

### COMPRESSOR DEFINITION

|                           |                                   |
|---------------------------|-----------------------------------|
| Designation               | NE U6212Z                         |
| Nominal Voltage/Frequency | 200-230 V 50 Hz / 208-230 V 60 Hz |
| Engineering Number        | 269MB51                           |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |   |                                   |           |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor           |                                   |           |
| 2 Refrigerant                      | R-134a                                      |                                   |           |
| 3 Nominal voltage and frequency    | 200-230 / 50                                | [ V / Hz ]                        |           |
| 4 Application type                 | High Back Pressure (Commercial Compressors) |                                   |           |
| 4.1 Evaporating temperature range  | -15°C to 10°C                               | (5°F to 50°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                      | 14.2  | [kgf/cm <sup>2</sup> ] (202 psig) | / °C - °F |
| 9.2 Peak                           | 15.9  | [kgf/cm <sup>2</sup> ] (226 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130   | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |                                  |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation      | 1/2           | [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 | 200-230 V 50 Hz / 208-230 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Voltage Relay  |                                    |
| 2.1 Starting device                          | RVA3H3C-108  |                                    |
| 3 Start capacitor                            | 108-130(330)   | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 12.5(400)  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | MRA38173-3261  |                                    |
| 6 Start winding resistance                   | 10.90  | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 3.59   | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 26.00/26.00  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | -  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | -  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | VDE  |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |      |                             |                               |  |                           |                                      |       |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS:<br>@208V60Hz |          |      | ASHRAEHBP46<br>Fan          |                               | Evaporating temperature<br>(Condensing temperature |                           | 7.2°C (44.96°F)<br>54.4°C (129.92°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] |
| 5796                          | 1461     | 1698 | 693                         | 3.37                          | 37.58  | 8.36                      | 2.11                                 | 2.45  |

### E - PERFORMANCE - CURVES

|                               |       |                            |          |      |                             |                                       |                         |                           |           |       |
|-------------------------------|-------|----------------------------|----------|------|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@208V50Hz |       | ASHRAE46<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] |
| -15                           | (+5)  | 2407                       | 607      | 705  | 317                         | 1.96                                  | 13.02                   | 7.60                      | 1.91      | 2.23  |
| -10                           | (+14) | 3047                       | 768      | 893  | 347                         | 2.21                                  | 16.54                   | 8.78                      | 2.21      | 2.57  |
| -5                            | (+23) | 3816                       | 962      | 1118 | 381                         | 2.30                                  | 20.79                   | 10.02                     | 2.52      | 2.93  |
| 0                             | (+32) | 4713                       | 1188     | 1381 | 418                         | 2.36                                  | 25.79                   | 11.27                     | 2.84      | 3.30  |
| +5                            | (+41) | 5738                       | 1446     | 1681 | 458                         | 2.48                                  | 31.57                   | 12.52                     | 3.15      | 3.67  |
| +10                           | (+50) | 6890                       | 1736     | 2019 | 502                         | 2.80                                  | 38.14                   | 13.74                     | 3.46      | 4.03  |

|                               |       |                            |          |      |                             |  |                         |                           |           |       |
|-------------------------------|-------|----------------------------|----------|------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@208V50Hz |       | ASHRAE46<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] |
| -15                           | (+5)  | 2129                       | 537      | 624  | 339                         | 2.06                                   | 12.44                   | 6.27                      | 1.58      | 1.84  |
| -10                           | (+14) | 2706                       | 682      | 793  | 376                         | 2.31                                   | 15.87                   | 7.20                      | 1.81      | 2.11  |
| -5                            | (+23) | 3402                       | 857      | 997  | 415                         | 2.42                                   | 20.03                   | 8.20                      | 2.07      | 2.40  |
| 0                             | (+32) | 4218                       | 1063     | 1236 | 457                         | 2.51                                   | 24.95                   | 9.24                      | 2.33      | 2.71  |
| +5                            | (+41) | 5151                       | 1298     | 1509 | 501                         | 2.68                                   | 30.66                   | 10.30                     | 2.59      | 3.02  |
| +10                           | (+50) | 6202                       | 1563     | 1817 | 547                         | 3.06                                   | 37.17                   | 11.34                     | 2.86      | 3.32  |

|                               |       |                            |          |      |                             |  |                         |                           |           |       |
|-------------------------------|-------|----------------------------|----------|------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@208V50Hz |       | ASHRAE46<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] |
| -15                           | (+5)  | 1852                       | 467      | 543  | 358                         | 2.19                                   | 11.80                   | 5.18                      | 1.31      | 1.52  |
| -10                           | (+14) | 2370                       | 597      | 695  | 403                         | 2.38                                   | 15.16                   | 5.87                      | 1.48      | 1.72  |
| -5                            | (+23) | 2999                       | 756      | 879  | 451                         | 2.44                                   | 19.27                   | 6.65                      | 1.68      | 1.95  |
| 0                             | (+32) | 3738                       | 942      | 1095 | 499                         | 2.48                                   | 24.14                   | 7.49                      | 1.89      | 2.19  |
| +5                            | (+41) | 4585                       | 1155     | 1344 | 549                         | 2.62                                   | 29.81                   | 8.36                      | 2.11      | 2.45  |
| +10                           | (+50) | 5540                       | 1396     | 1623 | 600                         | 2.99                                   | 36.28                   | 9.24                      | 2.33      | 2.71  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@208V60Hz |                            | ASHRAE46<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]  |
| -15                           | (+ 5)                      | 2820            | 711     | 826                         | 365                                   | 1.79                    | 15.25                     | 7.72  | 1.94 | 2.26 |
| -10                           | (+14)                      | 3550            | 895     | 1040                        | 408                                   | 1.99                    | 19.27                     | 8.70  | 2.19 | 2.55 |
| -5                            | (+23)                      | 4422            | 1114    | 1296                        | 457                                   | 2.22                    | 24.09                     | 9.68  | 2.44 | 2.84 |
| 0                             | (+32)                      | 5436            | 1370    | 1593                        | 511                                   | 2.48                    | 29.75                     | 10.64 | 2.68 | 3.12 |
| +5                            | (+41)                      | 6594            | 1662    | 1932                        | 571                                   | 2.77                    | 36.27                     | 11.54 | 2.91 | 3.38 |
| +10                           | (+50)                      | 7894            | 1989    | 2313                        | 637                                   | 3.10                    | 43.71                     | 12.39 | 3.12 | 3.63 |

| TEST CONDITIONS:<br>@208V60Hz |                            | ASHRAE46<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]  |
| -15                           | (+ 5)                      | 2498            | 630     | 732                         | 392                                    | 1.90                    | 14.60                     | 6.37  | 1.60 | 1.87 |
| -10                           | (+14)                      | 3164            | 797     | 927                         | 441                                    | 2.13                    | 18.55                     | 7.18  | 1.81 | 2.10 |
| -5                            | (+23)                      | 3964            | 999     | 1162                        | 494                                    | 2.39                    | 23.34                     | 8.03  | 2.02 | 2.35 |
| 0                             | (+32)                      | 4899            | 1234    | 1435                        | 552                                    | 2.67                    | 28.98                     | 8.88  | 2.24 | 2.60 |
| +5                            | (+41)                      | 5969            | 1504    | 1749                        | 615                                    | 2.98                    | 35.52                     | 9.71  | 2.45 | 2.85 |
| +10                           | (+50)                      | 7174            | 1808    | 2102                        | 682                                    | 3.31                    | 42.99                     | 10.51 | 2.65 | 3.08 |

| TEST CONDITIONS:<br>@208V60Hz |                            | ASHRAE46<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]  |
| -15                           | (+ 5)                      | 2188            | 551     | 641                         | 411                                    | 1.99                    | 13.94                     | 5.32 | 1.34 | 1.56 |
| -10                           | (+14)                      | 2780            | 701     | 815                         | 469                                    | 2.27                    | 17.78                     | 5.93 | 1.49 | 1.74 |
| -5                            | (+23)                      | 3499            | 882     | 1025                        | 530                                    | 2.56                    | 22.48                     | 6.59 | 1.66 | 1.93 |
| 0                             | (+32)                      | 4344            | 1095    | 1273                        | 595                                    | 2.87                    | 28.06                     | 7.29 | 1.84 | 2.14 |
| +5                            | (+41)                      | 5317            | 1340    | 1558                        | 664                                    | 3.21                    | 34.57                     | 8.01 | 2.02 | 2.35 |
| +10                           | (+50)                      | 6417            | 1617    | 1880                        | 736                                    | 3.56                    | 42.03                     | 8.72 | 2.20 | 2.56 |

### 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      |      |                          |