



Minimum Evaporating Temp. With:

10 K Suction Superheat

Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

Additional restrictions, please see application guidelines

50 Hz

ZR190KRE-TFD

R513A

| Cond °C | Cooling Capacity, kW | | | | | | | | | | | | | |
|------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
| 20.0 | 17.10 | 21.00 | 25.70 | 31.40 | 38.10 | 41.10 | | | | | | | | |
| 25.0 | 16.10 | 19.90 | 24.50 | 30.00 | 36.50 | 39.40 | 44.10 | | | | | | | |
| 30.0 | 15.00 | 18.75 | 23.20 | 28.50 | 34.80 | 37.60 | 42.20 | 46.30 | 50.70 | | | | | |
| 35.0 | 13.90 | 17.55 | 21.90 | 27.00 | 33.00 | 35.70 | 40.10 | 44.00 | 48.30 | | | | | |
| 40.0 | 12.75 | 16.30 | 20.50 | 25.40 | 31.20 | 33.80 | 37.90 | 41.70 | 45.70 | 54.70 | | | | |
| 45.0 | 11.60 | 15.05 | 19.05 | 23.70 | 29.20 | 31.70 | 35.60 | 39.20 | 43.00 | 51.60 | 61.40 | | | |
| 50.0 | | 13.70 | 17.55 | 22.00 | 27.20 | 29.50 | 33.20 | 36.60 | 40.20 | 48.40 | 57.70 | 68.30 | | |
| 55.0 | | 12.30 | 15.95 | 20.10 | 25.00 | 27.20 | 30.70 | 33.90 | 37.30 | 45.00 | 53.70 | 63.80 | 75.20 | |
| 60.0 | | | 14.30 | 18.20 | 22.80 | 24.80 | 28.10 | 31.10 | 34.30 | 41.40 | 49.70 | 59.10 | 69.80 | 82.00 |
| 65.0 | | | 12.55 | 16.20 | 20.40 | 22.30 | 25.40 | 28.10 | 31.10 | 37.70 | 45.40 | 54.20 | 64.30 | 75.80 |
| 70.0 | | | | 14.10 | 18.00 | 19.70 | 22.50 | 25.00 | 27.80 | 33.90 | 41.00 | 49.20 | 58.60 | 69.40 |
| 75.0 | | | | 11.95 | 15.45 | 17.00 | 19.50 | 21.80 | 24.30 | 29.90 | 36.50 | 44.00 | 52.70 | 62.70 |
| 80.0 | | | | | | | 16.45 | 18.50 | 20.70 | 25.80 | 31.70 | 38.60 | 46.60 | 55.90 |
| 85.0 | | | | | | | | | | 21.50 | 26.80 | 33.10 | 40.40 | 48.80 |

| Cond °C | Power, kW | | | | | | | | | | | | | |
|------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
| 20.0 | 4.75 | 4.75 | 4.75 | 4.77 | 4.81 | 4.83 | | | | | | | | |
| 25.0 | 5.24 | 5.25 | 5.26 | 5.30 | 5.35 | 5.38 | 5.43 | | | | | | | |
| 30.0 | 5.76 | 5.79 | 5.82 | 5.86 | 5.92 | 5.95 | 6.01 | 6.06 | 6.12 | | | | | |
| 35.0 | 6.36 | 6.38 | 6.42 | 6.47 | 6.54 | 6.57 | 6.63 | 6.68 | 6.74 | | | | | |
| 40.0 | 7.02 | 7.05 | 7.09 | 7.14 | 7.21 | 7.24 | 7.30 | 7.35 | 7.42 | 7.56 | | | | |
| 45.0 | 7.79 | 7.81 | 7.85 | 7.89 | 7.96 | 7.99 | 8.04 | 8.09 | 8.15 | 8.29 | 8.46 | | | |
| 50.0 | | 8.68 | 8.70 | 8.74 | 8.79 | 8.82 | 8.87 | 8.91 | 8.97 | 9.09 | 9.26 | 9.46 | | |
| 55.0 | | 9.66 | 9.67 | 9.70 | 9.74 | 9.76 | 9.79 | 9.83 | 9.88 | 9.99 | 10.15 | 10.30 | 10.55 | |
| 60.0 | | | 10.80 | 10.80 | 10.80 | 10.80 | 10.85 | 10.85 | 10.90 | 11.00 | 11.10 | 11.30 | 11.50 | 11.75 |
| 65.0 | | | 12.05 | 12.00 | 12.00 | 12.00 | 12.00 | 12.05 | 12.05 | 12.10 | 12.20 | 12.35 | 12.50 | 12.75 |
| 70.0 | | | | 13.40 | 13.35 | 13.35 | 13.35 | 13.35 | 13.35 | 13.40 | 13.45 | 13.55 | 13.70 | 13.90 |
| 75.0 | | | | 14.95 | 14.90 | 14.85 | 14.85 | 14.80 | 14.80 | 14.80 | 14.85 | 14.90 | 15.00 | 15.15 |
| 80.0 | | | | | | | 16.50 | 16.45 | 16.45 | 16.40 | 16.40 | 16.40 | 16.45 | 16.55 |
| 85.0 | | | | | | | | | | 18.15 | 18.10 | 18.10 | 18.10 | 18.15 |

Additional restrictions, please see application guidelines

50 Hz

ZR190KRE-TFD

R513A

| Cond °C | Current at 400 V, A | | | | | | | | | | | | | |
|------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
| 20.0 | 18.97 | 18.91 | 18.84 | 18.76 | 18.68 | 18.64 | | | | | | | | |
| 25.0 | 18.65 | 18.63 | 18.61 | 18.57 | 18.53 | 18.52 | 18.50 | | | | | | | |
| 30.0 | 18.49 | 18.50 | 18.51 | 18.50 | 18.50 | 18.50 | 18.51 | 18.52 | 18.53 | | | | | |
| 35.0 | 18.51 | 18.54 | 18.57 | 18.59 | 18.61 | 18.63 | 18.65 | 18.67 | 18.70 | | | | | |
| 40.0 | 18.74 | 18.78 | 18.81 | 18.85 | 18.89 | 18.91 | 18.94 | 18.98 | 19.02 | 19.12 | | | | |
| 45.0 | 19.19 | 19.23 | 19.26 | 19.30 | 19.35 | 19.37 | 19.41 | 19.45 | 19.50 | 19.61 | 19.76 | | | |
| 50.0 | | 19.91 | 19.94 | 19.97 | 20.01 | 20.04 | 20.08 | 20.12 | 20.17 | 20.28 | 20.44 | 20.63 | | |
| 55.0 | | 20.86 | 20.86 | 20.88 | 20.91 | 20.93 | 20.96 | 21.00 | 21.04 | 21.15 | 21.31 | 21.50 | 21.74 | |
| 60.0 | | | 22.06 | 22.05 | 22.06 | 22.06 | 22.09 | 22.11 | 22.15 | 22.25 | 22.38 | 22.57 | 22.81 | 23.10 |
| 65.0 | | | 23.56 | 23.50 | 23.48 | 23.47 | 23.48 | 23.49 | 23.51 | 23.58 | 23.70 | 23.86 | 24.08 | 24.36 |
| 70.0 | | | | 25.27 | 25.19 | 25.17 | 25.15 | 25.14 | 25.14 | 25.18 | 25.26 | 25.40 | 25.59 | 25.85 |
| 75.0 | | | | 27.36 | 27.23 | 27.19 | 27.13 | 27.10 | 27.08 | 27.07 | 27.11 | 27.20 | 27.36 | 27.58 |
| 80.0 | | | | | | | 29.45 | 29.38 | 29.33 | 29.26 | 29.25 | 29.30 | 29.41 | 29.58 |
| 85.0 | | | | | | | | | | 31.79 | 31.72 | 31.70 | 31.75 | 31.88 |

| Cond °C | Suction Mass Flow, g/s | | | | | | | | | | | | | |
|------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
| 20.0 | 112.50 | 134.50 | 161.50 | 192.50 | 229.00 | 245.00 | | | | | | | | |
| 25.0 | 111.00 | 133.50 | 161.00 | 192.50 | 229.00 | 246.00 | 272.00 | | | | | | | |
| 30.0 | 109.00 | 132.50 | 160.00 | 192.00 | 229.00 | 246.00 | 272.00 | 295.00 | 320.00 | | | | | |
| 35.0 | 106.50 | 131.00 | 159.00 | 191.50 | 229.00 | 245.00 | 271.00 | 294.00 | 319.00 | | | | | |
| 40.0 | 104.00 | 129.00 | 157.50 | 190.50 | 228.00 | 244.00 | 270.00 | 294.00 | 318.00 | 373.00 | | | | |
| 45.0 | 101.00 | 126.50 | 156.00 | 189.00 | 226.00 | 243.00 | 269.00 | 292.00 | 317.00 | 371.00 | 432.00 | | | |
| 50.0 | | 124.00 | 153.50 | 186.50 | 224.00 | 241.00 | 267.00 | 290.00 | 315.00 | 369.00 | 429.00 | 497.00 | | |
| 55.0 | | 120.00 | 150.50 | 184.00 | 222.00 | 238.00 | 264.00 | 287.00 | 312.00 | 366.00 | 426.00 | 493.00 | 568.00 | |
| 60.0 | | | 146.50 | 180.50 | 218.00 | 235.00 | 261.00 | 284.00 | 308.00 | 362.00 | 422.00 | 489.00 | 564.00 | 647.00 |
| 65.0 | | | 141.50 | 176.00 | 214.00 | 230.00 | 256.00 | 279.00 | 304.00 | 357.00 | 417.00 | 485.00 | 560.00 | 643.00 |
| 70.0 | | | | 170.00 | 208.00 | 225.00 | 251.00 | 274.00 | 298.00 | 352.00 | 412.00 | 479.00 | 554.00 | 638.00 |
| 75.0 | | | | 163.00 | 201.00 | 218.00 | 244.00 | 267.00 | 291.00 | 345.00 | 405.00 | 473.00 | 549.00 | 634.00 |
| 80.0 | | | | | | | 236.00 | 259.00 | 284.00 | 338.00 | 399.00 | 467.00 | 544.00 | 631.00 |
| 85.0 | | | | | | | | | | 333.00 | 395.00 | 466.00 | 545.00 | 634.00 |

Additional restrictions, please see application guidelines

COMPRESSOR MECHANICAL AND PHYSICAL DATA

| | |
|-------------------------------------|--|
| Displacement @ 50 Hz, m³/h | 43.3 |
| Length/Width, mm | 281/285 |
| Height, mm | 552 |
| Net Weight, kg | 66.2 |
| Stub Suction, inch | 1 3/8 |
| Stub Discharge, inch | 7/8 |
| Oil Quantity, l | 3.38 |
| 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 (0) |
| Sound Pressure @ 1m (HT), dBA | 71 |
| Sound Power (HT), dBA | 82 |
| Sound Conditions (HT, Temperatures: | 5 / 50 / 15 °C at 50 Hz |
| Evap./Cond./Suction at freq./speed) | |
| PED Category | 2 |
| Max. Internal Free Volume, l | 12.8 |
| High Side PS gauge, bar | 32 |
| Low Side PS gauge, bar | 20 |
| Low Side TS Max., °C | 53 |
| Low Side TS Min., °C | -35 |
| Refrigerant's GWP | 631 |
| Refrigerant's classification | A1 |

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

| | |
|------------------------------|----------|
| Maximum Operating Current, A | 36 |
| Locked Rotor Current, A | 174 |
| Winding Resistance, ohm | 0.83 |
| Default Enclosure Class | IP 21/65 |

ACCESSORIES INCLUDED

| | |
|----------------------------------|--------------------------------|
| Enclosure Class | IP21 |
| Oil Charge | |
| Discharge Temperature Protection | ASTP Therm-O-Disc In Scroll |
| Oil Service Valve | Schraeder Valve |
| Check Valve | Discharge Low Leak Check Valve |

Additional restrictions, please see application guidelines

ACCESSORIES OPTIONAL

| | |
|--------------------|-------------------------------------|
| Enclosure Class | IP 65 |
| Mounting Grommets | Hard Mounts for Paralleling |
| Sound Attenuation | Sound Shell (12dBA) |
| Oil Control System | ALCO Trax-Oil OM3 |
| Mounting Grommets | Rubber Grommet For Single |
| Adapter Kit | R1"1/4 -B 1"1/8 For TPTL for |
| Crankcase Heater | Parallel Operation 67 W External |

MOTOR OPTIONS

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

Additional restrictions, please see application guidelines