



Minimum Evaporating Temp. With:

- 25 °C Suction Gas Return
- 10 K Suction Superheat
- Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

| Cond °C | Cooling Capacity, kW | | | | | | | | | |
|------------|----------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 |
| 30.0 | 5.06 | 6.39 | 7.98 | 9.86 | 12.10 | 14.65 | 15.80 | 17.60 | | |
| 35.0 | 4.79 | 6.08 | 7.60 | 9.40 | 11.50 | 13.95 | 15.05 | 16.80 | 18.35 | |
| 40.0 | 4.51 | 5.75 | 7.21 | 8.93 | 10.95 | 13.25 | 14.25 | 15.90 | 17.40 | 19.00 |
| 45.0 | | 5.41 | 6.81 | 8.44 | 10.35 | 12.50 | 13.50 | 15.05 | 16.45 | 17.95 |
| 50.0 | | 5.06 | 6.39 | 7.93 | 9.72 | 11.80 | 12.70 | 14.15 | 15.50 | 16.90 |
| 55.0 | | | 5.95 | 7.40 | 9.08 | 11.00 | 11.90 | 13.25 | 14.50 | 15.80 |
| 60.0 | | | | 6.86 | 8.44 | 10.25 | 11.05 | 12.35 | 13.50 | 14.70 |
| 65.0 | | | | 6.31 | 7.77 | 9.45 | 10.20 | 11.40 | 12.45 | 13.60 |
| 70.0 | | | | | 7.08 | 8.64 | 9.32 | 10.40 | 11.40 | 12.45 |
| 75.0 | | | | | 6.38 | 7.80 | 8.43 | 9.43 | 10.35 | 11.30 |

50 Hz

ZR81KRE-TFD

R134a

| Cond °C | Power, kW | | | | | | | | | |
|------------|-----------|-------|-------|------|------|------|------|------|------|------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 |
| 30.0 | 2.25 | 2.28 | 2.29 | 2.30 | 2.31 | 2.33 | 2.35 | 2.37 | | |
| 35.0 | 2.51 | 2.54 | 2.56 | 2.57 | 2.59 | 2.61 | 2.62 | 2.65 | 2.68 | |
| 40.0 | 2.81 | 2.84 | 2.86 | 2.87 | 2.89 | 2.91 | 2.93 | 2.96 | 2.99 | 3.02 |
| 45.0 | | 3.17 | 3.19 | 3.21 | 3.22 | 3.25 | 3.26 | 3.29 | 3.32 | 3.36 |
| 50.0 | | 3.55 | 3.57 | 3.58 | 3.60 | 3.62 | 3.64 | 3.67 | 3.70 | 3.73 |
| 55.0 | | | 3.99 | 4.01 | 4.02 | 4.04 | 4.06 | 4.08 | 4.11 | 4.15 |
| 60.0 | | | | 4.48 | 4.49 | 4.51 | 4.52 | 4.55 | 4.57 | 4.61 |
| 65.0 | | | | 5.02 | 5.02 | 5.04 | 5.05 | 5.07 | 5.09 | 5.12 |
| 70.0 | | | | | 5.62 | 5.63 | 5.64 | 5.65 | 5.67 | 5.70 |
| 75.0 | | | | | 6.29 | 6.29 | 6.29 | 6.31 | 6.32 | 6.35 |

| Cond °C | Current at 400 V, A | | | | | | | | | |
|------------|---------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 |
| 30.0 | 6.78 | 6.79 | 6.79 | 6.79 | 6.79 | 6.81 | 6.82 | 6.85 | | |
| 35.0 | 6.98 | 6.99 | 7.00 | 7.01 | 7.02 | 7.05 | 7.06 | 7.09 | 7.12 | |
| 40.0 | 7.22 | 7.24 | 7.26 | 7.27 | 7.29 | 7.32 | 7.33 | 7.37 | 7.40 | 7.44 |
| 45.0 | | 7.55 | 7.57 | 7.59 | 7.61 | 7.64 | 7.66 | 7.69 | 7.72 | 7.77 |
| 50.0 | | 7.93 | 7.95 | 7.96 | 7.99 | 8.02 | 8.04 | 8.07 | 8.10 | 8.15 |
| 55.0 | | | 8.40 | 8.42 | 8.44 | 8.47 | 8.49 | 8.52 | 8.56 | 8.60 |
| 60.0 | | | | 8.96 | 8.98 | 9.01 | 9.03 | 9.06 | 9.09 | 9.13 |
| 65.0 | | | | 9.61 | 9.62 | 9.65 | 9.66 | 9.69 | 9.71 | 9.75 |
| 70.0 | | | | | 10.37 | 10.39 | 10.40 | 10.42 | 10.45 | 10.48 |
| 75.0 | | | | | 11.25 | 11.26 | 11.26 | 11.28 | 11.30 | 11.32 |

| Cond °C | Suction Mass Flow, g/s | | | | | | | | | |
|------------|------------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 |
| 30.0 | 33.20 | 41.10 | 50.20 | 60.90 | 73.10 | 87.00 | 93.00 | 102.50 | | |
| 35.0 | 33.10 | 41.00 | 50.20 | 60.80 | 72.90 | 86.70 | 92.60 | 102.00 | 110.50 | |
| 40.0 | 32.80 | 40.90 | 50.10 | 60.60 | 72.70 | 86.30 | 92.20 | 101.50 | 110.00 | 119.00 |
| 45.0 | | 40.70 | 49.90 | 60.40 | 72.30 | 85.80 | 91.60 | 101.00 | 109.00 | 118.00 |
| 50.0 | | 40.30 | 49.60 | 60.10 | 71.90 | 85.20 | 91.00 | 100.00 | 108.50 | 117.00 |
| 55.0 | | | 49.30 | 59.70 | 71.40 | 84.50 | 90.20 | 99.30 | 107.50 | 115.50 |
| 60.0 | | | | 59.20 | 70.80 | 83.80 | 89.40 | 98.30 | 106.00 | 114.50 |
| 65.0 | | | | 58.60 | 70.10 | 82.90 | 88.40 | 97.10 | 105.00 | 113.00 |
| 70.0 | | | | | 69.30 | 81.90 | 87.30 | 95.90 | 103.50 | 111.50 |
| 75.0 | | | | | 68.30 | 80.80 | 86.20 | 94.60 | 102.00 | 110.00 |

COMPRESSOR MECHANICAL AND PHYSICAL DATA

| | |
|--|--|
| Displacement @ 50 Hz, m³/h | 18.8 |
| Length/Width, mm | 246/257 |
| Height, mm | 443 |
| Net Weight, kg | 39.2 |
| Stub Suction, inch | 7/8 |
| Stub Discharge, inch | 3/4 |
| Oil Quantity, l | 1.77 |
| Oil type (original charge) | POE RL32-3MAF |
| Oil type (approved oils) | POE RL32-3MAF, POE MOBIL EAL Arctic 22 CC |
| Base mounting (hole dia), mm | 190 x 190 (19) |
| Sound Pressure @ 1m (MT), dBA | 62 |
| Sound Power (MT), dBA | 73 |
| Sound Power with Sound Shell (MT), dBA | 63 |
| Sound Conditions (MT, Temperatures: Evap./Cond./Suction at freq./speed) | -10 / 45 / 20 °C at 50 Hz |
| | |
| PED Category | 1 |
| Max. Internal Free Volume, l | 5.40 |
| High Side PS gauge, bar | 29 |
| Low Side PS gauge, bar | 21 |
| Low Side TS Max., °C | 50 |
| Low Side TS Min., °C | -35 |
| Refrigerant's GWP | 1430 |
| Refrigerant's classification | A1 |

COMPRESSOR ELECTRICAL DATA (380-420 V / 3~ / 50 Hz)

| | |
|------------------------------|----------------|
| Maximum Operating Current, A | 14 |
| Locked Rotor Current, A | 101 |
| Winding Resistance, ohm | 1.79 |
| Default Enclosure Class | IP 21 (IEC 34) |

ACCESSORIES INCLUDED

| | |
|----------------------------------|---------------------|
| Discharge Temperature Protection | Internal Thermodisk |
|----------------------------------|---------------------|

ACCESSORIES OPTIONAL

| | |
|--------------------|-----------------------|
| Crankcase Heater | 70 W External |
| Oil Control System | ALCO Trax-Oil OM3 |
| Mounting Grommets | Standard |
| Sound Attenuation | Sound Shell (10dBA) |
| Rotalock valves | suction and discharge |

50 Hz

ZR81KRE-TFD

R134a

MOTOR OPTIONS

| Motor Code | Power Supply | Nominal Voltage, V | Start Connection | DOL Connection | Amps Factor |
|-------------------|------------------------|---------------------------|-------------------------|-----------------------|--------------------|
| TFD | 380-420 V / 3~ / 50 Hz | 400 | | Y | 1.00 |
| TFD | 460 V / 3~ / 60 Hz | 460 | | Y | 1.04 |