

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NT 2178GK |
| Nominal Voltage/Frequency | 208-230 V 60 Hz |
| Engineering Number | 922ED04 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 208-230 / 60 | [V / Hz] | |
| 4 Application type | Low Back Pressure R404A | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSCR | | |
| 6 Starting torque | HST - Hight starting torque | | |
| 7 Expansion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | - | - | - |
| 8.2 LBP (43°C Ambient temperature) | - | - | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 25.2 | [kgf/cm ²] (358 psig) | / °C - °F |
| 9.2 Peak | 28.3 | [kgf/cm ²] (402 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1- | [hp] |
| 2 Displacement | 17.39 | [cm ³] (1.061 cu.in) |
| 2.1 Bore [mm] | 34.120 | |
| 2.2 Stroke [mm] | 19.030 | |
| 3 Lubricant charge | 450 | [ml] (15.22 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 17 | [kg] (37.48 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELETRICAL DATA

| | | |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 208-230 V 60 Hz 1~ (Single phase) | |
| 2 Starting device type | Voltage Relay | |
| 2.1 Starting device | RVA2AM3C-104 | |
| 3 Start capacitor | 72-88(330) | [µF(VAC minimum)] |
| 4 Run capacitor | 15(400) | [µF(VAC minimum)] |
| 5 Motor protection | T0843/G6 | |
| 6 Start winding resistance | 6.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 1.58 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @230V60Hz | | | ARILBP Fan | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 48.9°C (120.02°F) | |
| Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 2559 | 645 | 750 | 831 | 3.93 | 26.49 | 3.08 | 0.78 | 0.90 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-------------|------|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @230V60Hz | | | ARI4 Fan | | (Condensing temperature 35°C (+95°F)) | | | | | |
| Evaporating temperature | | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -40 | (-40) | 1312 | 331 | 384 | 520 | 2.67 | 10.78 | 2.52 | 0.63 | 0.74 |
| -35 | (-31) | 1843 | 464 | 540 | 604 | 2.99 | 15.27 | 3.05 | 0.77 | 0.89 |
| -30 | (-22) | 2492 | 628 | 730 | 686 | 3.30 | 20.76 | 3.63 | 0.91 | 1.06 |
| -25 | (-13) | 3259 | 821 | 955 | 766 | 3.60 | 27.33 | 4.26 | 1.07 | 1.25 |
| -20 | (- 4) | 4145 | 1045 | 1215 | 841 | 3.91 | 35.05 | 4.94 | 1.24 | 1.45 |
| -15 | (+ 5) | 5149 | 1298 | 1509 | 911 | 4.22 | 43.99 | 5.66 | 1.43 | 1.66 |
| -10 | (+14) | 6272 | 1580 | 1838 | 974 | 4.54 | 54.22 | 6.42 | 1.62 | 1.88 |

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|-------------------------------|-------|----------------------------|-------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @230V60Hz | | | ARI4 Fan | | (Condensing temperature 45°C (+113°F)) | | | | | |
| Evaporating temperature | | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -40 | (-40) | 957 | 241 | 281 | 525 | 2.65 | 9.08 | 1.84 | 0.46 | 0.54 |
| -35 | (-31) | 1398 | 352 | 410 | 614 | 3.01 | 13.33 | 2.27 | 0.57 | 0.67 |
| -30 | (-22) | 1944 | 490 | 570 | 704 | 3.36 | 18.62 | 2.75 | 0.69 | 0.80 |
| -25 | (-13) | 2594 | 654 | 760 | 794 | 3.72 | 25.05 | 3.25 | 0.82 | 0.95 |
| -20 | (- 4) | 3349 | 844 | 981 | 882 | 4.08 | 32.68 | 3.79 | 0.96 | 1.11 |
| -15 | (+ 5) | 4209 | 1061 | 1233 | 967 | 4.45 | 41.58 | 4.36 | 1.10 | 1.28 |
| -10 | (+14) | 5174 | 1304 | 1516 | 1047 | 4.84 | 51.84 | 4.95 | 1.25 | 1.45 |

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|-------------------------------|-------|----------------------------|-------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @230V60Hz | | | ARI4 Fan | | (Condensing temperature 55°C (+131°F)) | | | | | |
| Evaporating temperature | | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -40 | (-40) | 701 | 177 | 205 | 533 | 2.67 | 7.94 | 1.30 | 0.33 | 0.38 |
| -35 | (-31) | 1017 | 256 | 298 | 626 | 3.05 | 11.60 | 1.63 | 0.41 | 0.48 |
| -30 | (-22) | 1425 | 359 | 417 | 723 | 3.42 | 16.37 | 1.98 | 0.50 | 0.58 |
| -25 | (-13) | 1923 | 485 | 564 | 822 | 3.81 | 22.33 | 2.34 | 0.59 | 0.69 |
| -20 | (- 4) | 2513 | 633 | 736 | 922 | 4.21 | 29.54 | 2.73 | 0.69 | 0.80 |
| -15 | (+ 5) | 3194 | 805 | 936 | 1022 | 4.62 | 38.08 | 3.13 | 0.79 | 0.92 |
| -10 | (+14) | 3966 | 999 | 1162 | 1119 | 5.05 | 48.03 | 3.54 | 0.89 | 1.04 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 9.6 +0.07/+0.00 | [mm] | (0.378" +0.003"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Vertical | | |
| 3.2 DISCHARGE | 6.42 +0.08/+0.00 | [mm] | (0.253" +0.003"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Vertical | | |
| 3.3 PROCESS | 6.42 +0.08/+0.00 | [mm] | (0.253" +0.003"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Vertical | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |