



Minimum Evaporating Temp. With:

- 25 °C Suction Gas Return — 0 °C Suction Gas Return
- Maximum Evaporating Temperature — Maximum Pressure Limit

Suction Return Temperature 20.0°C

Liquid Subcooling 0.0K

Evaporating Temperature, °C

| Ambient °C | Cooling Capacity, kW | | | | | | | | | | |
|---------------|----------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| | -40.0 | -35.0 | -30.0 | -25.0 | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 |
| 27.0 | 1.44 | 1.88 | 2.40 | 2.99 | 3.66 | 4.39 | 5.17 | 5.99 | 6.84 | 7.72 | 8.08 |
| 32.0 | 1.37 | 1.80 | 2.30 | 2.87 | 3.51 | 4.20 | 4.93 | 5.71 | 6.51 | 7.33 | 7.66 |
| 38.0 | | 1.68 | 2.16 | 2.70 | 3.29 | 3.93 | 4.61 | 5.33 | 6.06 | 6.81 | 7.11 |
| 43.0 | | 1.57 | 2.02 | 2.53 | 3.09 | 3.69 | 4.32 | 4.98 | 5.65 | 6.34 | |
| 46.0 | | | 1.94 | 2.42 | 2.95 | 3.53 | 4.13 | 4.75 | | | |
| 49.0 | | | | | | | | | | | |

50 Hz

ZXLE020E-TFD

R404A Dew Point

| Ambient °C | Total Power Input, kW | | | | | | | | | | |
|---------------|-----------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| | -40.0 | -35.0 | -30.0 | -25.0 | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 |
| 27.0 | 1.43 | 1.52 | 1.61 | 1.70 | 1.78 | 1.84 | 1.92 | 1.98 | 2.05 | 2.11 | 2.13 |
| 32.0 | 1.58 | 1.68 | 1.78 | 1.88 | 1.97 | 2.06 | 2.14 | 2.21 | 2.28 | 2.35 | 2.38 |
| 38.0 | | 1.92 | 2.03 | 2.14 | 2.24 | 2.34 | 2.43 | 2.52 | 2.60 | 2.68 | 2.71 |
| 43.0 | | 2.14 | 2.27 | 2.39 | 2.51 | 2.62 | 2.72 | 2.81 | 2.90 | 2.99 | |
| 46.0 | | | 2.43 | 2.56 | 2.68 | 2.80 | 2.90 | 3.00 | | | |
| 49.0 | | | | | | | | | | | |

| Ambient °C | Current at 400 V, A | | | | | | | | | | |
|---------------|---------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| | -40.0 | -35.0 | -30.0 | -25.0 | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 |
| 27.0 | 2.87 | 2.97 | 3.06 | 3.15 | 3.25 | 3.33 | 3.42 | 3.50 | 3.58 | 3.65 | 3.68 |
| 32.0 | 3.03 | 3.15 | 3.26 | 3.38 | 3.48 | 3.59 | 3.69 | 3.79 | 3.88 | 3.97 | 4.00 |
| 38.0 | | 3.42 | 3.56 | 3.70 | 3.83 | 3.96 | 4.08 | 4.20 | 4.31 | 4.41 | 4.45 |
| 43.0 | | 3.71 | 3.87 | 4.03 | 4.18 | 4.33 | 4.47 | 4.60 | 4.73 | 4.84 | |
| 46.0 | | | 4.09 | 4.26 | 4.42 | 4.58 | 4.73 | 4.87 | | | |
| 49.0 | | | | | | | | | | | |

| Ambient °C | Mass Flow, g/s | | | | | | | | | | |
|---------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | -40.0 | -35.0 | -30.0 | -25.0 | -20.0 | -15.0 | -10.0 | -5.0 | 0.0 | 5.0 | 7.0 |
| 27.0 | 7.48 | 9.97 | 12.90 | 16.40 | 20.60 | 25.50 | 31.50 | 38.40 | 46.50 | 55.90 | 60.10 |
| 32.0 | 7.26 | 9.74 | 12.65 | 16.10 | 20.20 | 25.20 | 31.00 | 37.90 | 45.90 | 55.30 | 59.40 |
| 38.0 | | 9.36 | 12.20 | 15.60 | 19.65 | 24.50 | 30.20 | 37.00 | 45.00 | 54.20 | 58.30 |
| 43.0 | | 8.96 | 11.75 | 15.05 | 19.00 | 23.80 | 29.40 | 36.10 | 44.00 | 53.10 | |
| 46.0 | | | 11.40 | 14.65 | 18.60 | 23.30 | 28.90 | 35.50 | | | |
| 49.0 | | | | | | | | | | | |

CONDENSING UNIT MECHANICAL AND PHYSICAL DATA

| | |
|--|-----------------------------|
| Condenser/Fan Type | ZX020E/60 W |
| Base mounting (hole dia), mm | 580 x 388 (12) |
| Number of Fans | 1 |
| Air Flow, m ³ /s | 0.81 |
| Total Fan Power Input, W | 116 |
| Height, mm | 840 |
| Depth/Width, mm | 1035/446 |
| Suction Diameter, inch | 3/4 |
| Liquid Line, inch | 1/2 |
| Suction Type | Cu Tube |
| High Side PS gauge, bar | 28.8 |
| Receiver Capacity, l | 4.1 |
| Low Side PS gauge, bar | 21 |
| Net Weight, kg | 79 |
| Sound Pressure @ 10m (MT), dBA | 37 |
| Sound Conditions (MT, Temperatures: Evap./Cond./Suction at freq./speed) | -10.0/45.0/20.0 °C at 50 Hz |

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

| | |
|---|------|
| Compressor Maximum Operating Current, A | 5.7 |
| Compressor Locked Rotor Current, A | 39.2 |

ACCESSORIES INCLUDED

| | |
|-------------------------------------|--------------------------------|
| Crankcase Heater | 70 W External |
| Oil separator | ALCO OSH-404 |
| Liquid sight glass | ALCO MIA 012 |
| Compressor contactor | 18 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 | 10 A |
| Suction Accumulator | ALCO A09-507 |

ACCESSORIES OPTIONAL

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

50 Hz

ZXLE020E-TFD

R404A Dew Point

MOTOR OPTIONS

| Motor Code | Power Supply | Nominal Voltage, V | Start Connection | DOL Connection | Amps Factor |
|-------------------|------------------------|---------------------------|-------------------------|-----------------------|--------------------|
| TFD | 380-420 V / 3~ / 50 Hz | 400 | | Y | 1.00 |



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Project Report

Project Details: New Project

Contact:

Author Name:

| Refrigerant | R404A Dew Point |
|--|-----------------|
| High Side Properties: | |
| Condensing Temperature, °C | 44.60 |
| Abs. Condensing Pressure, bar | 20.27 |
| Dew Point, °C | 44.60 |
| Bubble Point, °C | 44.30 |
| Saturated vapour enthalpy, kJ/kg | 381.00 |
| Specific volume of saturated vapour, dm ³ /kg | 8.60 |
| Liquid Temperature, °C | 20.10 |
| Liquid enthalpy, kJ/kg | 229.00 |
| Low Side Properties: | |
| Evaporating Temperature, °C | -10.00 |
| Evaporating Abs. Pressure, bar | 4.34 |
| Dew Point, °C | -10.00 |
| Bubble Point, °C | -10.60 |
| With vapour at, °C | 20.00 |
| Specific volume, dm ³ /kg | 53.00 |
| Enthalpy, kJ/kg | 388.00 |
| Operating Conditions: | |
| Evaporating Temperature, °C | -10.00 |
| Suction Return Temperature, °C | 20.00 |
| Ambient, °C | 32.00 |
| Condensing Unit Selected | ZXLE020E-TFD |

**PERFORMANCE AT SPECIFIED OPERATING POINT
ZXLE020E-TFD Data at 50 Hz**

| | |
|----------------------------|-------|
| Cooling Capacity, kW | 4.93 |
| Total Power Input, kW | 2.14 |
| COP | 2.31 |
| Current at 400 V, A | 3.69 |
| Mass Flow, g/s | 31.00 |
| Heating Capacity, kW | 6.85 |
| Condensing Temperature, °C | 44.60 |
| Liquid Temperature LO, °C | 20.10 |

CONDENSING UNIT MECHANICAL AND PHYSICAL DATA

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|--|-----------------------------|
| Condenser/Fan Type | ZX020E/60 W |
| Base mounting (hole dia), mm | 580 x 388 (12) |
| Number of Fans | 1 |
| Air Flow, m ³ /s | 0.81 |
| Total Fan Power Input, W | 116 |
| Height, mm | 840 |
| Depth/Width, mm | 1035/446 |
| Suction Diameter, inch | 3/4 |
| Liquid Line, inch | 1/2 |
| Suction Type | Cu Tube |
| High Side PS gauge, bar | 28.8 |
| Receiver Capacity, l | 4.1 |
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| Liquid sight glass | ALCO MIA 012 |
| Compressor contactor | 18 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 | 10 A |
| Suction Accumulator | ALCO A09-507 |

ACCESSORIES OPTIONAL

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

