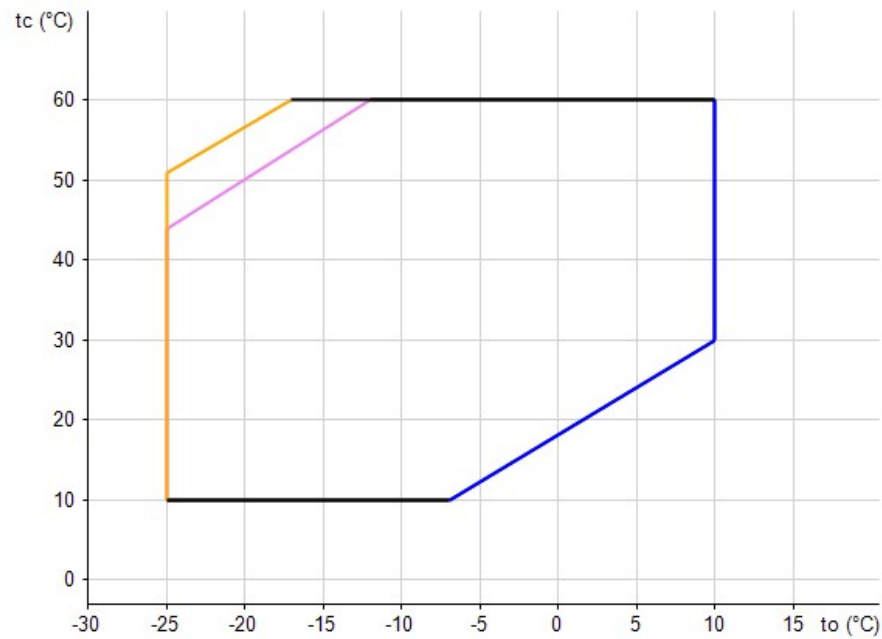


50 Hz

ZBD38KCE-TFD

R404A Dew Point



Minimum Evaporating Temp. With:

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

Suction Return Temperature 18.3°C

Liquid Subcooling 0.0K

Evaporating Temperature, °C

| Cond<br>°C | Cooling Capacity, kW |       |       |       |       |       |       |       |       |
|------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | -25.0                | -20.0 | -15.0 | -10.0 | -5.0  | 0.0   | 5.0   | 7.0   | 10.0  |
| 10.0       | 7.69                 | 9.21  | 11.05 | 13.20 |       |       |       |       |       |
| 15.0       | 7.17                 | 8.65  | 10.40 | 12.50 | 14.95 |       |       |       |       |
| 20.0       | 6.70                 | 8.14  | 9.84  | 11.85 | 14.15 | 16.85 |       |       |       |
| 25.0       | 6.27                 | 7.66  | 9.29  | 11.20 | 13.40 | 15.95 | 18.85 |       |       |
| 30.0       | 5.87                 | 7.20  | 8.75  | 10.55 | 12.65 | 15.05 | 17.75 | 18.95 | 20.80 |
| 35.0       | 5.49                 | 6.75  | 8.21  | 9.91  | 11.85 | 14.10 | 16.65 | 17.75 | 19.55 |
| 40.0       | 5.12                 | 6.30  | 7.66  | 9.24  | 11.05 | 13.15 | 15.50 | 16.55 | 18.20 |
| 45.0       |                      | 5.83  | 7.09  | 8.54  | 10.20 | 12.10 | 14.30 | 15.25 | 16.75 |
| 50.0       |                      | 5.34  | 6.48  | 7.80  | 9.31  | 11.05 | 13.00 | 13.90 | 15.30 |
| 55.0       |                      |       | 5.83  | 7.00  | 8.35  | 9.90  | 11.65 | 12.45 | 13.70 |
| 60.0       |                      |       |       | 6.15  | 7.32  | 8.67  | 10.25 | 10.90 | 12.05 |

50 Hz

ZBD38KCE-TFD

R404A Dew Point

| Cond<br>°C | Power, kW |       |       |       |      |      |      |      |      |
|------------|-----------|-------|-------|-------|------|------|------|------|------|
|            | -25.0     | -20.0 | -15.0 | -10.0 | -5.0 | 0.0  | 5.0  | 7.0  | 10.0 |
| 10.0       | 1.94      | 2.01  | 2.08  | 2.14  |      |      |      |      |      |
| 15.0       | 2.07      | 2.15  | 2.23  | 2.31  | 2.37 |      |      |      |      |
| 20.0       | 2.22      | 2.32  | 2.41  | 2.50  | 2.57 | 2.63 |      |      |      |
| 25.0       | 2.40      | 2.51  | 2.62  | 2.71  | 2.80 | 2.87 | 2.91 |      |      |
| 30.0       | 2.60      | 2.73  | 2.85  | 2.96  | 3.05 | 3.13 | 3.19 | 3.21 | 3.22 |
| 35.0       | 2.83      | 2.97  | 3.11  | 3.23  | 3.34 | 3.43 | 3.49 | 3.51 | 3.54 |
| 40.0       | 3.08      | 3.24  | 3.39  | 3.53  | 3.65 | 3.75 | 3.83 | 3.85 | 3.88 |
| 45.0       |           | 3.54  | 3.70  | 3.85  | 3.99 | 4.10 | 4.19 | 4.22 | 4.25 |
| 50.0       |           | 3.87  | 4.04  | 4.21  | 4.35 | 4.48 | 4.58 | 4.61 | 4.65 |
| 55.0       |           |       | 4.41  | 4.59  | 4.75 | 4.89 | 5.00 | 5.04 | 5.09 |
| 60.0       |           |       |       | 5.00  | 5.18 | 5.33 | 5.45 | 5.50 | 5.55 |

| Cond<br>°C | Current at 400 V, A |       |       |       |      |      |      |      |      |
|------------|---------------------|-------|-------|-------|------|------|------|------|------|
|            | -25.0               | -20.0 | -15.0 | -10.0 | -5.0 | 0.0  | 5.0  | 7.0  | 10.0 |
| 10.0       | 5.12                | 5.16  | 5.20  | 5.24  |      |      |      |      |      |
| 15.0       | 5.19                | 5.25  | 5.31  | 5.36  | 5.42 |      |      |      |      |
| 20.0       | 5.30                | 5.38  | 5.46  | 5.53  | 5.60 | 5.67 |      |      |      |
| 25.0       | 5.45                | 5.56  | 5.65  | 5.74  | 5.82 | 5.90 | 5.97 |      |      |
| 30.0       | 5.64                | 5.77  | 5.89  | 5.99  | 6.09 | 6.18 | 6.26 | 6.29 | 6.33 |
| 35.0       | 5.87                | 6.03  | 6.17  | 6.30  | 6.41 | 6.51 | 6.60 | 6.63 | 6.67 |
| 40.0       | 6.14                | 6.33  | 6.50  | 6.65  | 6.78 | 6.89 | 6.99 | 7.02 | 7.07 |
| 45.0       |                     | 6.67  | 6.87  | 7.04  | 7.20 | 7.33 | 7.44 | 7.48 | 7.53 |
| 50.0       |                     | 7.06  | 7.29  | 7.49  | 7.67 | 7.81 | 7.94 | 7.98 | 8.04 |
| 55.0       |                     |       | 7.75  | 7.99  | 8.19 | 8.36 | 8.50 | 8.55 | 8.61 |
| 60.0       |                     |       |       | 8.53  | 8.76 | 8.95 | 9.12 | 9.17 | 9.25 |

50 Hz

ZBD38KCE-TFD

R404A Dew Point

| Cond<br>°C | Suction Mass Flow, g/s |       |       |       |       |        |        |        |        |
|------------|------------------------|-------|-------|-------|-------|--------|--------|--------|--------|
|            | -25.0                  | -20.0 | -15.0 | -10.0 | -5.0  | 0.0    | 5.0    | 7.0    | 10.0   |
| 10.0       | 43.60                  | 52.50 | 63.30 | 76.30 |       |        |        |        |        |
| 15.0       | 42.40                  | 51.40 | 62.40 | 75.40 | 90.90 |        |        |        |        |
| 20.0       | 41.50                  | 50.60 | 61.60 | 74.80 | 90.30 | 108.50 |        |        |        |
| 25.0       | 40.70                  | 50.00 | 61.10 | 74.20 | 89.70 | 108.00 | 129.50 |        |        |
| 30.0       | 40.10                  | 49.50 | 60.60 | 73.70 | 89.20 | 107.50 | 128.50 | 138.50 | 154.00 |
| 35.0       | 39.70                  | 49.10 | 60.20 | 73.30 | 88.70 | 107.00 | 128.00 | 137.50 | 153.00 |
| 40.0       | 39.30                  | 48.70 | 59.70 | 72.70 | 88.00 | 106.00 | 127.50 | 137.00 | 152.50 |
| 45.0       |                        | 48.20 | 59.20 | 72.00 | 87.20 | 105.00 | 126.00 | 135.50 | 151.00 |
| 50.0       |                        | 47.70 | 58.50 | 71.10 | 86.00 | 103.50 | 124.50 | 134.00 | 150.00 |
| 55.0       |                        |       | 57.50 | 69.90 | 84.60 | 102.00 | 123.00 | 132.50 | 148.00 |
| 60.0       |                        |       |       | 68.30 | 82.70 | 99.90  | 120.50 | 130.50 | 146.00 |

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

|                                                                            |                                              |
|----------------------------------------------------------------------------|----------------------------------------------|
| Displacement @ 50 Hz, m³/h                                                 | 14.4                                         |
| Length/Width, mm                                                           | 246/250                                      |
| Height, mm                                                                 | 481                                          |
| Net Weight, kg                                                             | 38.1                                         |
| Rotalock Suction, inch                                                     | 1 1/4                                        |
| Rotalock Discharge, inch                                                   | 1                                            |
| Stub Suction, inch                                                         | 7/8                                          |
| Stub Discharge, inch                                                       | 1/2                                          |
| Oil Quantity, l                                                            | 1.89                                         |
| Oil type (original charge)                                                 | POE RL32-3MAF                                |
| Oil type (approved oils)                                                   | POE RL32-3MAF, POE MOBIL<br>EAL Arctic 22 CC |
| Base mounting (hole dia), mm                                               | 190 x 190 (19)                               |
| Sound Pressure @ 1m (MT), dBA                                              | 67                                           |
| Sound Power (MT), dBA                                                      | 78                                           |
| Sound Conditions (MT, Temperatures:<br>Evap./Cond./Suction at freq./speed) | -10 / 45 / 20 °C at 50 Hz                    |
| PED Category                                                               | 1                                            |
| Max. Low Side Internal Free Volume, l                                      | 6.3                                          |
| Max. High Side Internal Free Volume, l                                     | 0.5                                          |
| Max. Internal Free Volume, l                                               | 6.80                                         |
| High Side PS gauge, bar                                                    | 32                                           |
| Low Side PS gauge, bar                                                     | 21                                           |
| Refrigerant's GWP                                                          | 3922                                         |
| Refrigerant's classification                                               | A1                                           |

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

|                              |                |
|------------------------------|----------------|
| Maximum Operating Current, A | 11.3           |
| Locked Rotor Current, A      | 64             |
| Winding Resistance, ohm      | 2.8            |
| Default Enclosure Class      | IP 21 (IEC 34) |

### **ACCESSORIES INCLUDED**

|                                  |            |
|----------------------------------|------------|
| Discharge Temperature Protection | NTC sensor |
| Mounting Grommets                | Standard   |

### **ACCESSORIES OPTIONAL**

|                     |                             |
|---------------------|-----------------------------|
| Crankcase Heater    | 70 W External               |
| Mounting Grommets   | Hard Mounts for Paralleling |
| Solenoid valve      | Standard                    |
| Oil Control System  | ALCO Trax-Oil OM3           |
| Sound Attenuation   | Sound Shell (10dBA)         |
| Valve Coil          | 220V                        |
| Valve Coil          | 24V AC                      |
| Solenoid Valve Kit  | 220 V Ac 12" lead Length    |
| Solenoid Valve Kit  | 24 V Ac 12" lead Length     |
| Digital Tubing Kit  | 220 V 0.3m Rotalock         |
| Digital Tubing Kit  | 24 V 0.3m Rotalock          |
| Digital Control Kit | EC2-552                     |
| Digital Control Kit | EC3-652                     |
| Digital Driver      | EC3-D13                     |

### **MOTOR OPTIONS**

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