

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

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

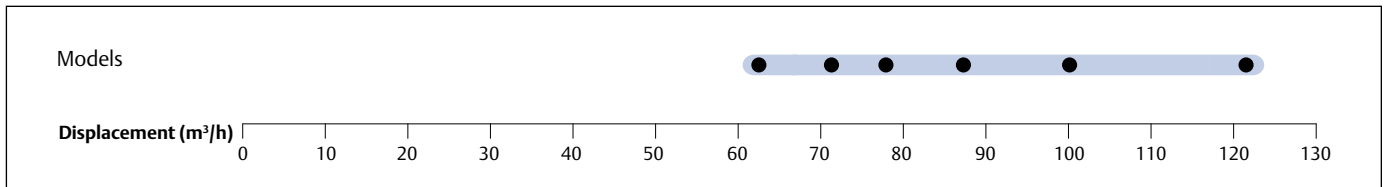
This series of refrigeration units is equipped with 4 or 6 cylinder high performance semi-hermetic Stream compressors. The advanced protection and diagnostic features reduce service costs and system downtime. These models are specifically suitable for those applications where high efficiency and reliability 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 <sup>3</sup> /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**                   |                                |
| <b>W99-6MI-40X</b> | 121                              | 47.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 521.0           | AWM                 | 71                            | 304                      | 59.0                           |
| <b>Z9-4MA-22X</b>  | 62                               | 18.9                  | 4              | 1600                      | 1 5/8                        | 7/8                         | 383.0           | AWM                 | 36                            | 175                      | 59.0                           |
| <b>V6-4ML-15X</b>  | 71                               | 18.9                  | 2              | 800                       | 1 5/8                        | 7/8                         | 303.0           | AWM                 | 35                            | 156                      | 57.0                           |
| <b>V6-4MF-13X</b>  | 62                               | 18.9                  | 2              | 800                       | 1 5/8                        | 7/8                         | 295.0           | AWM                 | 31                            | 105                      | 57.0                           |
| <b>Z9-4MH-25X</b>  | 71                               | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 389.0           | AWM                 | 42                            | 199                      | 59.0                           |
| <b>Z9-4MM-20X</b>  | 71                               | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 388.0           | AWM                 | 39                            | 175                      |                                |
| <b>Z9-4MI-30X</b>  | 78                               | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 416.0           | AWM                 | 47                            | 221                      | 59.0                           |
| <b>Z9-4MT-22X</b>  | 71                               | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 389.0           | AWM                 | 45                            | 175                      |                                |
| <b>Z9-4MJ-33X</b>  | 88                               | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 416.0           | AWM                 | 53                            | 221                      | 59.0                           |
| <b>W9-4MT-22X</b>  | 88                               | 18.9                  | 2              | 800                       | 2 1/8                        | 7/8                         | 358.0           | AWM                 | 45                            | 175                      | 59.0                           |
| <b>W9-4MM-20X</b>  | 78                               | 18.9                  | 2              | 800                       | 2 1/8                        | 7/8                         | 358.0           | AWM                 | 39                            | 175                      | 57.0                           |
| <b>Z9-4MU-25X</b>  | 100                              | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 392.0           | AWM                 | 52                            | 199                      | 59.0                           |
| <b>Z9-6MM-30X</b>  | 121                              | 18.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 410.0           | AWM                 | 60                            | 255                      | 59.0                           |
| <b>W99-4MK-35X</b> | 121                              | 47.9                  | 4              | 1600                      | 2 1/8                        | 7/8                         | 504.0           | AWM                 | 61                            | 255                      | 59.0                           |
| <b>Z9-4ML-15X</b>  | 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 |
| <b>Standard Motor Version</b>       |              |            |  |                   |              |            |
| 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       |
|                                     |              |            |  |                   |              |            |
|                                     |              |            |  |                   |              |            |
| <b>Special Motor Version</b>        |              |            |  |                   |              |            |
| 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       |
| <b>Hermetic &amp; Scroll</b>        |              |            |  |                   |              |            |
| Motor Codes                         | Voltage      | Connection |  | Motor Codes       | Voltage      | Connection |
| <b>Standard Motor Version</b>       |              |            |  |                   |              |            |
| 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          |  |                   |              |            |
| <b>Special Motor Version</b>        |              |            |  |                   |              |            |
| 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          |
| <b>Variable Speed Motor Version</b> |              |            |  |                   |              |            |
| *E9                                 | BPM Motor    | -          |  |                   |              |            |

YY/Y = part-winding-start  
 Δ/Δ = part-winding-start