**COMPRESSOR DEFINITION**

| | |
|---|---|
| Designation | **NT 2210UV** |
| Nominal Voltage/Frequency | **208-230 V 60 Hz** |
| Engineering Number | **843CD02** |

**A - APPLICATION / LIMIT WORKING CONDITIONS**

| | | | |
|---|---|---|---|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 3 Nominal voltage and frequency | 208-230 / 60 | [ V / Hz ] | |
| 4 Application type | Low Back Pressure R290 | | |
| 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 Expantion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | | Operating voltage range | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32ºC Ambient temperature) | - | - | - |
| 8.2 LBP (43ºC Ambient temperature) | - | - | - |
| 8.3 HBP (32ºC Ambient temperature) | - | - | - |
| 8.4 HBP (43ºC Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 18.4 | [kgf/cm²] (262 psig) | / ºC - ºF |
| 9.2 Peak | 20.6 | [kgf/cm²] (293 psig) | / ºC - ºF |
| 10 Maximum winding temperature | 130 | [ °C ] | |

**B - MECHANICAL DATA**

| | | |
|---|---|---|
| 1 Commercial designation | 1 | [hp] |
| 2 Displacement | 27.80 | [cm³] (1.696 cu.in) |
| 2.1 Bore [mm] | 38.100 | |
| 2.2 Stroke [mm] | 24.400 | |
| 3 Lubricant charge | 450 | [ml] (15.22 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | AB / ISO32 | |
| 4 Weight (with oil charge) | 17.7 | [kg] (39.02 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm²] (2.84 to 4.27 psig) |

**C - ELECTRICAL 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 | RVA2AI3C-124 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | 17.5(400) | [µF(VAC minimum)] |
| 5 Motor protection | 15HM1971-247 | |
| 6 Start winding resistance | 3.73 | [Ω at 25ºC (77ºF)] +/- 8% |
| 7 Run winding resistance | 1.44 | [Ω at 25ºC (77ºF)] +/- 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 (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 3584 | 903 | 1050 | 936 | 4.51 | 14.56 | 3.83 | 0.97 | 1.12 |

## E - PERFORMANCE - CURVES

TEST CONDITIONS: **ARI4** (Condensing temperature **35ºC (+95ºF) )**
**@230V60Hz** **Fan**

| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
|---|---|---|---|---|---|---|---|---|---|---|
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| **-40** | **(-40)** | 1976 | 498 | 579 | 584 | 3.17 | 6.86 | 3.37 | 0.85 | 0.99 |
| **-35** | **(-31)** | 2491 | 628 | 730 | 657 | 3.43 | 8.67 | 3.80 | 0.96 | 1.11 |
| **-30** | **(-22)** | 3210 | 809 | 941 | 740 | 3.75 | 11.21 | 4.34 | 1.09 | 1.27 |
| **-25** | **(-13)** | 4132 | 1041 | 1211 | 833 | 4.11 | 14.50 | 4.95 | 1.25 | 1.45 |
| **-20** | **(- 4)** | 5258 | 1325 | 1541 | 935 | 4.52 | 18.57 | 5.61 | 1.41 | 1.64 |
| **-15** | **(+ 5)** | 6588 | 1660 | 1930 | 1046 | 4.98 | 23.43 | 6.29 | 1.59 | 1.84 |
| **-10** | **(+14)** | 8121 | 2046 | 2380 | 1167 | 5.49 | 29.11 | 6.97 | 1.76 | 2.04 |

TEST CONDITIONS: **ARI4** (Condensing temperature **45ºC (+113ºF) )**
**@230V60Hz** **Fan**

| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
|---|---|---|---|---|---|---|---|---|---|---|
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| **-40** | **(-40)** | 1676 | 422 | 491 | 599 | 3.24 | 6.40 | 2.79 | 0.70 | 0.82 |
| **-35** | **(-31)** | 2117 | 534 | 620 | 678 | 3.52 | 8.14 | 3.13 | 0.79 | 0.92 |
| **-30** | **(-22)** | 2725 | 687 | 799 | 766 | 3.85 | 10.52 | 3.56 | 0.90 | 1.04 |
| **-25** | **(-13)** | 3500 | 882 | 1025 | 866 | 4.24 | 13.59 | 4.04 | 1.02 | 1.18 |
| **-20** | **(- 4)** | 4441 | 1119 | 1301 | 975 | 4.68 | 17.35 | 4.55 | 1.15 | 1.33 |
| **-15** | **(+ 5)** | 5548 | 1398 | 1626 | 1095 | 5.17 | 21.83 | 5.07 | 1.28 | 1.49 |
| **-10** | **(+14)** | 6822 | 1719 | 1999 | 1225 | 5.72 | 27.07 | 5.56 | 1.40 | 1.63 |

TEST CONDITIONS: **ARI4** (Condensing temperature **55ºC (+131ºF) )**
**@230V60Hz** **Fan**

| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
|---|---|---|---|---|---|---|---|---|---|---|
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| **-40** | **(-40)** | 1363 | 344 | 400 | 620 | 3.31 | 5.86 | 2.21 | 0.56 | 0.65 |
| **-35** | **(-31)** | 1759 | 443 | 516 | 704 | 3.62 | 7.59 | 2.49 | 0.63 | 0.73 |
| **-30** | **(-22)** | 2285 | 576 | 670 | 800 | 3.99 | 9.91 | 2.85 | 0.72 | 0.83 |
| **-25** | **(-13)** | 2940 | 741 | 861 | 906 | 4.41 | 12.82 | 3.24 | 0.82 | 0.95 |
| **-20** | **(- 4)** | 3724 | 939 | 1091 | 1024 | 4.88 | 16.37 | 3.65 | 0.92 | 1.07 |
| **-15** | **(+ 5)** | 4638 | 1169 | 1359 | 1153 | 5.42 | 20.56 | 4.04 | 1.02 | 1.18 |
| **-10** | **(+14)** | 5682 | 1432 | 1665 | 1293 | 6.02 | 25.43 | 4.38 | 1.10 | 1.28 |

## 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 | | |