

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NE U2155GK</b>      |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>959QA51</b>         |

### 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                               | CSIR                              |                                   |           |
| 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 pressures/temperature |                                   |                                   |           |
| 9.1 Operating (gauge)                      | 25.7                              | [kgf/cm <sup>2</sup> ] (365 psig) | / °C - °F |
| 9.2 Peak (gauge)                           | 28.7                              | [kgf/cm <sup>2</sup> ] (408 psig) | / °C - °F |
| 10 Maximum winding temperature             | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |                                  |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation      | 3/4           | [hp]                             |
| 2 Displacement                | 12.11         | [cm <sup>3</sup> ] (0.739 cu.in) |
| 2.1 Bore [mm]                 | 27.775        |                                  |
| 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)    | 11.1          | [kg] (24.47 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                       | Current Relay                      |                                    |
| 2.1 Starting device                          | MTRP-49-65                         |                                    |
| 3 Start capacitor                            | 64-77(330)                         | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | T0964/G6                           |                                    |
| 6 Start winding resistance                   | 27.95                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 5.11                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 18.00                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 3.79                               | [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 |          |     | EN12900LBP_HH<br>Fan        |                               | Evaporating temperature<br>(Condensing temperature |                           | -35°C (-31°F)<br>40°C (104°F) |       |
| Cooling capacity<br>+/- 5%    |          |     | Power consumption<br>+/- 5% | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5%                            | EFFICIENCY RATE<br>+/- 7% |                               |       |
| [Btu/h]                       | [kcal/h] | [W] | [W]                         | [A]                           | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                     | [W/W] |
| 1255                          | 316      | 368 | 340                         | 2.62                          | 9.24   | 3.69                      | 0.93                          | 1.08  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                  |      |                                       |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<br>Fan |      | (Condensing temperature 35°C (+95°F)) |                               |                         |                           |           |       |
| Evaporating temperature       |       | Cooling capacity<br>+/- 5% |                  |      | Power consumption<br>+/- 5%           | Current consumption<br>+/- 5% | Gas flow 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) | 1038                       | 261              | 304  | 292                                   | 2.54                          | 7.19                    | 3.54                      | 0.89      | 1.04  |
| -35                           | (-31) | 1359                       | 342              | 398  | 335                                   | 2.62                          | 9.46                    | 4.07                      | 1.03      | 1.19  |
| -30                           | (-22) | 1772                       | 446              | 519  | 379                                   | 2.72                          | 12.37                   | 4.68                      | 1.18      | 1.37  |
| -25                           | (-13) | 2276                       | 574              | 667  | 425                                   | 2.84                          | 15.96                   | 5.36                      | 1.35      | 1.57  |
| -20                           | (- 4) | 2872                       | 724              | 842  | 472                                   | 2.98                          | 20.24                   | 6.08                      | 1.53      | 1.78  |
| -15                           | (+ 5) | 3560                       | 897              | 1043 | 520                                   | 3.14                          | 25.25                   | 6.85                      | 1.73      | 2.01  |
| -10                           | (+14) | 4340                       | 1094             | 1272 | 569                                   | 3.32                          | 31.01                   | 7.63                      | 1.92      | 2.24  |

|                               |       |                            |                  |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<br>Fan |      | (Condensing temperature 45°C (+113°F)) |                               |                         |                           |           |       |
| Evaporating temperature       |       | Cooling capacity<br>+/- 5% |                  |      | Power consumption<br>+/- 5%            | Current consumption<br>+/- 5% | Gas flow 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) | 840                        | 212              | 246  | 299                                    | 2.54                          | 6.54                    | 2.82                      | 0.71      | 0.83  |
| -35                           | (-31) | 1119                       | 282              | 328  | 347                                    | 2.63                          | 8.75                    | 3.23                      | 0.81      | 0.95  |
| -30                           | (-22) | 1473                       | 371              | 432  | 399                                    | 2.76                          | 11.56                   | 3.69                      | 0.93      | 1.08  |
| -25                           | (-13) | 1902                       | 479              | 557  | 453                                    | 2.91                          | 15.00                   | 4.19                      | 1.06      | 1.23  |
| -20                           | (- 4) | 2406                       | 606              | 705  | 510                                    | 3.09                          | 19.09                   | 4.71                      | 1.19      | 1.38  |
| -15                           | (+ 5) | 2986                       | 752              | 875  | 570                                    | 3.30                          | 23.86                   | 5.24                      | 1.32      | 1.54  |
| -10                           | (+14) | 3641                       | 918              | 1067 | 633                                    | 3.54                          | 29.32                   | 5.76                      | 1.45      | 1.69  |

|                               |       |                            |                  |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<br>Fan |     | (Condensing temperature 55°C (+131°F)) |                               |                         |                           |           |       |
| Evaporating temperature       |       | Cooling capacity<br>+/- 5% |                  |     | Power consumption<br>+/- 5%            | Current consumption<br>+/- 5% | Gas flow 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) | 640                        | 161              | 188 | 298                                    | 2.57                          | 5.77                    | 2.15                      | 0.54      | 0.63  |
| -35                           | (-31) | 882                        | 222              | 258 | 353                                    | 2.67                          | 7.97                    | 2.49                      | 0.63      | 0.73  |
| -30                           | (-22) | 1182                       | 298              | 346 | 413                                    | 2.81                          | 10.73                   | 2.86                      | 0.72      | 0.84  |
| -25                           | (-13) | 1541                       | 388              | 451 | 477                                    | 2.99                          | 14.07                   | 3.23                      | 0.81      | 0.95  |
| -20                           | (- 4) | 1958                       | 493              | 574 | 546                                    | 3.22                          | 18.01                   | 3.60                      | 0.91      | 1.05  |
| -15                           | (+ 5) | 2434                       | 613              | 713 | 619                                    | 3.48                          | 22.57                   | 3.94                      | 0.99      | 1.16  |
| -10                           | (+14) | 2969                       | 748              | 870 | 696                                    | 3.79                          | 27.78                   | 4.25                      | 1.07      | 1.25  |

### F - EXTERNAL CHARACTERISTICS

|                         |                   |      |                          |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate            | European Standard |      |                          |
| 2 Tray holder           | No                |      |                          |
| 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      |      |                          |