

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | NT X6238U       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 843JA72         |

### 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                 | Medium Back Pressure (Commercial Compressors) |                                   |           |
| 4.1 Evaporating temperature range  | -20°C to 10°C                                 | (-4°F to 50°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 <sup>2</sup> ] (262 psig) | / °C - °F |
| 9.2 Peak                           | 20.6  | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130   | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |                                  |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation      | 1 1/2         | [hp]                             |
| 2 Displacement                | 33.42         | [cm <sup>3</sup> ] (2.039 cu.in) |
| 2.1 Bore [mm]                 | 41.770        |                                  |
| 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 <sup>2</sup> ]           |

### C - ELETRICAL 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                          | RVA3G3C-101                        |                                    |
| 3 Start capacitor                            | 108-130(330)                       | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 30(400)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | USP-605-84                         |                                    |
| 6 Start winding resistance                   | 3.80                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 1.55                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 40.00                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | -                                  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS:<br>@220V50Hz |          |      | EN12900MBP<br>Fan              |                                  | Evaporating temperature<br>(Condensing temperature |                           | -10°C (14°F)<br>45°C (113°F) |       |
|-------------------------------|----------|------|--------------------------------|----------------------------------|--|---------------------------|------------------------------|-------|
| Cooling capacity<br>+/- 5%    |          |      | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5%                         | EFFICIENCY RATE<br>+/- 7% |                              |       |
| [Btu/h]                       | [kcal/h] | [W]  | [W]                            | [A]                              | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                    | [W/W] |
| 8479                          | 2137     | 2485 | 1244                           | 5.92                             | 30.51  | 6.82                      | 1.72                         | 2.00  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900<br>Fan |      | (Condensing temperature 35°C (+95°F)) |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------------|------|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |                |      | Power<br>consumption<br>+/- 5%        | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]       | [W]  | [W]                                   | [A]                              | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -20                           | (- 4) | 6377                       | 1607           | 1868 | 965                                   | 4.69                             | 20.67                      | 6.60                      | 1.66      | 1.93  |
| -15                           | (+ 5) | 7883                       | 1987           | 2310 | 1042                                  | 5.03                             | 25.70                      | 7.57                      | 1.91      | 2.22  |
| -10                           | (+14) | 9622                       | 2425           | 2819 | 1120                                  | 5.38                             | 31.55                      | 8.60                      | 2.17      | 2.52  |
| -5                            | (+23) | 11591                      | 2921           | 3396 | 1200                                  | 5.74                             | 38.27                      | 9.66                      | 2.43      | 2.83  |
| 0                             | (+32) | 13792                      | 3475           | 4041 | 1283                                  | 6.11                             | 45.92                      | 10.75                     | 2.71      | 3.15  |
| +5                            | (+41) | 16223                      | 4088           | 4754 | 1368                                  | 6.49                             | 54.55                      | 11.86                     | 2.99      | 3.48  |
| +10                           | (+50) | 18887                      | 4759           | 5534 | 1455                                  | 6.89                             | 64.23                      | 12.99                     | 3.27      | 3.80  |

| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900<br>Fan |      | (Condensing temperature 45°C (+113°F)) |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |                |      | Power<br>consumption<br>+/- 5%         | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]       | [W]  | [W]                                    | [A]                              | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -20                           | (- 4) | 5481                       | 1381           | 1606 | 1040                                   | 5.04                             | 19.48                      | 5.27                      | 1.33      | 1.54  |
| -15                           | (+ 5) | 6817                       | 1718           | 1998 | 1133                                   | 5.45                             | 24.38                      | 6.02                      | 1.52      | 1.76  |
| -10                           | (+14) | 8361                       | 2107           | 2450 | 1226                                   | 5.86                             | 30.09                      | 6.82                      | 1.72      | 2.00  |
| -5                            | (+23) | 10111                      | 2548           | 2963 | 1320                                   | 6.28                             | 36.66                      | 7.66                      | 1.93      | 2.25  |
| 0                             | (+32) | 12069                      | 3041           | 3536 | 1413                                   | 6.71                             | 44.17                      | 8.54                      | 2.15      | 2.50  |
| +5                            | (+41) | 14233                      | 3587           | 4171 | 1507                                   | 7.14                             | 52.66                      | 9.45                      | 2.38      | 2.77  |
| +10                           | (+50) | 16605                      | 4184           | 4866 | 1601                                   | 7.58                             | 62.20                      | 10.36                     | 2.61      | 3.04  |

| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900<br>Fan |      | (Condensing temperature 55°C (+131°F)) |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |                |      | Power<br>consumption<br>+/- 5%         | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]       | [W]  | [W]                                    | [A]                              | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -20                           | (- 4) | 4622                       | 1165           | 1354 | 1096                                   | 5.25                             | 18.28                      | 4.22                      | 1.06      | 1.24  |
| -15                           | (+ 5) | 5773                       | 1455           | 1692 | 1214                                   | 5.77                             | 22.98                      | 4.75                      | 1.20      | 1.39  |
| -10                           | (+14) | 7106                       | 1791           | 2082 | 1329                                   | 6.29                             | 28.49                      | 5.34                      | 1.35      | 1.56  |
| -5                            | (+23) | 8623                       | 2173           | 2527 | 1443                                   | 6.82                             | 34.88                      | 5.97                      | 1.50      | 1.75  |
| 0                             | (+32) | 10322                      | 2601           | 3025 | 1555                                   | 7.35                             | 42.19                      | 6.64                      | 1.67      | 1.95  |
| +5                            | (+41) | 12204                      | 3075           | 3576 | 1664                                   | 7.88                             | 50.48                      | 7.34                      | 1.85      | 2.15  |
| +10                           | (+50) | 14269                      | 3596           | 4181 | 1772                                   | 8.42                             | 59.83                      | 8.05                      | 2.03      | 2.36  |

### 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     |      |                          |