



## Project Report

|                                             |                 |
|---------------------------------------------|-----------------|
| Refrigerant                                 | R449A Dew Point |
| <b>High Side Properties:</b>                |                 |
| Condensing Temperature, °C                  | 38.20           |
| Abs. Condensing Pressure, bar               | 15.87           |
| Dew Point, °C                               | 38.20           |
| Bubble Point, °C                            | 33.70           |
| Saturated vapour enthalpy, kJ/kg            | 413.00          |
| Specific volume of saturated vapour, dm³/kg | 13.80           |
| Liquid Temperature, °C                      | 2.30            |
| Liquid enthalpy, kJ/kg                      | 203.00          |
| <b>Low Side Properties:</b>                 |                 |
| Evaporating Temperature, °C                 | -35.00          |
| Evaporating Abs. Pressure, bar              | 1.29            |
| Dew Point, °C                               | -35.00          |
| Bubble Point, °C                            | -40.70          |
| With vapour at, °C                          | 20.00           |
| Specific volume, dm³/kg                     | 213.00          |
| Enthalpy, kJ/kg                             | 425.00          |
| <b>Operating Conditions:</b>                |                 |
| Evaporating Temperature, °C                 | -35.00          |
| Suction Return Temperature, °C              | 20.00           |
| Ambient, °C                                 | 32.00           |
| Condensing Unit Selected                    | ZXLE-050E-TFD   |

**PERFORMANCE AT SPECIFIED OPERATING POINT**  
**ZXLE-050E-TFD Data at 50 Hz**

|                            |       |
|----------------------------|-------|
| Cooling Capacity, kW       | 3.62  |
| Total Power Input, kW      | 2.94  |
| COP                        | 1.23  |
| Current at 400 V, A        | 4.84  |
| Mass Flow, g/s             | 16.35 |
| Heating Capacity, kW       | 6.18  |
| Condensing Temperature, °C | 38.20 |
| Liquid Temperature LO, °C  | 2.30  |

**CONDENSING UNIT MECHANICAL AND PHYSICAL DATA**

|                                                                            |                             |
|----------------------------------------------------------------------------|-----------------------------|
| Condenser/Fan Type                                                         | ZXL_2F/60 W                 |
| Number of Fans                                                             | 2                           |
| Total Fan Power Input, W                                                   | 246                         |
| Depth/Width, mm                                                            | 1035/447                    |
| Height, mm                                                                 | 1244                        |
| Base mounting (hole dia), mm                                               | 580 x 388 (12)              |
| Net Weight, kg                                                             | 106                         |
| Receiver Capacity, l                                                       | 5.9                         |
| Liquid Line, inch                                                          | 1/2                         |
| Air Flow, m <sup>3</sup> /s                                                | 1.64                        |
| High Side PS gauge, bar                                                    | 28.8                        |
| Low Side PS gauge, bar                                                     | 21                          |
| Suction Type                                                               | Cu Tube                     |
| Suction Diameter, inch                                                     | 7/8                         |
| Sound Pressure @ 10m (LT), dBA                                             | 41                          |
| Sound Pressure @ 10m (MT), dBA                                             | 41                          |
| Sound Conditions (LT, Temperatures:<br>Evap./Cond./Suction at freq./speed) | -35.0/40.0/20.0 °C at 50 Hz |
| Sound Conditions (MT, Temperatures:<br>Evap./Cond./Suction at freq./speed) | -10.0/45.0/20.0 °C at 50 Hz |
| PED Category                                                               | I                           |

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

|                                         |      |
|-----------------------------------------|------|
| Compressor Maximum Operating Current, A | 11.9 |
| Compressor Locked Rotor Current, A      | 51.5 |

***ACCESSORIES INCLUDED***

|                                     |                                |
|-------------------------------------|--------------------------------|
| Crankcase Heater                    | 70 W External                  |
| Oil separator                       | ALCO OSH-404                   |
| Liquid sight glass                  | ALCO MIA 012                   |
| Compressor contactor                | 12 A                           |
| Control circuit fuse                | S7-904-5355-0                  |
| HP Switch                           | ALCO PS3 WDS (Automatic reset) |
| Electronic controller               | Emerson XCM25D                 |
| Filter Drier                        | ALCO ADK Plus                  |
| Vapour Injection                    | Expansion Valve                |
| Circuit breaker, over current relay | 20 A                           |
| Suction Accumulator                 | ALCO A12-507                   |

***ACCESSORIES OPTIONAL***

|                               |              |
|-------------------------------|--------------|
| LP Adjustable Pressure Switch | Alco PS1-A3A |
|-------------------------------|--------------|

