



Minimum Evaporating Temp. With:

- 20 K Suction Superheat
- 20 °C Suction Gas Return
- Maximum Evaporating Temperature

Suction Superheat 11.1K

Liquid Subcooling 8.3K

Evaporating Temperature, °C

50 Hz

4MID-30X 100% Loaded

R134a

| Cond °C | Cooling Capacity, kW | | | | | | | | | | |
|------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 |
| 10.0 | 24.50 | 30.70 | 38.40 | | | | | | | | |
| 15.0 | 23.20 | 29.30 | 36.80 | 45.70 | | | | | | | |
| 20.0 | 21.90 | 27.80 | 35.00 | 43.70 | 53.90 | | | | | | |
| 25.0 | 20.60 | 26.30 | 33.30 | 41.60 | 51.50 | 63.00 | | | | | |
| 30.0 | 19.25 | 24.80 | 31.50 | 39.40 | 48.90 | 60.00 | 72.90 | 80.10 | | | |
| 35.0 | 17.90 | 23.20 | 29.60 | 37.20 | 46.30 | 56.90 | 69.30 | 76.20 | 83.50 | | |
| 40.0 | 16.50 | 21.60 | 27.70 | 35.00 | 43.60 | 53.80 | 65.60 | 72.20 | 79.20 | 94.80 | 112.50 |
| 45.0 | 15.10 | 19.95 | 25.80 | 32.70 | 40.90 | 50.60 | 61.80 | 68.10 | 74.90 | 89.80 | 107.00 |
| 50.0 | 13.70 | 18.35 | 23.90 | 30.40 | 38.20 | 47.40 | 58.00 | 64.00 | 70.40 | 84.70 | 101.00 |
| 55.0 | 12.35 | 16.70 | 21.90 | 28.10 | 35.40 | 44.10 | 54.20 | 59.90 | 65.90 | 79.50 | 95.00 |
| 60.0 | | 15.05 | 19.95 | 25.80 | 32.60 | 40.80 | 50.30 | 55.70 | 61.40 | 74.20 | 89.00 |
| 65.0 | | | 18.00 | 23.40 | 29.80 | 37.40 | 46.40 | 51.40 | 56.90 | 69.00 | 82.90 |
| 70.0 | | | 16.05 | 21.10 | 27.00 | 34.10 | 42.50 | 47.20 | 52.30 | 63.70 | 76.90 |
| 75.0 | | | | 18.75 | 24.20 | 30.80 | 38.50 | 42.90 | 47.70 | 58.40 | 70.90 |
| 80.0 | | | | 16.40 | 21.40 | 27.50 | 34.60 | 38.70 | 43.20 | 53.20 | 64.90 |

| Cond °C | Power, kW | | | | | | | | | | |
|------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 |
| 10.0 | 5.56 | 5.77 | 5.83 | | | | | | | | |
| 15.0 | 6.00 | 6.33 | 6.53 | 6.56 | | | | | | | |
| 20.0 | 6.41 | 6.86 | 7.20 | 7.38 | 7.37 | | | | | | |
| 25.0 | 6.78 | 7.35 | 7.82 | 8.15 | 8.31 | 8.26 | | | | | |
| 30.0 | 7.11 | 7.80 | 8.41 | 8.89 | 9.22 | 9.35 | 9.25 | 9.11 | | | |
| 35.0 | 7.40 | 8.21 | 8.95 | 9.58 | 10.10 | 10.40 | 10.50 | 10.45 | 10.35 | | |
| 40.0 | 7.64 | 8.57 | 9.44 | 10.25 | 10.90 | 11.40 | 11.70 | 11.75 | 11.75 | 11.55 | 11.05 |
| 45.0 | 7.82 | 8.87 | 9.88 | 10.80 | 11.65 | 12.35 | 12.85 | 13.00 | 13.10 | 13.15 | 12.90 |
| 50.0 | 7.95 | 9.12 | 10.25 | 11.35 | 12.35 | 13.20 | 13.90 | 14.20 | 14.40 | 14.65 | 14.65 |
| 55.0 | 8.02 | 9.31 | 10.60 | 11.85 | 13.00 | 14.05 | 14.95 | 15.30 | 15.65 | 16.15 | 16.35 |
| 60.0 | | 9.44 | 10.85 | 12.25 | 13.55 | 14.80 | 15.90 | 16.40 | 16.85 | 17.55 | 18.05 |
| 65.0 | | | 11.05 | 12.60 | 14.10 | 15.50 | 16.80 | 17.40 | 17.95 | 18.90 | 19.60 |
| 70.0 | | | 11.15 | 12.85 | 14.50 | 16.10 | 17.60 | 18.30 | 18.95 | 20.20 | 21.10 |
| 75.0 | | | | 13.05 | 14.90 | 16.65 | 18.35 | 19.15 | 19.95 | 21.30 | 22.60 |
| 80.0 | | | | 13.20 | 15.15 | 17.15 | 19.05 | 19.95 | 20.80 | 22.50 | 23.90 |

50 Hz

4MID-30X 100% Loaded

R134a

| Cond °C | Current at 400 V, A | | | | | | | | | | |
|------------|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 |
| 10.0 | 17.84 | 18.07 | 18.17 | | | | | | | | |
| 15.0 | 18.17 | 18.49 | 18.69 | 18.73 | | | | | | | |
| 20.0 | 18.51 | 18.92 | 19.24 | 19.42 | 19.40 | | | | | | |
| 25.0 | 18.85 | 19.36 | 19.81 | 20.14 | 20.29 | 20.21 | | | | | |
| 30.0 | 19.17 | 19.79 | 20.37 | 20.86 | 21.19 | 21.32 | 21.19 | 21.01 | | | |
| 35.0 | 19.45 | 20.20 | 20.93 | 21.58 | 22.10 | 22.44 | 22.55 | 22.49 | 22.36 | | |
| 40.0 | 19.70 | 20.57 | 21.45 | 22.28 | 23.00 | 23.56 | 23.91 | 23.99 | 24.00 | 23.76 | 23.15 |
| 45.0 | 19.89 | 20.90 | 21.94 | 22.95 | 23.88 | 24.67 | 25.27 | 25.49 | 25.63 | 25.70 | 25.41 |
| 50.0 | 20.01 | 21.17 | 22.37 | 23.58 | 24.72 | 25.76 | 26.62 | 26.97 | 27.27 | 27.64 | 27.68 |
| 55.0 | 20.04 | 21.36 | 22.75 | 24.15 | 25.52 | 26.80 | 27.94 | 28.44 | 28.88 | 29.57 | 29.95 |
| 60.0 | | 21.47 | 23.04 | 24.66 | 26.26 | 27.80 | 29.21 | 29.86 | 30.46 | 31.47 | 32.20 |
| 65.0 | | | 23.25 | 25.08 | 26.93 | 28.73 | 30.44 | 31.23 | 31.99 | 33.34 | 34.43 |
| 70.0 | | | 23.35 | 25.41 | 27.51 | 29.59 | 31.59 | 32.55 | 33.46 | 35.16 | 36.61 |
| 75.0 | | | | 25.64 | 27.99 | 30.35 | 32.66 | 33.78 | 34.87 | 36.91 | 38.75 |
| 80.0 | | | | 25.74 | 28.37 | 31.02 | 33.64 | 34.93 | 36.19 | 38.59 | 40.81 |

| Cond °C | Suction Mass Flow, g/s | | | | | | | | | | |
|------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 10.0 | 12.5 | 15.0 | 20.0 | 25.0 |
| 10.0 | 126.50 | 156.50 | 192.50 | | | | | | | | |
| 15.0 | 124.50 | 154.50 | 190.50 | 233.00 | | | | | | | |
| 20.0 | 122.00 | 152.50 | 188.50 | 231.00 | 280.00 | | | | | | |
| 25.0 | 119.50 | 150.00 | 186.00 | 228.00 | 277.00 | 334.00 | | | | | |
| 30.0 | 116.50 | 147.00 | 183.00 | 225.00 | 274.00 | 331.00 | 395.00 | 430.00 | | | |
| 35.0 | 113.00 | 144.00 | 180.00 | 222.00 | 271.00 | 327.00 | 390.00 | 425.00 | 463.00 | | |
| 40.0 | 109.50 | 140.00 | 176.00 | 218.00 | 266.00 | 322.00 | 385.00 | 420.00 | 457.00 | 538.00 | 628.00 |
| 45.0 | 105.50 | 136.00 | 172.00 | 214.00 | 262.00 | 317.00 | 380.00 | 415.00 | 451.00 | 532.00 | 621.00 |
| 50.0 | 101.00 | 132.00 | 167.50 | 209.00 | 257.00 | 311.00 | 374.00 | 408.00 | 445.00 | 525.00 | 614.00 |
| 55.0 | 96.20 | 127.00 | 162.50 | 204.00 | 251.00 | 305.00 | 367.00 | 401.00 | 438.00 | 517.00 | 606.00 |
| 60.0 | | 122.00 | 157.00 | 198.00 | 245.00 | 298.00 | 360.00 | 394.00 | 430.00 | 509.00 | 597.00 |
| 65.0 | | | 151.00 | 191.50 | 238.00 | 291.00 | 352.00 | 385.00 | 421.00 | 500.00 | 588.00 |
| 70.0 | | | 145.00 | 184.50 | 230.00 | 283.00 | 343.00 | 377.00 | 412.00 | 490.00 | 579.00 |
| 75.0 | | | | 177.00 | 222.00 | 274.00 | 334.00 | 367.00 | 403.00 | 481.00 | 569.00 |
| 80.0 | | | | 169.00 | 214.00 | 265.00 | 325.00 | 358.00 | 393.00 | 471.00 | 560.00 |

COMPRESSOR MECHANICAL AND PHYSICAL DATA

| | |
|--|--|
| Number of cylinders | 4 |
| Displacement @ 50 Hz, m ³ /h | 78.2 |
| Bore/Stroke, mm | 71.5/56.0 |
| Length/Width, mm | 657/501 |
| Height, mm | 452 |
| Net Weight, kg | 194 |
| Suction, inch | 2 1/8 |
| Discharge, inch | 1 1/8 |
| Oil Quantity, l | 3.3 |
| 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 | 381 x 305 (18) |
| Sound Pressure @ 1m (MT), dBA | 69 |
| Sound Power (MT), dBA | 80 |
| Sound Power with Sound Shell (MT), dBA | 67 |
| Sound Conditions (MT, Temperatures: Evap./Cond./Suction at freq./speed) | -10 / 45 / 20 °C at 50 Hz |
| High Side PS gauge, bar | 32.5 |
| Low Side PS gauge, bar | 22.5 |
| Digital Modulation | 50-100% |
| Refrigerant's GWP | 1430 |
| Refrigerant's classification | A1 |

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

| | |
|------------------------------|----------------|
| Maximum Operating Current, A | 46.6 |
| Locked Rotor Current, A | 221 |
| Default Enclosure Class | IP 54 (IEC 34) |

ACCESSORIES INCLUDED

| | |
|--------------------------------|---|
| Mounting Parts | Spring |
| CoreSense Protection (-P) | Motor protection |
| Oil Pressure Switch (-P) | OPS2 Electronic Switch |
| Next Generation CoreSense (-N) | Oil pressure, motor and discharge line temperature protection; advanced diagnostics features and power measurement |

ACCESSORIES OPTIONAL

| | |
|---------------------|------------------------------|
| Additional Cooling | 70 W Vertical Air Flow Fan |
| Crankcase Heater | 100 W Internal |
| Adapter Kit | For Parallel Operation |
| Check Valve | For unloaded start operation |
| Sound Attenuation | Sound Shell |
| Digital Driver | EC3-D23 |
| Mounting Parts | Rubber |
| Digital Modulation | 50-100 % |
| NG CoreSense module | Modbus extension module |

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> |
|-------------------|------------------------|---------------------------|-------------------------|-----------------------|--------------------|
| AWM | 380-420 V / 3~ / 50 Hz | 400 | YY/Y | Y | 1.00 |
| EWL | 220-240 V / 3~ / 50 Hz | 230 | Y/DELTA | DELTA | 1.73 |
| EWL | 380-420 V / 3~ / 50 Hz | 400 | | Y | 1.00 |
| EWM | 380-420 V / 3~ / 50 Hz | 400 | Y/DELTA | DELTA | 1.00 |
| AWR | 220-240 V / 3~ / 50 Hz | 230 | YY/Y | Y | 1.73 |
| AWY | 500-550 V / 3~ / 50 Hz | 525 | YY/Y | Y | 0.76 |
| EWK | 220-240 V / 3~ / 60 Hz | 230 | Y/DELTA | DELTA | 2.10 |
| EWK | 380-420 V / 3~ / 60 Hz | 380 | | Y | 1.20 |
| EWD | 440-480 V / 3~ / 60 Hz | 460 | Y/DELTA | DELTA | 1.00 |
| AWC | 208-230 V / 3~ / 60 Hz | 230 | YY/Y | Y | 2.19 |
| AWX | 380 V / 3~ / 60 Hz | 380 | YY/Y | Y | 1.20 |
| AWD | 440-480 V / 3~ / 60 Hz | 460 | YY/Y | Y | 1.00 |