

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | NE U2168GJ      |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 959LA58         |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-404A                            |                                   |           |
| 3 Nominal voltage and frequency    | 220-240 / 50                      | [ 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 - High 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 <sup>2</sup> ] (358 psig) | / °C - °F |
| 9.2 Peak                           | 28.3                              | [kgf/cm <sup>2</sup> ] (402 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |                                  |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation      | 3/4           | [hp]                             |
| 2 Displacement                | 14.28         | [cm <sup>3</sup> ] (0.871 cu.in) |
| 2.1 Bore [mm]                 | 30.157        |                                  |
| 2.2 Stroke [mm]               | 20.000        |                                  |
| 3 Lubricant charge            | 350           | [ml] (11.84 fl.oz.)              |
| 3.1 Lubricants approved       |               |                                  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |                                  |
| 4 Weight (with oil charge)    | 11.6          | [kg] (25.57 lb.)                 |
| 5 Nitrogen charge             | -             | [kgf/cm <sup>2</sup> ]           |

### 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                          | RVA3AN3C-575                       |                                    |
| 3 Start capacitor                            | 88-108(330)                        | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 12.5(400)                          | [µF(VAC minimum)]                  |
| 5 Motor protection                           | MRA38166-3261                      |                                    |
| 6 Start winding resistance                   | 11.03                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 5.15                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 22.00                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 3.48                               | [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:<br>@220V50Hz |          |     | EN12900LBP_HH<br>Fan           |                                  | Evaporating temperature<br>(Condensing temperature |                           | -35°C (-31°F)<br>40°C (104°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] |
| 1493                          | 376      | 437 | 361                            | 1.65                             | 10.99  | 4.14                      | 1.04                          | 1.21  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                  |      |                                       |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|------|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<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] |
| -40                           | (-40) | 1214                       | 306              | 356  | 310                                   | 1.54                             | 8.41                       | 3.90                      | 0.98      | 1.14  |
| -35                           | (-31) | 1603                       | 404              | 470  | 358                                   | 1.74                             | 11.16                      | 4.49                      | 1.13      | 1.32  |
| -30                           | (-22) | 2094                       | 528              | 614  | 407                                   | 1.95                             | 14.63                      | 5.15                      | 1.30      | 1.51  |
| -25                           | (-13) | 2687                       | 677              | 787  | 458                                   | 2.17                             | 18.84                      | 5.86                      | 1.48      | 1.72  |
| -20                           | (- 4) | 3381                       | 852              | 991  | 511                                   | 2.41                             | 23.83                      | 6.61                      | 1.67      | 1.94  |
| -15                           | (+ 5) | 4177                       | 1053             | 1224 | 566                                   | 2.65                             | 29.63                      | 7.38                      | 1.86      | 2.16  |
| -10                           | (+14) | 5075                       | 1279             | 1487 | 623                                   | 2.91                             | 36.25                      | 8.15                      | 2.05      | 2.39  |

|                               |       |                            |                  |      |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<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] |
| -40                           | (-40) | 999                        | 252              | 293  | 320                                    | 1.58                             | 7.79                       | 3.12                      | 0.79      | 0.92  |
| -35                           | (-31) | 1334                       | 336              | 391  | 372                                    | 1.80                             | 10.43                      | 3.59                      | 0.90      | 1.05  |
| -30                           | (-22) | 1756                       | 442              | 514  | 427                                    | 2.05                             | 13.78                      | 4.11                      | 1.03      | 1.20  |
| -25                           | (-13) | 2264                       | 571              | 664  | 485                                    | 2.31                             | 17.85                      | 4.66                      | 1.17      | 1.36  |
| -20                           | (- 4) | 2861                       | 721              | 838  | 547                                    | 2.59                             | 22.69                      | 5.22                      | 1.32      | 1.53  |
| -15                           | (+ 5) | 3544                       | 893              | 1038 | 612                                    | 2.88                             | 28.31                      | 5.79                      | 1.46      | 1.70  |
| -10                           | (+14) | 4314                       | 1087             | 1264 | 681                                    | 3.19                             | 34.75                      | 6.34                      | 1.60      | 1.86  |

|                               |       |                            |                  |      |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<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] |
| -40                           | (-40) | 763                        | 192              | 223  | 316                                    | 1.57                             | 6.87                       | 2.41                      | 0.61      | 0.71  |
| -35                           | (-31) | 1047                       | 264              | 307  | 375                                    | 1.83                             | 9.46                       | 2.79                      | 0.70      | 0.82  |
| -30                           | (-22) | 1403                       | 354              | 411  | 439                                    | 2.10                             | 12.74                      | 3.19                      | 0.80      | 0.94  |
| -25                           | (-13) | 1832                       | 462              | 537  | 507                                    | 2.41                             | 16.73                      | 3.61                      | 0.91      | 1.06  |
| -20                           | (- 4) | 2334                       | 588              | 684  | 580                                    | 2.74                             | 21.47                      | 4.03                      | 1.02      | 1.18  |
| -15                           | (+ 5) | 2909                       | 733              | 852  | 658                                    | 3.09                             | 26.98                      | 4.43                      | 1.12      | 1.30  |
| -10                           | (+14) | 3557                       | 896              | 1042 | 741                                    | 3.47                             | 33.29                      | 4.79                      | 1.21      | 1.40  |

### F - EXTERNAL CHARACTERISTICS

|                         |                   |      |                          |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate            | European Standard |      |                          |
| 2 Tray holder           | Yes               |      |                          |
| 3 Connectors            |                   |      |                          |
| 3.1 SUCTION             | 8.1 +0.10/+0.00   | [mm] | (0.319" +0.004"/+0.000") |
| 3.1.1 Material          | Copper            |      |                          |
| 3.1.2 Shape             | Slanted 42°       |      |                          |
| 3.2 DISCHARGE           | 6.1 +0.10/+0.00   | [mm] | (0.240" +0.004"/+0.000") |
| 3.2.1 Material          | Copper            |      |                          |
| 3.2.2 Shape             | Straight          |      |                          |
| 3.3 PROCESS             | 6.1 +0.10/+0.00   | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material          | Copper            |      |                          |
| 3.3.2 Shape             | Slanted 42°       |      |                          |
| 3.4 Oil cooler (Copper) | No                | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs      |      |                          |