ZR108KCE-TFD
HFC, R-407C, 50 Hz, 3 - Phase, 380/420 V , Also Available with Variable Frequency Drives
**Air Conditioning**
Production Status: Available for sale to all U.S. customers. Please check with your local Emerson Climate Technologies Representative for international availability.

## Performance

| | | |
|---|---|---|
| **Evaporator Temp. (°C)** | 7 | 2 |
| **Condensing Temp. (°C)** | 54 | 49 |
| **Return Gas Temp. (°C)** | 18 | 13 |
| **Liquid Temp. (°C)** | 46 | 41 |
| **Capacity (Watts)** | 25820 | 22332 |
| **Power (W):** | 7580 | 6690 |
| **Current (Amps):** | 13.8 | 12.7 |
| **EER(BTU/Wh):** | 19.71 | 19.37 |
| **Mass Flow (lbs/hr):** | 161.28 | 134.19 |
| **Sound Data @** | | |
| **Sound Power (dBA):** | 74 Avg | 79 Max |
| **Vibration mils(peak-peak):** | 3.0 Avg | 4.5 Max |
| **Record Date:** | 2017-03-23 | |

## Mechanical

| | |
|---|---|
| **Displacement (cm^3/Rev):** | 142.90 |
| **Displacement (m^3/Hr):** | |
| **Overall Length (mm):** | 263.65 |
| **Overall Width (mm):** | 285.24 |
| **Overall Height (mm):** | 533.40 |
| **Mounting Length (mm):** | 190.50 |
| **Mounting Width (mm):** | 190.50 |
| **Mounting Height (mm):** | 552.45 |
| **Suction Size (mm),Type:** | 330.20 / 203.20 Stub |
| **Discharge Size (mm),Type:** | 177.80 / 203.20 Stub |
| **Initial Oil Charge (ml):** | 3253.14 |
| **Oil Recharge (ml):** | 3134.84 |
| **Net Weight (kg):** | 59.87 |
| **Internal Free Volume (cm^3):** | 13257.08 |
| **Horse Power:** | 9.0 |

*Overall compressor height on Copeland Brand Product's specified mounting grommets.

## Electrical

| | |
|---|---|
| **LRA High* (Amps):** | 111 |
| **LRA Low*(Amps):** | 100 |
| **LRA Half Winding (Amps):** | |
| **MCC (Amps):** | 24.2 |
| **Max Operating Current (Amps):** | 17.7 |
| **RLA, MCC/1.4(use for contactor selection)(Amps):** | 17.3 |
| **RLA, MCC/1.56(use for breaker & wire size selection)(Amps):** | 15.5 |
| **RPM:** | 2900 |
| **Box IP :** | 21 |
| **UL File No:** | SA-2337 |
| **UL File Date:** | 1996-09-27 |

*Low and High refer to the low and high nominal voltage ranges for which the motor is approved.

## Capacitors

| Type | Part No | Low MFD | High MFD | Volts | User Description |
|---|---|---|---|---|---|
| No data available in table | | | | | |

## Rating Conditions

11.1 K Superheat

8.3 K Subcooling

35 °C Ambient Air Over

**50 Hz Operation**

**AIR CONDITIONING**

## ZR108KCE-TFD

**HFC-407C - Dew Pt.**

**COPELAND SCROLL®**

TFD 380/420-3-50

**Condensing Temperature °C (Sat. Dew Pt. Pressure, bar)** / **Evaporating Temperature °C (Sat. Dew Pt. Pressure, bar)**

| | | -29.0 (1.5) | -23.0 (1.9) | -18.0 (2.3) | -12.0 (3) | -7.0 (3.6) | 0.0 (4.6) | 5.0 (5.5) | 10.0 (6.4) | 13.0 (7.1) | 16.0 (7.8) | 18.0 (8.3) | 21.0 (9.1) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **65.0** (28.4) | C | | | | | | | | 24,500 | 27,500 | 30,800 | 33,100 | 36,900 |
| | P | | | | | | | | 9,610 | 9,610 | 9,610 | 9,610 | 9,610 |
| | A | | | | | | | | 16.6 | 16.6 | 16.6 | 16.6 | 16.5 |
| | M | | | | | | | | 172 | 191 | 211 | 226 | 248 |
| | E | | | | | | | | 2.6 | 2.9 | 3.2 | 3.5 | 3.8 |
| | % | | | | | | | | 68.5 | 70.9 | 72.9 | 74.0 | 75.1 |
| **60.0** (25.3) | C | | | | | | | 21,800 | 26,500 | 29,700 | 33,100 | 35,600 | 39,600 |
| | P | | | | | | | 8,590 | 8,590 | 8,590 | 8,600 | 8,600 | 8,620 |
| | A | | | | | | | 15.2 | 15.2 | 15.2 | 15.1 | 15.1 | 15.0 |
| | M | | | | | | | 146 | 175 | 194 | 214 | 229 | 252 |
| | E | | | | | | | 2.5 | 3.1 | 3.5 | 3.9 | 4.1 | 4.6 |
| | % | | | | | | | 67.7 | 71.8 | 73.8 | 75.2 | 75.8 | 76.1 |
| **55.0** (22.5) | C | | | | | | 19,200 | 23,500 | 28,500 | 31,800 | 35,400 | 38,000 | 42,200 |
| | P | | | | | | 7,670 | 7,680 | 7,680 | 7,690 | 7,710 | 7,730 | 7,770 |
| | A | | | | | | 13.9 | 14.0 | 14.0 | 13.9 | 13.9 | 13.9 | 13.8 |
| | M | | | | | | 124 | 149 | 178 | 197 | 217 | 231 | 254 |
| | E | | | | | | 2.5 | 3.1 | 3.7 | 4.1 | 4.6 | 4.9 | 5.4 |
| | % | | | | | | 66.5 | 71.0 | 74.3 | 75.6 | 76.2 | 76.2 | 75.5 |
| **49.0** (19.4) | C | | | | | 15,500 | 20,900 | 25,400 | 30,700 | 34,300 | 38,100 | 40,800 | 45,200 |
| | P | | | | | 6,670 | 6,700 | 6,710 | 6,730 | 6,760 | 6,800 | 6,840 | 6,910 |
| | A | | | | | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 |
| | M | | | | | 96 | 126 | 151 | 180 | 199 | 219 | 234 | 256 |
| | E | | | | | 2.3 | 3.1 | 3.8 | 4.6 | 5.1 | 5.6 | 6.0 | 6.5 |
| | % | | | | | 63.6 | 70.3 | 73.8 | 75.7 | 75.9 | 75.1 | 74.1 | 71.7 |
| **43.0** (16.7) | C | | | | 13,450 | 16,800 | 22,500 | 27,300 | 32,800 | 36,600 | 40,600 | 43,500 | 48,100 |
| | P | | | | 5,800 | 5,830 | 5,860 | 5,880 | 5,940 | 5,990 | 6,060 | 6,120 | 6,240 |
| | A | | | | 11.7 | 11.7 | 11.8 | 11.8 | 11.8 | 11.8 | 11.8 | 11.9 | 12.0 |
| | M | | | | 80 | 98 | 128 | 153 | 182 | 201 | 221 | 235 | 258 |
| | E | | | | 2.3 | 2.9 | 3.8 | 4.6 | 5.5 | 6.1 | 6.7 | 7.1 | 7.7 |
| | % | | | | 62.3 | 67.3 | 72.8 | 74.8 | 74.6 | 73.2 | 70.7 | 68.3 | 63.8 |
| **38.0** (14.6) | C | | | 10,850 | 14,350 | 17,800 | 23,700 | 28,700 | 34,500 | 38,400 | 42,600 | 45,600 | 50,300 |
| | P | | | 5,120 | 5,180 | 5,210 | 5,250 | 5,300 | 5,390 | 5,470 | 5,580 | 5,660 | 5,820 |
| | A | | | 10.9 | 11.0 | 11.0 | 11.1 | 11.1 | 11.1 | 11.2 | 11.3 | 11.4 | 11.6 |
| | M | | | 63 | 81 | 99 | 129 | 154 | 183 | 202 | 222 | 236 | 259 |
| | E | | | 2.1 | 2.8 | 3.4 | 4.5 | 5.4 | 6.4 | 7.0 | 7.6 | 8.1 | 8.7 |
| | % | | | 58.8 | 65.2 | 69.6 | 73.5 | 73.7 | 71.1 | 68.1 | 63.8 | 60.2 | 53.9 |
| **27.0** (10.8) | C | | 9,760 | 12,350 | 16,100 | 19,850 | 26,200 | 31,700 | 37,900 | | | | |
| | P | | 3,950 | 4,000 | 4,050 | 4,090 | 4,210 | 4,350 | 4,560 | | | | |
| | A | | 9.7 | 9.7 | 9.7 | 9.7 | 9.8 | 10.0 | 10.3 | | | | |
| | M | | 52 | 65 | 83 | 101 | 131 | 156 | 185 | | | | |
| | E | | 2.5 | 3.1 | 4.0 | 4.9 | 6.2 | 7.3 | 8.3 | | | | |
| | % | | 59.6 | 64.5 | 68.8 | 70.4 | 68.1 | 62.5 | 53.2 | | | | |
| **21.0** (9.1) | C | | 10,400 | 13,050 | 16,950 | 20,800 | 27,400 | 33,100 | | | | | |
| | P | | 3,430 | 3,480 | 3,550 | 3,630 | 3,810 | 4,020 | | | | | |
| | A | | 9.0 | 9.0 | 9.0 | 9.1 | 9.3 | 9.6 | | | | | |
| | M | | 53 | 66 | 84 | 102 | 132 | 157 | | | | | |
| | E | | 3.0 | 3.8 | 4.8 | 5.7 | 7.2 | 8.2 | | | | | |
| | % | | 62.5 | 66.3 | 68.3 | 67.1 | 59.8 | 50.2 | | | | | |
| **10.0** (6.4) | C | | 11,450 | 14,200 | 18,200 | 22,300 | | | | | | | |
| | P | | 2,630 | 2,710 | 2,850 | 3,030 | | | | | | | |
| | A | | 7.5 | 7.6 | 7.7 | 8.0 | | | | | | | |
| | M | | 56 | 68 | 87 | 105 | | | | | | | |
| | E | | 4.4 | 5.2 | 6.4 | 7.4 | | | | | | | |
| | % | | 65.8 | 65.0 | 59.8 | 51.3 | | | | | | | |

**C: Capacity (W), P: Power (W), A: Current (Amps), M: Mass Flow (gm/s), E: COP, %: Isentropic Efficiency (%)**

Nominal Performance Values (±5%) based on 72 hours run-in. Subject to change without notice. Current @ 400 V