



Producer: **Copeland**
 Line: **ZR**
 Model: **ZR11M3E-TWD**
 Cooling capacity [kW]: **12.98**
 Heat rejection [kW]: **19.06**
 Displacement [m³/h]: **25.1**
 Refrigerant: **R22, R134a, R407C**
 Capacity control: **None**
 Power supply: **400V/3Ph/50Hz**

Data

Technical data

| | | |
|----------------------|---------------------|---------------|
| Displacement | [m ³ /h] | 25.1 |
| Oil charge | [l] | 4.10 |
| Oil type | | POE RL32-3MAF |
| Internal free volume | [dm ³] | 21.2 |
| Net weight | [kg] | 96.00 |
| Gross weight | [kg] | 107.00 |

Electrical data and limits

| | | |
|-----------------------------|-------|---------------|
| Power supply | | 400V/3Ph/50Hz |
| Maximum continuous current | [A] | 20.0 |
| Locked rotor amperage | [A] | 123.0 |
| Motor resistance main | [Ω] | 1.04 |
| Maximum suction pressure | [bar] | 20.0 |
| Maximum discharge pressure | [bar] | 32.0 |
| Maximum suction temperature | [°C] | 52.0 |
| Minimum suction temperature | [°C] | -35.0 |

Dimensions

| | | |
|--------------------------------------|--------|-------|
| Suction tube diameter | [inch] | 1 3/8 |
| Discharge tube diameter | [inch] | 7/8 |
| Suction connection thread diameter | [inch] | 1 3/4 |
| Discharge connection thread diameter | [inch] | 1 1/4 |
| Length | [mm] | 319 |
| Height | [mm] | 525 |
| Width | [mm] | 357 |

Other

| | |
|-----------------------|---|
| Approved refrigerants | R22, R134a, R407C |
| Allowed oil types | POE RL32-3MAF, POE MOBIL EAL Arctic 22 CC |
| Capacity control | None |
| Protection rating | IP54 (IEC34) |

Performance

Nominal conditions: refrigerant: R407C, evaporation: -10°C (dew point), condensation: 45°C (dew point), superheating: 10K, subcooling: 0°C

Cooling capacity

| | | Evaporation temperature [°C] | | | | | | | | | |
|-------------------------------|----|------------------------------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|
| | | -20 | -15 | -10 | -5 | 0 | 5 | 7 | 10 | 12.5 | 15 |
| Condensation temperature [°C] | 10 | 12.39 | 15.43 | 19.04 | 23.31 | | | | | | |
| | 15 | 11.76 | 14.71 | 18.21 | 22.33 | 27.14 | | | | | |
| | 20 | 11.14 | 13.99 | 17.37 | 21.34 | 25.98 | 31.35 | | | | |
| | 25 | 10.51 | 13.26 | 16.52 | 20.34 | 24.80 | 29.98 | 32.26 | 35.92 | | |
| | 30 | 9.88 | 12.53 | 15.65 | 19.32 | 23.61 | 28.57 | 30.77 | 34.29 | 37.45 | 40.83 |
| | 35 | 9.25 | 11.78 | 14.77 | 18.29 | 22.39 | 27.15 | 29.25 | 32.63 | 35.67 | 38.91 |
| | 40 | 8.61 | 11.03 | 13.89 | 17.23 | 21.15 | 25.69 | 27.70 | 30.94 | 33.84 | 36.95 |
| | 45 | | 10.27 | 12.98 | 16.16 | 19.88 | 24.21 | 26.13 | 29.21 | 31.99 | 34.96 |
| | 50 | | | 12.06 | 15.07 | 18.59 | 22.70 | 24.52 | 27.46 | 30.10 | 32.93 |
| | 55 | | | | 13.96 | 17.28 | 21.16 | 22.88 | 25.67 | 28.17 | 30.87 |
| | 60 | | | | | 15.94 | 19.59 | 21.21 | 23.84 | 26.21 | 28.76 |
| 65 | | | | | | 17.99 | 19.51 | 21.98 | 24.21 | 26.61 | |
| 68 | | | | | | | 17.02 | 18.48 | 20.85 | 22.99 | 25.31 |

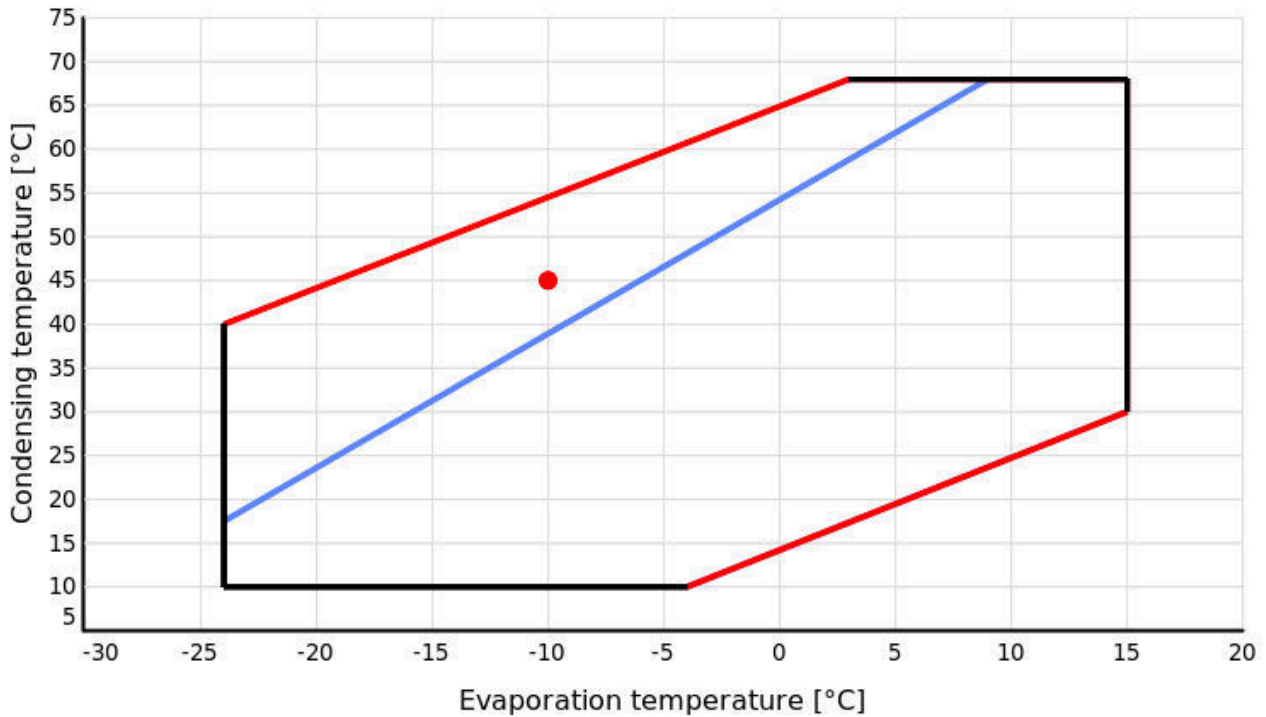
Heat rejection

| | | Evaporation temperature [°C] | | | | | | | | | |
|-------------------------------|----|------------------------------|-------|--------------|-------|-------|-------|-------|-------|-------|-------|
| | | -20 | -15 | -10 | -5 | 0 | 5 | 7 | 10 | 12.5 | 15 |
| Condensation temperature [°C] | 10 | 15.27 | 18.27 | 21.86 | 26.10 | | | | | | |
| | 15 | 14.98 | 17.89 | 21.36 | 25.45 | 30.24 | | | | | |
| | 20 | 14.72 | 17.54 | 20.88 | 24.82 | 29.44 | 34.79 | | | | |
| | 25 | 14.49 | 17.21 | 20.44 | 24.23 | 28.66 | 33.81 | 36.08 | 39.74 | | |
| | 30 | 14.29 | 16.93 | 20.03 | 23.67 | 27.92 | 32.86 | 35.04 | 38.56 | 41.71 | 45.08 |
| | 35 | 14.14 | 16.68 | 19.66 | 23.15 | 27.22 | 31.95 | 34.05 | 37.41 | 40.44 | 43.67 |
| | 40 | 14.04 | 16.48 | 19.34 | 22.67 | 26.57 | 31.09 | 33.09 | 36.31 | 39.21 | 42.30 |
| | 45 | | 16.33 | 19.06 | 22.25 | 25.96 | 30.27 | 32.18 | 35.26 | 38.02 | 40.98 |
| | 50 | | | 18.84 | 21.88 | 25.41 | 29.51 | 31.33 | 34.26 | 36.89 | 39.72 |
| | 55 | | | | 21.56 | 24.91 | 28.81 | 30.53 | 33.31 | 35.82 | 38.51 |
| | 60 | | | | | 24.48 | 28.16 | 29.80 | 32.43 | 34.81 | 37.36 |
| 65 | | | | | | 27.59 | 29.13 | 31.62 | 33.86 | 36.27 | |
| 68 | | | | | | | 27.28 | 28.76 | 31.16 | 33.33 | 35.66 |

Power consumption

| | | Evaporation temperature [°C] | | | | | | | | | |
|-------------------------------|----|------------------------------|------|-------------|------|------|-------|-------|-------|-------|-------|
| | | -20 | -15 | -10 | -5 | 0 | 5 | 7 | 10 | 12.5 | 15 |
| Condensation temperature [°C] | 10 | 3.03 | 2.99 | 2.96 | 2.94 | | | | | | |
| | 15 | 3.39 | 3.35 | 3.31 | 3.28 | 3.26 | | | | | |
| | 20 | 3.77 | 3.74 | 3.70 | 3.66 | 3.63 | 3.62 | | | | |
| | 25 | 4.19 | 4.16 | 4.13 | 4.09 | 4.06 | 4.03 | 4.03 | 4.02 | | |
| | 30 | 4.65 | 4.63 | 4.61 | 4.58 | 4.54 | 4.51 | 4.50 | 4.49 | 4.48 | 4.48 |
| | 35 | 5.15 | 5.15 | 5.14 | 5.12 | 5.09 | 5.06 | 5.05 | 5.03 | 5.02 | 5.01 |
| | 40 | 5.71 | 5.73 | 5.74 | 5.73 | 5.71 | 5.68 | 5.67 | 5.66 | 5.64 | 5.63 |
| | 45 | | 6.37 | 6.40 | 6.41 | 6.40 | 6.38 | 6.38 | 6.36 | 6.35 | 6.34 |
| | 50 | | | 7.14 | 7.16 | 7.18 | 7.17 | 7.17 | 7.16 | 7.15 | 7.14 |
| | 55 | | | | 8.00 | 8.04 | 8.05 | 8.05 | 8.05 | 8.05 | 8.04 |
| | 60 | | | | | 8.99 | 9.03 | 9.03 | 9.04 | 9.05 | 9.05 |
| | 65 | | | | | | 10.10 | 10.12 | 10.14 | 10.16 | 10.17 |
| | 68 | | | | | | | 10.80 | 10.83 | 10.86 | 10.89 |

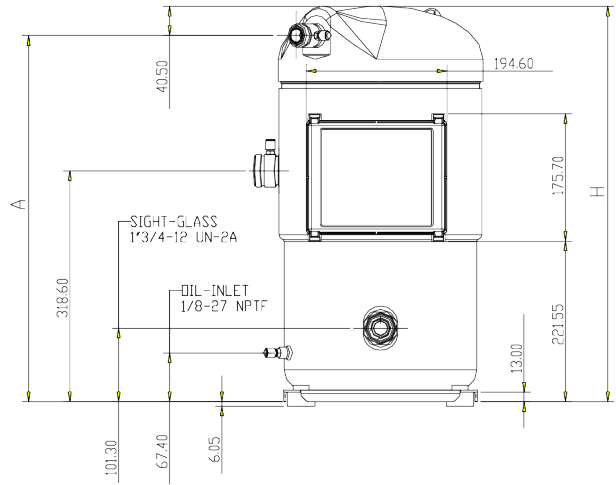
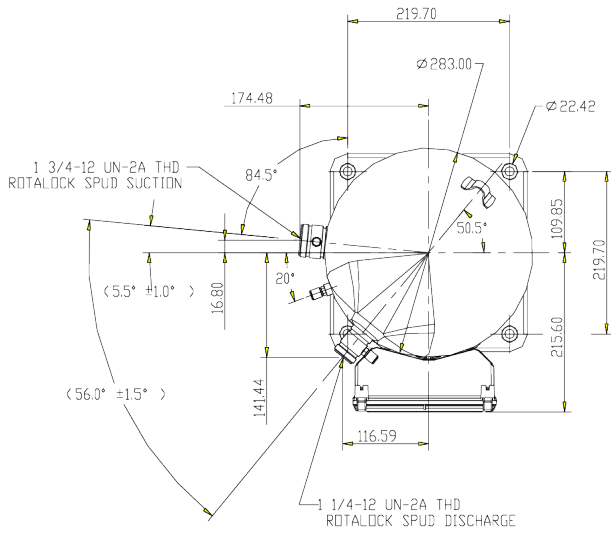
Application range



Legend

- Suction gas superheating: 10 K
- Suction gas temperature: 25°C

Dimensions



Dimensions

| | | |
|-------------|------|--------|
| Dimension A | [mm] | 497,34 |
|-------------|------|--------|

Tube diameters

| | |
|-------------|--------|
| Dimension H | 537,84 |
|-------------|--------|