

**COMPRESSOR DEFINITION**

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NE U6220GK</b>      |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>959TA51</b>         |

**A - APPLICATION / LIMIT WORKING CONDITIONS**

|  |   |                                   |           |
|--|---|-----------------------------------|-----------|
| 1 Type                                     | Hermetic reciprocating compressor             |                                   |           |
| 2 Refrigerant                              | R-404A  |                                   |           |
| 2.1 Max Refrigerant Charge                 | 350 [g]                                       |                                   |           |
| 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 - 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 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) |           |
| 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)    | 11,5          | [kg] (25.35 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                          | RVA4AL3C-560/RVA4AL3C-649          |                                    |
| 3 Start capacitor                            | 108-130(330)                       | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 15(400)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | MRA38168-3261                      |                                    |
| 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 Hz)        | -                                  | [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 |          |      | <b>ASHRAEHBP46</b><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] |
| 7821                          | 1971     | 2292 | 1055                        | 5,17                          | 64,39  | 7,41                                 | 1,87      | 2,17  |

**E - PERFORMANCE - CURVES**

|                               |       |                            |                        |      |                                       |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | <b>ASHRAE46</b><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] |
| -20                           | (- 4) | 3768                       | 949                    | 1104 | 560                                   | 3,12                          | 23,91                   | 6,72                      | 1,69      | 1,97  |
| -15                           | (+ 5) | 4646                       | 1171                   | 1361 | 609                                   | 3,30                          | 29,67                   | 7,64                      | 1,93      | 2,24  |
| -10                           | (+14) | 5685                       | 1433                   | 1666 | 660                                   | 3,50                          | 36,52                   | 8,61                      | 2,17      | 2,52  |
| -5                            | (+23) | 6884                       | 1735                   | 2017 | 715                                   | 3,72                          | 44,53                   | 9,63                      | 2,43      | 2,82  |
| 0                             | (+32) | 8244                       | 2078                   | 2416 | 773                                   | 3,95                          | 53,80                   | 10,66                     | 2,69      | 3,12  |
| +5                            | (+41) | 9764                       | 2461                   | 2861 | 834                                   | 4,21                          | 64,39                   | 11,70                     | 2,95      | 3,43  |
| +10                           | (+50) | 11445                      | 2884                   | 3354 | 899                                   | 4,49                          | 76,39                   | 12,74                     | 3,21      | 3,73  |

|                               |       |                            |                        |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | <b>ASHRAE46</b><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] |
| -20                           | (- 4) | 3225                       | 813                    | 945  | 601                                    | 3,25                          | 22,58                   | 5,37                      | 1,35      | 1,57  |
| -15                           | (+ 5) | 4003                       | 1009                   | 1173 | 658                                    | 3,48                          | 28,22                   | 6,08                      | 1,53      | 1,78  |
| -10                           | (+14) | 4922                       | 1240                   | 1442 | 719                                    | 3,72                          | 34,93                   | 6,85                      | 1,73      | 2,01  |
| -5                            | (+23) | 5979                       | 1507                   | 1752 | 782                                    | 3,98                          | 42,77                   | 7,64                      | 1,93      | 2,24  |
| 0                             | (+32) | 7177                       | 1809                   | 2103 | 849                                    | 4,26                          | 51,84                   | 8,46                      | 2,13      | 2,48  |
| +5                            | (+41) | 8513                       | 2145                   | 2495 | 918                                    | 4,56                          | 62,21                   | 9,28                      | 2,34      | 2,72  |
| +10                           | (+50) | 9989                       | 2517                   | 2927 | 990                                    | 4,89                          | 73,96                   | 10,09                     | 2,54      | 2,96  |

|                               |       |                            |                        |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | <b>ASHRAE46</b><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] |
| -20                           | (- 4) | 2728                       | 688                    | 800  | 638                                    | 3,39                          | 21,46                   | 4,28                      | 1,08      | 1,25  |
| -15                           | (+ 5) | 3400                       | 857                    | 996  | 710                                    | 3,67                          | 26,93                   | 4,79                      | 1,21      | 1,40  |
| -10                           | (+14) | 4191                       | 1056                   | 1228 | 783                                    | 3,98                          | 33,43                   | 5,34                      | 1,35      | 1,57  |
| -5                            | (+23) | 5099                       | 1285                   | 1494 | 860                                    | 4,30                          | 41,06                   | 5,93                      | 1,49      | 1,74  |
| 0                             | (+32) | 6126                       | 1544                   | 1795 | 939                                    | 4,65                          | 49,88                   | 6,53                      | 1,65      | 1,91  |
| +5                            | (+41) | 7271                       | 1832                   | 2131 | 1020                                   | 5,02                          | 59,97                   | 7,14                      | 1,80      | 2,09  |
| +10                           | (+50) | 8534                       | 2151                   | 2501 | 1104                                   | 5,41                          | 71,42                   | 7,73                      | 1,95      | 2,27  |

**F - EXTERNAL CHARACTERISTICS**

|                         |                  |      |                          |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate            | Universal        |      |                          |
| 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           | 6,45 +0.10/+0.00 | [mm] | (0.254" +0.004"/+0.000") |
| 3.2.1 Material          | Copper           |      |                          |
| 3.2.2 Shape             | Straight         |      |                          |
| 3.3 PROCESS             | 6,45 +0.10/+0.00 | [mm] | (0.254" +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     |      |                          |

DEVELOPMENT