

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | NT X2211U |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513308801 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-290 | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [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 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 | 18.4 | [kgf/cm ²] (262 psig) | / °C - °F |
| 9.2 Peak | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 1 1/4 | [hp] |
| 2 Displacement | 27.80 | [cm ³] (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 | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 17.8 | [kg] (39.24 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELECTRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Voltage Relay | |
| 2.1 Starting device | RVA2E3C-103 | |
| 3 Start capacitor | 88-108(330) | [µF(VAC minimum)] |
| 4 Run capacitor | 17.5(400) | [µF(VAC minimum)] |
| 5 Motor protection | USP-543-84 | |
| 6 Start winding resistance | 3.64 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 1.78 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 33.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 4.30 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @220V50Hz | | | EN12900LBP Fan | | Evaporating temperature (Condensing temperature | | -35°C (-31°F) 40°C (104°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] |
| 2550 | 643 | 747 | 599 | 3.11 | 8.54 | 4.26 | 1.07 | 1.25 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | | EN12900 Fan | | (Condensing temperature 35°C (+95°F)) | | | | | |
|-------------------------------|-------|---------------------------------|----------------|------|--|----------------------------|-----------------------------|--------------------------------|-----------|-------|
| 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) | 2144 | 540 | 628 | 505 | 2.74 | 6.85 | 4.24 | 1.07 | 1.24 |
| -35 | (-31) | 2785 | 702 | 816 | 579 | 3.06 | 8.93 | 4.82 | 1.21 | 1.41 |
| -30 | (-22) | 3560 | 897 | 1043 | 653 | 3.38 | 11.45 | 5.46 | 1.38 | 1.60 |
| -25 | (-13) | 4469 | 1126 | 1309 | 725 | 3.69 | 14.42 | 6.17 | 1.55 | 1.81 |
| -20 | (- 4) | 5510 | 1389 | 1615 | 796 | 4.00 | 17.87 | 6.93 | 1.75 | 2.03 |
| -15 | (+ 5) | 6686 | 1685 | 1959 | 865 | 4.30 | 21.79 | 7.73 | 1.95 | 2.26 |
| -10 | (+14) | 7994 | 2015 | 2343 | 933 | 4.60 | 26.21 | 8.56 | 2.16 | 2.51 |

| TEST CONDITIONS: @220V50Hz | | | EN12900 Fan | | (Condensing temperature 45°C (+113°F)) | | | | | |
|-------------------------------|-------|---------------------------------|----------------|------|---|----------------------------|-----------------------------|--------------------------------|-----------|-------|
| 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) | 1790 | 451 | 525 | 514 | 2.79 | 6.27 | 3.48 | 0.88 | 1.02 |
| -35 | (-31) | 2366 | 596 | 693 | 601 | 3.16 | 8.31 | 3.93 | 0.99 | 1.15 |
| -30 | (-22) | 3062 | 772 | 897 | 688 | 3.54 | 10.79 | 4.45 | 1.12 | 1.30 |
| -25 | (-13) | 3880 | 978 | 1137 | 774 | 3.91 | 13.72 | 5.00 | 1.26 | 1.47 |
| -20 | (- 4) | 4819 | 1214 | 1412 | 861 | 4.29 | 17.13 | 5.60 | 1.41 | 1.64 |
| -15 | (+ 5) | 5879 | 1482 | 1723 | 947 | 4.67 | 21.02 | 6.21 | 1.57 | 1.82 |
| -10 | (+14) | 7060 | 1779 | 2069 | 1033 | 5.05 | 25.41 | 6.85 | 1.72 | 2.01 |

| TEST CONDITIONS: @220V50Hz | | | EN12900 Fan | | (Condensing temperature 55°C (+131°F)) | | | | | |
|-------------------------------|-------|---------------------------------|----------------|------|---|----------------------------|-----------------------------|--------------------------------|-----------|-------|
| 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) | 1426 | 359 | 418 | 515 | 2.78 | 5.55 | 2.77 | 0.70 | 0.81 |
| -35 | (-31) | 1926 | 485 | 564 | 615 | 3.22 | 7.51 | 3.14 | 0.79 | 0.92 |
| -30 | (-22) | 2535 | 639 | 743 | 716 | 3.67 | 9.92 | 3.54 | 0.89 | 1.04 |
| -25 | (-13) | 3253 | 820 | 953 | 818 | 4.12 | 12.79 | 3.98 | 1.00 | 1.17 |
| -20 | (- 4) | 4079 | 1028 | 1195 | 921 | 4.59 | 16.13 | 4.43 | 1.12 | 1.30 |
| -15 | (+ 5) | 5014 | 1264 | 1469 | 1025 | 5.06 | 19.96 | 4.89 | 1.23 | 1.43 |
| -10 | (+14) | 6058 | 1527 | 1775 | 1131 | 5.54 | 24.30 | 5.35 | 1.35 | 1.57 |

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 | | |