC-50X | | 1.7* | 2.8 | 4.9 | 7.6 | 9.1 | 12.6 | P8-2DC-50X | | 1.6* | 2.0 | 2.7 | 3.4 | 3.8 | 4.6 |
| R7-2DD-50X | | 2.0* | 3.3 | 5.9 | 9.2 | 11.1 | 15.6 | R7-2DD-50X | | 2.1* | 2.5 | 3.3 | 4.1 | 4.5 | 5.3 |
| P8-2DL-75X | | 2.6* | 3.7* | 6.7 | 10.1 | 12.0 | | P8-2DL-75X | | 2.5* | 2.9* | 3.8 | 4.9 | 5.6 | |
| R7-2DL-75X | | 2.8* | 4.2 | 7.1 | 11.0 | 13.4 | 18.8 | R7-2DL-75X | | 2.8* | 3.1 | 4.0 | 5.0 | 5.5 | 6.8 |
| P8-2DB-50X | | 3.6* | 4.8* | 8.0 | 11.4 | 13.3 | | P8-2DB-50X | | 3.1* | 3.6* | 4.8 | 6.4 | 7.2 | |
| P8-2DB-75X | | 3.7* | 4.9* | 8.2 | 11.7 | 13.5 | | P8-2DB-75X | | 3.2* | 3.7* | 5.0 | 6.4 | 7.3 | |
| S9-2DB-75X | | 4.0* | 5.4* | 9.2 | 13.6 | 16.3 | 22.1 | S9-2DB-75X | | 3.4* | 3.9* | 5.0 | 6.2 | 6.8 | 8.3 |
| P8-3DA-50X | | 4.0* | 5.2* | 8.6 | 12.2 | | | P8-3DA-50X | | 3.5* | 4.1* | 5.6 | 7.4 | | |
| P8-3DA-75X | | 3.8* | 5.2* | 9.0 | 13.0 | 15.1 | | P8-3DA-75X | | 3.6* | 4.2* | 5.7 | 7.4 | 8.3 | |
| S9-3DA-75X | | 4.2* | 5.9* | 10.4 | 15.5 | 18.4 | 25.1 | S9-3DA-75X | | 3.8* | 4.4* | 5.8 | 7.1 | 7.9 | 9.4 |
| R7-3DC-100X | | 4.6* | 6.6* | 11.5 | 16.5 | 19.2 | | R7-3DC-100X | | 4.1* | 4.8* | 6.6 | 8.5 | 9.6 | |
| V6-3DC-100X | | 5.2* | 7.8 | 13.1 | 19.7 | 23.4 | 32.0 | V6-3DC-100X | | 4.4* | 5.2 | 6.7 | 8.2 | 9.1 | 10.8 |
| R7-3DC-75X | | 5.1* | 6.6* | 11.0 | 15.8 | 18.4 | | R7-3DC-75X | | 4.5* | 5.1* | 6.8 | 8.7 | 9.8 | |
| S9-3DS-100X | | 6.9* | 9.0* | 14.8 | 21.2 | | | S9-3DS-100X | | 5.8* | 6.8* | 9.1 | 11.9 | | |
| S9-3DS-150X | | 7.3* | 9.5* | 15.3 | 21.2 | 24.3 | | S9-3DS-150X | | 6.1* | 7.0* | 9.3 | 11.9 | 13.3 | |
| V6-3DS-150X | | 7.8* | 10.3* | 16.9 | 24.5 | 28.8 | 38.2 | V6-3DS-150X | | 6.3* | 7.2* | 9.2 | 11.4 | 12.6 | 15.2 |
| W9-3DS-150X | | 7.8* | 10.4* | 17.2 | 24.9 | 29.4 | 39.2 | W9-3DS-150X | | 6.3* | 7.2* | 9.1 | 11.3 | 12.5 | 15.0 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|------|------|------|------|------|---------------|------------------------------|-----|-----|------|------|------|------|
| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| P8-2DC-50X-B | | 2.4 | 3.2 | 5.2 | 7.9 | 9.5 | 13.0 | P8-2DC-50X-B | | 2.0 | 2.3 | 3.0 | 3.7 | 4.0 | 4.7 |
| R7-2DD-50X-B | | 3.1 | 4.1 | 6.7 | 9.9 | 11.7 | 15.9 | R7-2DD-50X-B | | 2.6 | 3.0 | 3.8 | 4.5 | 4.9 | 5.6 |
| R7-2DL-75X-B | | 3.8 | 5.0 | 8.0 | 11.8 | 13.9 | 18.6 | R7-2DL-75X-B | | 3.2 | 3.6 | 4.5 | 5.6 | 6.1 | 7.3 |
| P8-2DB-75X-B | | 4.8 | 6.0 | 8.9 | 12.2 | 14.0 | | P8-2DB-75X-B | | 3.7 | 4.2 | 5.5 | 6.9 | 7.7 | |
| S9-2DB-75X-B | | 5.1 | 6.5 | 10.0 | 14.2 | 16.7 | 21.9 | S9-2DB-75X-B | | 3.9 | 4.4 | 5.6 | 6.9 | 7.6 | 8.9 |
| P8-2DB-50X-B | 2.0* | 4.6 | 5.9 | 8.9 | 12.3 | | | P8-2DB-50X-B | 2.5* | 3.4 | 4.0 | 5.4 | 7.0 | | |
| P8-3DA-50X-B | 2.3* | 5.4 | 6.7 | 9.6 | 12.9 | | | P8-3DA-50X-B | 2.9* | 4.2 | 5.0 | 6.5 | 8.3 | | |
| P8-3DA-75X-B | | 5.0 | 6.5 | 9.8 | 13.5 | 15.4 | | P8-3DA-75X-B | | 4.1 | 4.8 | 6.4 | 8.1 | 9.0 | |
| S9-3DA-75X-B | | 5.4 | 7.1 | 11.2 | 16.0 | 18.7 | 24.5 | S9-3DA-75X-B | | 4.4 | 5.1 | 6.5 | 8.0 | 8.7 | 10.3 |
| R7-3DC-75X-B | 3.1* | 6.7 | 8.4 | 12.1 | 16.2 | | | R7-3DC-75X-B | 3.9* | 5.4 | 6.2 | 7.9 | 9.9 | | |
| R7-3DC-100X-B | | 6.3 | 8.2 | 12.3 | 16.6 | 18.9 | | R7-3DC-100X-B | | 5.1 | 5.9 | 7.8 | 9.8 | 10.8 | |
| V6-3DC-100X-B | | 7.1 | 9.3 | 14.6 | 20.9 | 24.5 | 32.5 | V6-3DC-100X-B | | 5.4 | 6.2 | 7.8 | 9.3 | 10.1 | 11.5 |
| S9-3DS-100X-B | 4.2* | 9.0 | 11.3 | 16.2 | 21.5 | | | S9-3DS-100X-B | 5.1* | 7.1 | 8.2 | 10.7 | 13.5 | | |
| V6-3DS-150X-B | | 9.4 | 12.2 | 18.5 | 25.9 | 30.1 | 39.1 | V6-3DS-150X-B | | 7.1 | 8.2 | 10.6 | 12.9 | 14.1 | 16.3 |
| W9-3DS-150X-B | | 9.4 | 12.2 | 18.7 | 26.2 | 30.5 | 39.7 | W9-3DS-150X-B | | 7.1 | 8.2 | 10.5 | 12.9 | 14.0 | 16.2 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Capacity Data

| Ambient Temperature: 32°C | | | | | | | | | | | | | | | |
|---------------------------|------------------------------|-----|-----|-----|-----|-----|------|--------------|------------------------------|-----|-----|-----|-----|-----|-----|
| R134a | Cooling Capacity (kW) | | | | | | | R134a | Power Input (kW) | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| B8-KM-5X-B | | | | 0.8 | 1.2 | 1.5 | 2.2 | B8-KM-5X-B | | | | 0.6 | 0.6 | 0.6 | 0.6 |
| B8-KJ-7X-B | | | | 1.0 | 1.6 | 1.9 | 2.8 | B8-KJ-7X-B | | | | 0.8 | 0.8 | 0.8 | 0.8 |
| B8-KSJ-10X-B | | | | 1.2 | 1.9 | 2.4 | 3.4 | B8-KSJ-10X-B | | | | 0.8 | 0.9 | 1.0 | 0.8 |
| B8-KL-15X-B | | | | 1.4 | 2.2 | 2.6 | 3.7 | B8-KL-15X-B | | | | 0.9 | 1.2 | 1.3 | 1.2 |
| D8-KSL-20X-B | | | | 1.8 | 2.9 | 3.5 | 5.0 | D8-KSL-20X-B | | | | 1.1 | 1.4 | 1.5 | 1.8 |
| H8-KSL-20X-B | | | | 1.9 | 3.0 | 3.7 | 5.4 | H8-KSL-20X-B | | | | 1.2 | 1.5 | 1.6 | 1.8 |
| D8-LE-20X-B | | | | 1.6 | 2.7 | 3.4 | 4.9 | D8-LE-20X-B | | | | 1.4 | 1.4 | 1.4 | 1.4 |
| H8-LE-20X-B | | | | 1.7 | 2.9 | 3.6 | 5.4 | H8-LE-20X-B | | | | 1.5 | 1.5 | 1.5 | 1.5 |
| D8-LF-20X-B | | | | 2.2 | 3.6 | 4.4 | 6.2 | D8-LF-20X-B | | | | 1.7 | 1.7 | 1.7 | 1.7 |
| H8-LJ-20X-B | | | | 2.7 | 4.3 | 5.2 | 7.5 | H8-LJ-20X-B | | | | 2.2 | 2.2 | 2.2 | 2.2 |
| H8-LL-30X-B | | | | 3.2 | 5.2 | 6.4 | 9.2 | H8-LL-30X-B | | | | 2.1 | 2.1 | 2.1 | 2.1 |
| K9-LL-30X-B | | | | 3.2 | 5.3 | 6.5 | 9.3 | K9-LL-30X-B | | | | 2.1 | 2.6 | 2.1 | 2.1 |
| H8-LSG-40X-B | | | | 4.2 | 6.5 | 7.9 | 11.0 | H8-LSG-40X-B | | | | 3.2 | 3.2 | 3.2 | 3.2 |
| K9-LSG-40X-B | | | | 4.2 | 6.6 | 8.0 | 11.1 | K9-LSG-40X-B | | | | 2.5 | 3.2 | 3.6 | 3.6 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

Refer to Emerson's Select software for R450A and R513A capacity data.



Refrigeration Units With Semi-Hermetic Stream Compressors and CoreSense™ Diagnostics

Copeland air-cooled indoor refrigeration units for low, medium and high temperature applications.

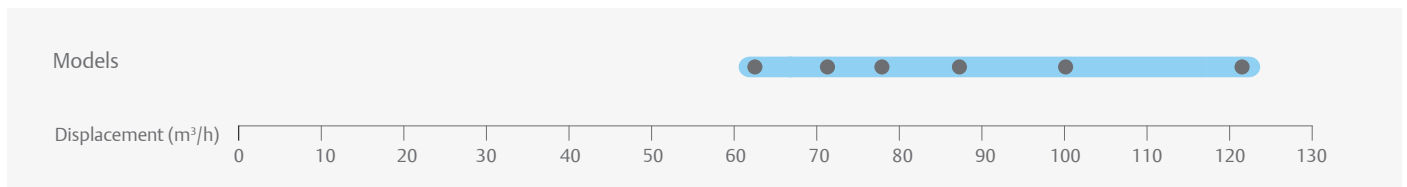
This series of refrigeration units is equipped with 4 or 6 cylinder high performance semi-hermetic Stream compressors. The advanced protection and diagnostic features reduce service costs and system downtime. These models are specifically suitable for those applications where high efficiency and reliability is required to achieve low lifecycle costs.

Multiple refrigerant approvals and wide range of accessories improve flexibility in system design.



Refrigeration Units with Semi-Hermetic Stream Compressors and CoreSense™ Diagnostics

Refrigeration Units With Stream Compressor Line-up



Features and Benefits

- Standard equipment: Stream compressor with CoreSense Diagnostics, condenser with thermally protected fan(s), discharge line with flexible pipe loop or vibration absorber, liquid receiver with shut-off-valve, HP/LP switch with automatic reset.
- Suitable for multiple refrigerants: R407A/F, R448A/R449A, R404A, R134a, R450A and R513A
- Wide range of quality accessories
- Excellent efficiency
- Proven reliability

Maximum Allowable Pressures (PS)

- Low pressure side = 22.5 bar
- High pressure side = 28 bar

CoreSense Diagnostics Features

- Motor and oil protection
- Storage of compressor asset and advanced runtime information
- Runtime and alarm signalling using multicoloured LED flash-codes
- System communication via Modbus
- Compressor power sensing

Technical Overview

| Model | Displacement (m ³ /h) | Receiver Capacity (l) | Number of Fans | Total Fan Motor Power (W) | Suction Line Diameter (inch) | Liquid Line Diameter (inch) | Net Weight (kg) | Motor Version/ Code | Maximum Operating Current (A) | Locked Rotor Current (A) | Sound Pressure @10m - dB(A)*** |
|-------------|----------------------------------|-----------------------|----------------|---------------------------|------------------------------|-----------------------------|-----------------|---------------------|-------------------------------|--------------------------|--------------------------------|
| | | | | | | | | 3 Ph** | 3 Ph** | 3 Ph** | |
| W99-6MI-40X | 121 | 47.9 | 4 | 1600 | 2 1/8 | 7/8 | 521.0 | AWM | 71 | 304 | 59.0 |
| Z9-4MA-22X | 62 | 18.9 | 4 | 1600 | 1 5/8 | 7/8 | 383.0 | AWM | 36 | 175 | 59.0 |
| V6-4ML-15X | 71 | 18.9 | 2 | 800 | 1 5/8 | 7/8 | 303.0 | AWM | 35 | 156 | 57.0 |
| V6-4MF-13X | 62 | 18.9 | 2 | 800 | 1 5/8 | 7/8 | 295.0 | AWM | 31 | 105 | 57.0 |
| Z9-4MH-25X | 71 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 389.0 | AWM | 42 | 199 | 59.0 |
| Z9-4MM-20X | 71 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 388.0 | AWM | 39 | 175 | |
| Z9-4MI-30X | 78 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 416.0 | AWM | 47 | 221 | 59.0 |
| Z9-4MT-22X | 71 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 389.0 | AWM | 45 | 175 | |
| Z9-4MJ-33X | 88 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 416.0 | AWM | 53 | 221 | 59.0 |
| W9-4MT-22X | 88 | 18.9 | 2 | 800 | 2 1/8 | 7/8 | 358.0 | AWM | 45 | 175 | 59.0 |
| W9-4MM-20X | 78 | 18.9 | 2 | 800 | 2 1/8 | 7/8 | 358.0 | AWM | 39 | 175 | 57.0 |
| Z9-4MU-25X | 100 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 392.0 | AWM | 52 | 199 | 59.0 |
| Z9-6MM-30X | 121 | 18.9 | 4 | 1600 | 2 1/8 | 7/8 | 410.0 | AWM | 60 | 255 | 59.0 |
| W99-4MK-35X | 121 | 47.9 | 4 | 1600 | 2 1/8 | 7/8 | 504.0 | AWM | 61 | 255 | 59.0 |
| Z9-4ML-15X | 71 | 18.9 | 4 | 1600 | 1 5/8 | 7/8 | 386.0 | AWM | 35 | 156 | |

** 3 Ph: 380-420V/ 50Hz

*** @ 10m: sound pressure level at 10m distance from the compressor, free field condition

Capacity Data

| R407A | Cooling Capacity (kW) | | | | | | | R407A | Power Input (kW) | | | | | | |
|-------------|------------------------------|-------|-------|------|------|------|------|-------------|------------------------------|-------|-------|------|------|------|------|
| | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| V6-4MF-13X | | 7.5* | 10.3* | 18.4 | 26.5 | 31.0 | | V6-4MF-13X | | 6.9* | 8.1* | 10.9 | 14.0 | 15.8 | |
| Z9-4MA-22X | | | | 20.9 | 32.0 | 38.7 | 54.5 | Z9-4MA-22X | | | | 11.0 | 13.3 | 14.5 | 17.0 |
| Z9-4ML-15X | | 10.2* | 15.2 | 24.6 | 36.7 | 43.8 | | Z9-4ML-15X | | 8.9* | 10.2 | 12.9 | 15.8 | 17.4 | |
| Z9-4MH-25X | | | | 24.4 | 36.6 | 43.9 | 60.9 | Z9-4MH-25X | | | | 12.9 | 15.7 | 17.1 | 20.0 |
| V6-4ML-15X | | 9.3* | 12.6* | 21.7 | 30.9 | 35.9 | | V6-4ML-15X | | 8.2* | 9.6* | 12.9 | 16.7 | 18.9 | |
| Z9-4MI-30X | | | | 26.6 | 40.0 | 47.9 | 66.1 | Z9-4MI-30X | | | | 14.2 | 17.4 | 19.0 | 22.5 |
| Z9-4MM-20X | | 11.4* | 16.7 | 26.7 | 39.6 | 47.2 | | Z9-4MM-20X | | 9.7* | 11.2 | 14.3 | 17.6 | 19.3 | |
| W9-4MM-20X | | 10.5* | 14.0* | 23.8 | 33.8 | 39.2 | | W9-4MM-20X | | 9.0* | 10.6* | 14.3 | 18.5 | 20.9 | |
| Z9-4MJ-33X | | | | 29.3 | 43.6 | 52.0 | 71.2 | Z9-4MJ-33X | | | | 15.9 | 19.6 | 21.5 | 25.8 |
| W9-4MT-22X | | 11.1* | 14.7* | 25.1 | 35.2 | 40.6 | | W9-4MT-22X | | 10.3* | 12.1* | 16.4 | 21.4 | 24.3 | |
| Z9-4MT-22X | | 12.1* | 17.9 | 28.4 | 41.9 | 49.8 | | Z9-4MT-22X | | 10.9* | 12.6 | 16.2 | 20.1 | 22.2 | |
| W99-4MK-35X | | | | 32.4 | 47.9 | 56.8 | 76.6 | W99-4MK-35X | | | | 18.1 | 22.6 | 25.0 | 30.4 |
| Z9-4MU-25X | | 13.2* | 19.8 | 31.7 | 46.5 | 55.0 | | Z9-4MU-25X | | 12.1* | 14.0 | 18.1 | 22.8 | 25.5 | |
| Z9-6MM-30X | | 15.8* | 23.7 | 37.5 | 54.5 | 64.0 | | Z9-6MM-30X | | 14.2* | 16.5 | 21.7 | 27.6 | 30.9 | |
| W99-6MI-40X | | | | 38.4 | 56.2 | 66.1 | 87.7 | W99-6MI-40X | | | | 21.6 | 27.3 | 30.5 | 37.5 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

| R407F | Cooling Capacity (kW) | | | | | | | R407F | Power Input (kW) | | | | | | |
|-------------|------------------------------|-------|-------|-------|-------|------|------|-------------|------------------------------|-------|-------|-------|-------|------|------|
| | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Z9-4MA-22X | | | | 21.3* | 34.0 | 41.1 | 57.5 | Z9-4MA-22X | | | | 11.7* | 14.2 | 15.5 | 18.0 |
| V6-4MF-13X | | 8.0* | 11.0* | 18.1* | 27.5 | 32.1 | | V6-4MF-13X | | 7.2* | 8.5* | 11.4* | 14.9 | 16.8 | |
| V6-4ML-15X | | 9.9* | 13.3* | 21.4* | 32.4 | | | V6-4ML-15X | | 8.6* | 10.1* | 13.6* | 17.9 | | |
| Z9-4MH-25X | | | | 24.4* | 38.7 | 46.5 | 64.6 | Z9-4MH-25X | | | | 13.5* | 16.6 | 18.1 | 21.3 |
| Z9-4MI-30X | | | | 26.9* | 42.0 | 50.2 | 68.8 | Z9-4MI-30X | | | | 14.7* | 18.2 | 20.0 | 23.9 |
| W9-4MM-20X | | 10.9* | 14.6* | 23.3* | 35.1 | | | W9-4MM-20X | | 9.6* | 11.2* | 15.0* | 19.6 | | |
| Z9-4MJ-33X | | | | 29.6* | 45.9 | 54.5 | 74.1 | Z9-4MJ-33X | | | | 16.6* | 20.6 | 22.9 | 27.7 |
| W9-4MT-22X | | 12.4* | 16.4* | 25.5* | 36.1* | | | W9-4MT-22X | | 10.9* | 12.7* | 17.2* | 22.8* | | |
| Z9-4MU-25X | | 14.8* | 19.8* | 32.2* | 49.5 | 58.5 | | Z9-4MU-25X | | 12.7* | 14.7* | 19.1* | 24.4 | 27.3 | |
| W99-4MK-35X | | | | 32.5* | 50.1 | 59.3 | 79.8 | W99-4MK-35X | | | | 18.8* | 23.6 | 26.4 | 32.7 |
| W99-6MI-40X | | | | 38.4* | 59.0 | 69.3 | 91.6 | W99-6MI-40X | | | | 22.6* | 28.9 | 32.4 | 40.2 |
| Z9-6MM-30X | | 17.7* | 23.7* | 38.1* | 58.0 | 68.1 | | Z9-6MM-30X | | 15.1* | 17.4* | 22.8* | 29.3 | 32.8 | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Capacity Data

| R448A | Cooling Capacity (kW) | | | | | | | R448A | Power Input (kW) | | | | | | |
|-------------|------------------------------|-------|-------|------|------|------|------|-------------|------------------------------|-------|-------|------|------|------|------|
| | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Z9-4MA-22X | | 9.0* | 13.1 | 21.8 | 33.6 | 40.8 | 57.8 | Z9-4MA-22X | | 7.8* | 9.0 | 11.3 | 13.6 | 14.8 | 17.2 |
| V6-4MF-13X | | 8.4* | 11.0* | 18.2 | 25.8 | 30.1 | | V6-4MF-13X | | 7.0* | 8.2* | 11.1 | 14.4 | 16.3 | |
| Z9-4MH-25X | | 10.6* | 15.2 | 24.9 | 37.5 | 45.0 | 62.2 | Z9-4MH-25X | | 9.1* | 10.4 | 13.2 | 16.1 | 17.7 | 20.9 |
| V6-4ML-15X | | 10.5* | 13.8* | 22.4 | 31.6 | 36.6 | | V6-4ML-15X | | 8.4* | 9.8* | 13.2 | 17.3 | 19.7 | |
| Z9-4ML-15X | | 11.5* | 16.0 | 25.3 | 37.3 | 44.3 | | Z9-4ML-15X | | 9.1* | 10.4 | 13.2 | 16.3 | 17.9 | |
| Z9-4MI-30X | | 11.9* | 17.2 | 27.9 | 41.7 | 49.7 | 68.2 | Z9-4MI-30X | | 9.8* | 11.4 | 14.6 | 17.9 | 19.7 | 23.2 |
| W9-4MM-20X | | 11.7* | 15.3* | 24.5 | 34.1 | 39.2 | | W9-4MM-20X | | 9.3* | 10.9* | 14.6 | 19.3 | 22.0 | |
| Z9-4MM-20X | | 12.7* | 17.6 | 27.7 | 40.3 | 47.5 | | Z9-4MM-20X | | 10.0* | 11.4 | 14.5 | 18.0 | 20.0 | |
| Z9-4MJ-33X | | 13.2* | 18.8 | 30.3 | 45.0 | 53.6 | 73.3 | Z9-4MJ-33X | | 10.8* | 12.5 | 16.2 | 20.2 | 22.3 | 26.8 |
| W9-4MT-22X | | 13.1* | 16.9* | 27.0 | 37.2 | | | W9-4MT-22X | | 10.5* | 12.4* | 16.7 | 22.1 | | |
| Z9-4MT-22X | | 14.4* | 18.8* | 30.7 | 44.5 | 52.4 | | Z9-4MT-22X | | 11.2* | 12.8* | 16.4 | 20.5 | 22.8 | |
| W99-4MK-35X | | 14.7* | 19.8* | 33.4 | 49.3 | 58.5 | 79.3 | W99-4MK-35X | | 12.3* | 14.2* | 18.6 | 23.3 | 25.9 | 31.3 |
| Z9-4MU-25X | | 15.2* | 20.0* | 33.1 | 48.3 | 57.1 | | Z9-4MU-25X | | 12.3* | 14.2* | 18.5 | 23.6 | 26.5 | |
| W99-6MI-40X | | 17.8* | 23.9* | 40.0 | 57.7 | 67.5 | 88.5 | W99-6MI-40X | | 14.5* | 16.9* | 21.9 | 27.7 | 30.9 | 37.9 |
| Z9-6MM-30X | | 18.3* | 24.0* | 39.1 | 55.5 | 64.6 | | Z9-6MM-30X | | 14.6* | 16.9* | 22.2 | 28.1 | 31.4 | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

| R449A | Cooling Capacity (kW) | | | | | | | R449A | Power Input (kW) | | | | | | |
|-------------|------------------------------|-------|-------|------|------|------|------|-------------|------------------------------|-------|-------|------|------|------|------|
| | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Z9-4MA-22X | | 9.0* | 13.1 | 21.8 | 33.6 | 40.8 | 57.8 | Z9-4MA-22X | | 7.8* | 9.0 | 11.3 | 13.6 | 14.8 | 17.2 |
| V6-4MF-13X | | 8.4* | 11.0* | 18.2 | 25.8 | 30.1 | | V6-4MF-13X | | 7.0* | 8.2* | 11.1 | 14.4 | 16.3 | |
| Z9-4MH-25X | | 10.5* | 15.2 | 24.9 | 37.5 | 45.0 | 62.2 | Z9-4MH-25X | | 9.1* | 10.4 | 13.2 | 16.1 | 17.7 | 20.9 |
| V6-4ML-15X | | 10.4* | 13.7* | 22.4 | 31.6 | 36.6 | | V6-4ML-15X | | 8.4* | 9.8* | 13.2 | 17.3 | 19.7 | |
| Z9-4ML-15X | | 11.4* | 16.0 | 25.3 | 37.3 | 44.3 | | Z9-4ML-15X | | 9.1* | 10.4 | 13.2 | 16.3 | 17.9 | |
| W9-4MM-20X | | 11.7* | 15.2* | 24.5 | 34.1 | 39.2 | | W9-4MM-20X | | 9.3* | 10.9* | 14.6 | 19.3 | 22.0 | |
| Z9-4MJ-33X | | 13.2* | 18.8 | 30.3 | 45.0 | 53.6 | 73.3 | Z9-4MJ-33X | | 10.8* | 12.5 | 16.2 | 20.2 | 22.3 | 26.8 |
| W9-4MT-22X | | 13.1* | 16.9* | 27.0 | 37.2 | | | W9-4MT-22X | | 10.5* | 12.4* | 16.7 | 22.1 | | |
| Z9-4MT-22X | | 14.3* | 18.8* | 30.7 | 44.5 | 52.4 | | Z9-4MT-22X | | 11.2* | 12.8* | 16.4 | 20.5 | 22.8 | |
| W99-4MK-35X | | 14.7* | 19.7* | 33.4 | 49.3 | 58.5 | 79.3 | W99-4MK-35X | | 12.3* | 14.2* | 18.6 | 23.3 | 25.9 | 31.3 |
| Z9-4MU-25X | | 15.1* | 19.9* | 33.1 | 48.3 | 57.1 | | Z9-4MU-25X | | 12.3* | 14.2* | 18.5 | 23.6 | 26.5 | |
| W99-6MI-40X | | 17.7* | 23.8* | 40.0 | 57.7 | 67.5 | 88.5 | W99-6MI-40X | | 14.5* | 16.9* | 21.9 | 27.7 | 30.9 | 37.9 |
| Z9-6MM-30X | | 18.2* | 24.0* | 39.1 | 55.5 | 64.6 | | Z9-6MM-30X | | 14.6* | 16.9* | 22.2 | 28.1 | 31.4 | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

Preliminary Data

Capacity Data

| R404A | Cooling Capacity (kW) | | | | | | | R404A | Power Input (kW) | | | | | | |
|-------------|------------------------------|------|------|------|------|------|------|-------------|------------------------------|------|------|------|------|------|------|
| | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Z9-4MA-22X | | 11.7 | 15.3 | 24.0 | 34.8 | 41.0 | 55.0 | Z9-4MA-22X | | 8.9 | 10.1 | 12.5 | 14.9 | 16.0 | 18.2 |
| V6-4MF-13X | 4.3* | 10.8 | 13.7 | 20.4 | 28.4 | 32.8 | | V6-4MF-13X | 5.8* | 8.2 | 9.5 | 12.3 | 15.3 | 16.9 | |
| V6-4ML-15X | 5.4* | 13.0 | 16.4 | 23.9 | 32.6 | 37.2 | | V6-4ML-15X | 7.1* | 9.9 | 11.5 | 14.9 | 18.7 | 20.6 | |
| Z9-4MH-25X | | 13.4 | 17.5 | 27.3 | 39.6 | 46.7 | 62.8 | Z9-4MH-25X | | 10.2 | 11.6 | 14.6 | 17.6 | 19.1 | 22.0 |
| Z9-4ML-15X | 5.9* | 14.2 | 18.1 | 27.7 | 39.5 | 46.3 | | Z9-4ML-15X | 7.9* | 10.5 | 12.0 | 15.0 | 18.0 | 19.4 | |
| Z9-4MM-20X | 6.8* | 15.9 | 20.1 | 30.2 | 42.5 | 49.4 | | Z9-4MM-20X | 8.7* | 11.6 | 13.1 | 16.3 | 19.7 | 21.3 | |
| W9-4MM-20X | 6.3* | 14.5 | 18.1 | 25.9 | 34.6 | 39.2 | | W9-4MM-20X | 7.9* | 11.0 | 12.7 | 16.5 | 20.7 | 23.0 | |
| Z9-4MI-30X | | 15.4 | 20.0 | 30.5 | 43.1 | 50.3 | 66.1 | Z9-4MI-30X | | 11.4 | 13.0 | 16.3 | 19.6 | 21.2 | 24.6 |
| Z9-4MJ-33X | | 17.0 | 21.8 | 33.2 | 46.9 | 54.6 | 71.6 | Z9-4MJ-33X | | 12.4 | 14.2 | 17.9 | 21.8 | 23.8 | 27.8 |
| W9-4MT-22X | 7.2* | 15.9 | 19.7 | 28.1 | 37.6 | | | W9-4MT-22X | 8.8* | 12.4 | 14.4 | 18.7 | 23.6 | | |
| Z9-4MT-22X | 7.9* | 17.7 | 22.2 | 33.3 | 46.9 | 54.6 | | Z9-4MT-22X | 9.6* | 13.0 | 14.7 | 18.5 | 22.4 | 24.4 | |
| W99-4MK-35X | | 18.9 | 24.1 | 36.5 | 51.3 | 59.6 | 77.8 | W99-4MK-35X | | 14.1 | 16.2 | 20.5 | 25.2 | 27.6 | 32.4 |
| Z9-4MU-25X | 8.4* | 19.2 | 24.2 | 36.1 | 50.7 | | | Z9-4MU-25X | 10.5* | 14.4 | 16.5 | 20.9 | 25.5 | | |
| W99-6MI-40X | | 22.1 | 28.2 | 42.3 | 58.8 | 67.9 | 87.3 | W99-6MI-40X | | 16.8 | 19.3 | 24.8 | 30.6 | 33.6 | 40.0 |
| Z9-6MM-30X | 10.1* | 22.8 | 28.4 | 41.8 | 58.1 | 67.2 | | Z9-6MM-30X | 12.8* | 17.5 | 20.0 | 25.3 | 31.2 | 34.3 | |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

* Conditions: EN13215: Suction Superheat 10K

| R407C | Cooling Capacity (kW) | | | | | | | R407C | Power Input (kW) | | | | | | |
|-------------|------------------------------|-----|-----|------|------|------|------|-------------|------------------------------|-----|-----|------|------|------|------|
| | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | | |
| | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Z9-4MA-22X | | | | 20.0 | 30.4 | 36.7 | 51.5 | Z9-4MA-22X | | | | 10.7 | 12.9 | 13.9 | 16.0 |
| Z9-4MH-25X | | | | 22.7 | 34.8 | 42.0 | 58.8 | Z9-4MH-25X | | | | 12.2 | 14.8 | 16.1 | 18.8 |
| Z9-4MI-30X | | | | 25.3 | 38.3 | 46.0 | 64.0 | Z9-4MI-30X | | | | 13.4 | 16.4 | 18.0 | 21.1 |
| Z9-4MJ-33X | | | | 27.8 | 42.0 | 50.4 | 69.6 | Z9-4MJ-33X | | | | 14.8 | 18.4 | 20.2 | 24.3 |
| W99-4MK-35X | | | | 31.9 | 47.7 | 56.9 | 77.5 | W99-4MK-35X | | | | 16.9 | 21.2 | 23.5 | 28.5 |
| W99-6MI-40X | | | | 36.2 | 53.5 | 63.3 | 84.5 | W99-6MI-40X | | | | 20.0 | 25.5 | 28.4 | 34.9 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

Preliminary Data

Capacity Data

| R134a | | Cooling Capacity (kW) | | | | | | R134a | | Power Input (kW) | | | | | |
|-------------|-----|------------------------------|-----|------|------|------|------|-------------|-----|------------------------------|-----|------|------|------|------|
| | | Ambient Temperature: 32°C | | | | | | | | Ambient Temperature: 32°C | | | | | |
| | | Evaporating Temperature (°C) | | | | | | | | Evaporating Temperature (°C) | | | | | |
| Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 | Model | -45 | -35 | -30 | -20 | -10 | -5 | +5 |
| Z9-4MA-22X | | | | 14.0 | 21.9 | 26.9 | 39.1 | Z9-4MA-22X | | | | 7.4 | 8.8 | 9.4 | 10.6 |
| V6-4MF-13X | | | | 12.4 | 19.6 | 23.8 | 33.8 | V6-4MF-13X | | | | 6.6 | 8.2 | 9.1 | 10.9 |
| Z9-4ML-15X | | | | 15.7 | 24.8 | 30.5 | 44.0 | Z9-4ML-15X | | | | 8.3 | 10.0 | 10.9 | 12.5 |
| Z9-4MH-25X | | | | 15.8 | 24.9 | 30.6 | 44.4 | Z9-4MH-25X | | | | 8.5 | 10.2 | 11.1 | 12.6 |
| V6-4ML-15X | | | | 14.8 | 22.9 | 27.7 | 38.6 | V6-4ML-15X | | | | 7.7 | 9.8 | 10.9 | 13.2 |
| W9-4MM-20X | | | | 16.4 | 25.2 | 30.3 | 42.1 | W9-4MM-20X | | | | 8.5 | 10.8 | 12.0 | 14.6 |
| Z9-4MI-30X | | | | 17.5 | 27.2 | 33.3 | 47.9 | Z9-4MI-30X | | | | 9.1 | 11.0 | 12.0 | 13.8 |
| Z9-4MM-20X | | | | 17.3 | 27.1 | 33.2 | 47.6 | Z9-4MM-20X | | | | 9.1 | 11.0 | 12.0 | 13.8 |
| Z9-4MJ-33X | | | | 19.5 | 30.1 | 36.7 | 52.4 | Z9-4MJ-33X | | | | 10.2 | 12.3 | 13.4 | 15.5 |
| Z9-4MT-22X | | | | 19.6 | 30.4 | 37.1 | 52.9 | Z9-4MT-22X | | | | 10.2 | 12.4 | 13.6 | 15.9 |
| W9-4MT-22X | | | | 18.5 | 28.0 | 33.6 | 45.9 | W9-4MT-22X | | | | 9.7 | 12.3 | 13.7 | 16.9 |
| Z9-4MU-25X | | | | 21.2 | 33.3 | 40.6 | 57.9 | Z9-4MU-25X | | | | 11.3 | 14.0 | 15.4 | 18.3 |
| W99-4MK-35X | | | | 21.8 | 33.7 | 41.0 | 58.5 | W99-4MK-35X | | | | 11.2 | 13.8 | 15.2 | 18.0 |
| Z9-6MM-30X | | | | 25.3 | 39.1 | 47.4 | 66.7 | Z9-6MM-30X | | | | 13.3 | 16.7 | 18.4 | 22.1 |
| W99-6MI-40X | | | | 25.2 | 39.0 | 47.4 | 67.3 | W99-6MI-40X | | | | 13.5 | 16.5 | 18.2 | 21.7 |

Conditions: EN13215: Suction Gas Return 20°C, Subcooling 0K

Refer to Emerson's Select software for R450A and R513A capacity data.

Compressors Motor Codes Table

| Semi-Hermetic | | | | | | |
|------------------------------|--------------|------------|--|-------------------|--------------|------------|
| Motor Codes | Voltage | Connection | | Motor Codes | Voltage | Connection |
| Standard Motor Version | | | | | | |
| CAG | 220-230/1/50 | - | | | | |
| EWL (DK, DL, D2S) | 220-240/3/50 | Δ | | EWN (DK, DL, D2S) | 250-280/3/60 | Δ |
| EWL (DK, DL, D2S) | 380-420/3/50 | Y | | EWN (DK, DL, D2S) | 440-480/3/60 | Y |
| AWM | 380-420/3/50 | YY/Y | | AWD | 440-480/3/60 | YY/Y |
| | | | | | | |
| | | | | | | |
| Special Motor Version | | | | | | |
| EWM | 380-420/3/50 | Δ/Y-Start | | EWD | 440-480/3/60 | Δ/Y-Start |
| AWR | 220-240/3/50 | YY/Y | | EWK (not D8) | 220-240/3/60 | Δ |
| AWY | 500-550/3/50 | YY/Y | | EWK (not D8) | 380-420/3/60 | Y |
| | | | | AWC | 208-230/3/60 | YY/Y |
| | | | | AWX | 380/3/60 | YY/Y |
| | | | | | | |
| Hermetic & Scroll | | | | | | |
| Motor Codes | Voltage | Connection | | Motor Codes | Voltage | Connection |
| Standard Motor Version | | | | | | |
| PFJ | 220-240/1/50 | - | | PFJ | 265/1/60 | - |
| PFT | 220-240/1/50 | - | | | | |
| PFZ | 220-240/1/50 | - | | | | |
| TFD | 380-420/3/50 | Y | | TFD | 460/3/60 | Y |
| TFM | 380-420/3/50 | Y | | | | |
| TWD | 380-420/3/50 | Y | | TWD | 460/3/60 | Y |
| FWD | 380-420/3/50 | Δ/Δ | | | | |
| FWM | 380-420/3/50 | Δ/Δ | | | | |
| TWM | 380-420/3/50 | Y | | | | |
| | | | | | | |
| Special Motor Version | | | | | | |
| TF5 | 200-220/3/50 | Y | | TF5 | 200-230/3/60 | Y |
| TWR | 220-240/3/50 | Y | | TW7 | 380/3/60 | Y |
| TWC | 200/3/50 | Y | | TWC | 208-230/3/60 | Y |
| TFE | 500/3/50 | Y | | TFE | 575/3/60 | Y |
| TWE | 500/3/50 | Y | | TWE | 575/3/60 | Y |
| | | | | TF7 | 380/3/60 | Y |
| TW5 | 200-220/3/50 | Y | | TW5 | 220-230/3/60 | Y |
| | | | | | | |
| Variable Speed Motor Version | | | | | | |
| *E9 | BPM Motor | - | | | | |

YY/Y = Part-Winding-Start
 Δ/Δ = Part-Winding-Start