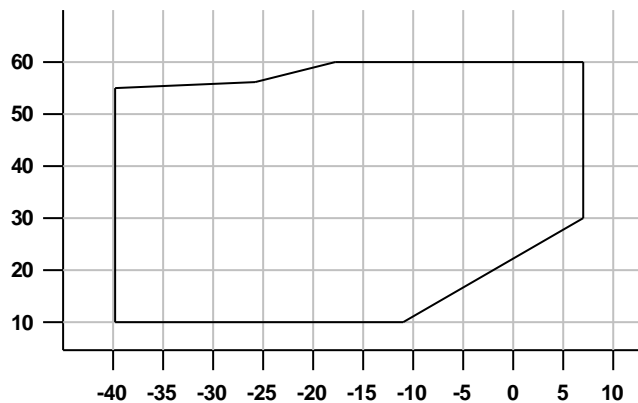


50Hz

ZF13K4E-TFD

R404A



Minimum evaporating temp. with:  
 ——— 25°C Suction Gas Return + Liquid Injection

Suction Return Temperature 20.0°C      **Evaporating Temperature °C**      Liquid subcooling 0.0K

| Cond °C | Capacity kW     |       |       |       |       |       |       |       |       |        |        |
|---------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
|         | -40             | -35   | -30   | -25   | -20   | -15   | -10   | -5    | 0     | 5      | 7      |
| 10      | 3.04            | 3.88  | 4.87  | 6.01  | 7.32  | 8.81  |       |       |       |        |        |
| 20      | 2.73            | 3.52  | 4.44  | 5.50  | 6.72  | 8.11  | 9.68  | 11.45 |       |        |        |
| 30      | 2.45            | 3.15  | 3.98  | 4.93  | 6.03  | 7.30  | 8.74  | 10.35 | 12.20 | 14.25  | 15.10  |
| 35      | 2.32            | 2.97  | 3.73  | 4.63  | 5.66  | 6.85  | 8.21  | 9.76  | 11.50 | 13.45  | 14.30  |
| 40      | 2.19            | 2.78  | 3.48  | 4.31  | 5.27  | 6.38  | 7.66  | 9.11  | 10.75 | 12.60  | 13.40  |
| 45      | 2.06            | 2.59  | 3.22  | 3.97  | 4.85  | 5.88  | 7.07  | 8.42  | 9.97  | 11.70  | 12.45  |
| 50      | 1.94            | 2.40  | 2.95  | 3.62  | 4.42  | 5.35  | 6.44  | 7.70  | 9.13  | 10.75  | 11.50  |
| 55      | 1.82            | 2.20  | 2.68  | 3.26  | 3.96  | 4.79  | 5.78  | 6.93  | 8.25  | 9.77   | 10.45  |
| 60      |                 |       |       |       |       | 4.21  | 5.08  | 6.11  | 7.32  | 8.71   | 9.32   |
|         | Power Input kW  |       |       |       |       |       |       |       |       |        |        |
|         | -40             | -35   | -30   | -25   | -20   | -15   | -10   | -5    | 0     | 5      | 7      |
| 10      | 1.32            | 1.37  | 1.44  | 1.53  | 1.65  | 1.78  |       |       |       |        |        |
| 20      | 1.56            | 1.61  | 1.68  | 1.77  | 1.88  | 2.00  | 2.15  | 2.31  |       |        |        |
| 30      | 1.87            | 1.93  | 2.00  | 2.08  | 2.19  | 2.30  | 2.44  | 2.59  | 2.76  | 2.95   | 3.03   |
| 35      | 2.06            | 2.12  | 2.19  | 2.28  | 2.37  | 2.49  | 2.62  | 2.76  | 2.93  | 3.11   | 3.19   |
| 40      | 2.27            | 2.33  | 2.41  | 2.49  | 2.59  | 2.70  | 2.83  | 2.97  | 3.13  | 3.30   | 3.37   |
| 45      | 2.51            | 2.58  | 2.65  | 2.74  | 2.84  | 2.95  | 3.07  | 3.21  | 3.36  | 3.52   | 3.60   |
| 50      | 2.78            | 2.85  | 2.93  | 3.02  | 3.12  | 3.23  | 3.35  | 3.48  | 3.62  | 3.78   | 3.85   |
| 55      | 3.08            | 3.16  | 3.24  | 3.33  | 3.43  | 3.54  | 3.66  | 3.79  | 3.93  | 4.08   | 4.15   |
| 60      |                 |       |       |       |       | 3.90  | 4.01  | 4.14  | 4.28  | 4.42   | 4.49   |
|         | Current 400V, A |       |       |       |       |       |       |       |       |        |        |
|         | -40             | -35   | -30   | -25   | -20   | -15   | -10   | -5    | 0     | 5      | 7      |
| 10      | 4.15            | 4.19  | 4.24  | 4.32  | 4.41  | 4.52  |       |       |       |        |        |
| 20      | 4.32            | 4.37  | 4.43  | 4.51  | 4.61  | 4.73  | 4.87  | 5.03  |       |        |        |
| 30      | 4.58            | 4.64  | 4.72  | 4.81  | 4.91  | 5.04  | 5.18  | 5.34  | 5.53  | 5.73   | 5.82   |
| 35      | 4.76            | 4.83  | 4.91  | 5.00  | 5.11  | 5.24  | 5.38  | 5.55  | 5.73  | 5.94   | 6.03   |
| 40      | 4.98            | 5.05  | 5.14  | 5.24  | 5.35  | 5.48  | 5.63  | 5.79  | 5.98  | 6.19   | 6.28   |
| 45      | 5.25            | 5.32  | 5.41  | 5.51  | 5.63  | 5.76  | 5.91  | 6.08  | 6.27  | 6.48   | 6.57   |
| 50      | 5.56            | 5.64  | 5.73  | 5.84  | 5.96  | 6.10  | 6.25  | 6.42  | 6.61  | 6.82   | 6.91   |
| 55      | 5.93            | 6.01  | 6.11  | 6.22  | 6.35  | 6.49  | 6.64  | 6.81  | 7.00  | 7.21   | 7.30   |
| 60      |                 |       |       |       |       | 6.93  | 7.09  | 7.27  | 7.46  | 7.67   | 7.76   |
|         | Mass Flow g/s   |       |       |       |       |       |       |       |       |        |        |
|         | -40             | -35   | -30   | -25   | -20   | -15   | -10   | -5    | 0     | 5      | 7      |
| 10      | 17.00           | 21.80 | 27.40 | 33.90 | 41.50 | 50.30 |       |       |       |        |        |
| 20      | 16.60           | 21.50 | 27.20 | 33.80 | 41.60 | 50.50 | 60.80 | 72.50 |       |        |        |
| 30      | 16.40           | 21.20 | 26.90 | 33.50 | 41.20 | 50.20 | 60.60 | 72.60 | 86.50 | 102.50 | 109.50 |
| 35      | 16.40           | 21.10 | 26.70 | 33.20 | 40.90 | 49.90 | 60.30 | 72.40 | 86.50 | 102.50 | 110.00 |
| 40      | 16.50           | 21.00 | 26.40 | 32.90 | 40.50 | 49.40 | 59.80 | 72.00 | 86.00 | 102.50 | 110.00 |
| 45      | 16.60           | 20.90 | 26.10 | 32.40 | 39.90 | 48.70 | 59.10 | 71.30 | 85.50 | 102.50 | 110.00 |
| 50      | 16.80           | 20.80 | 25.80 | 31.80 | 39.10 | 47.80 | 58.20 | 70.50 | 85.00 | 102.00 | 109.50 |
| 55      | 17.20           | 20.80 | 25.50 | 31.20 | 38.20 | 46.80 | 57.10 | 69.40 | 84.00 | 101.50 | 109.50 |
| 60      |                 |       |       |       |       | 45.60 | 55.80 | 68.20 | 83.00 | 101.50 | 109.50 |

**Copeland Scroll - Compressor - Refrigeration - Standard**
**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

|                                   |                 |
|-----------------------------------|-----------------|
| Displacement @ 50 Hz, cu.m/h      | 11.8            |
| Length/Width, mm                  | 241/244         |
| Height, mm                        | 458             |
| Net Weight, kg                    | 38              |
| Gross Weight, kg                  | 41              |
| Rotalock Suction, inch            | 1 1/4           |
| Rotalock Discharge, inch          | 1               |
| Oil Quantity, l                   | 1.9             |
| Base mounting (hole dia), mm      | 190 x 190 (8.5) |
| Sound Pressure @ 1m, dBA          | 65              |
| Sound Power, dBA                  | 76              |
| Sound Power with Sound Shell, dBA | 66              |
| PED Category                      | 1               |
| High Side PS, bar(g)              | 28.8            |
| Low Side PS, bar(g)               | 21              |
| Low Side TS Max., °C              | 50              |
| Internal Free Volume, l           | 6.1             |

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

|                              |                |
|------------------------------|----------------|
| Maximum Operating Current, A | 8              |
| Locked Rotor Current, A      | 51.5           |
| Winding Resistance, ohm      | 3.6            |
| Default Enclosure Class      | IP 21 (IEC 34) |

**ACCESSORIES INCLUDED**

|                                  |                     |
|----------------------------------|---------------------|
| Discharge Temperature Protection | External Thermostat |
| Mounting Grommets                | Standard            |

**ACCESSORIES OPTIONAL**

|                       |                       |
|-----------------------|-----------------------|
| Crankcase Heater      | 70W External          |
| Current Sensing Relay | External              |
| Liquid Injection      | DTC Valve             |
| Sound Attenuation     | Sound Shell (10dBA)   |
| Rotalock valves       | suction and discharge |

**MOTOR OPTIONS**

| <b>Power Supply</b> | <b>Nominal Voltage</b> | <b>Motor Code</b> | <b>Start Connection</b> | <b>DOL Connection</b> | <b>Amps Factor</b> |
|---------------------|------------------------|-------------------|-------------------------|-----------------------|--------------------|
| 380-420 V/3~/50H    | 400                    | TFD               |                         | Y                     | 1.00               |
| 200-220 V/3~/50H    | 200                    | TF5               |                         | Y                     | 2.09               |
| 200-230 V/3~/60H    | 230                    | TF5               |                         | Y                     | 2.09               |
| 380 V/3~/60Hz       | 380                    | TF7               |                         | Y                     | 1.26               |
| 460 V/3~/60Hz       | 460                    | TFD               |                         | Y                     | 1.04               |