

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NE U6210Z</b>       |
| Nominal Voltage/Frequency | <b>115-127 V 60 Hz</b> |
| Engineering Number        | <b>268HE71</b>         |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |   |                                   |           |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor           |                                   |           |
| 2 Refrigerant                      | R-134a                                      |                                   |           |
| 3 Nominal voltage and frequency    | 115-127 / 60                                | [ 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                       | CSIR  |                                   |           |
| 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      | 1/4           | [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)    | 10.62         | [kg] (23.41 lb.)                 |
| 5 Nitrogen charge             | -             | [kgf/cm <sup>2</sup> ]           |

### C - ELETRICAL DATA

|  |                                    |                                    |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                      |                                    |
| 2.1 Starting device                          | MTRPH-68-31                        |                                    |
| 3 Start capacitor                            | 243-292(250)                       | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | T0527/J5                           |                                    |
| 6 Start winding resistance                   | 6.83                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 1.15                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 40.00                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 7.80                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | UL                                 |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |      |                             |                               |  |                           |                                      |       |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS:<br>@115V60Hz |          |      | 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] |
| 4867                          | 1226     | 1426 | 621                         | 6.69                          | 31.56  | 7.84                      | 1.98                                 | 2.30  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                 |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       |                            | 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)  | 2360                       | 595             | 692  | 327                                    | 4.72                          | 12.76                   | 7.23                      | 1.82      | 2.12  |
| -10                           | (+14) | 2996                       | 755             | 878  | 365                                    | 4.92                          | 16.26                   | 8.21                      | 2.07      | 2.41  |
| -5                            | (+23) | 3746                       | 944             | 1098 | 408                                    | 5.17                          | 20.41                   | 9.17                      | 2.31      | 2.69  |
| 0                             | (+32) | 4610                       | 1162            | 1351 | 457                                    | 5.49                          | 25.23                   | 10.08                     | 2.54      | 2.95  |
| +5                            | (+41) | 5588                       | 1408            | 1637 | 511                                    | 5.87                          | 30.74                   | 10.93                     | 2.75      | 3.20  |
| +10                           | (+50) | 6678                       | 1683            | 1957 | 571                                    | 6.32                          | 36.97                   | 11.69                     | 2.95      | 3.43  |

|                               |       |                            |                 |      |   |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       |                            | 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)  | 2081                       | 524             | 610  | 347                                     | 4.82                          | 12.16                   | 5.99                      | 1.51      | 1.76  |
| -10                           | (+14) | 2649                       | 667             | 776  | 392                                     | 5.07                          | 15.53                   | 6.77                      | 1.71      | 1.98  |
| -5                            | (+23) | 3328                       | 839             | 975  | 440                                     | 5.38                          | 19.59                   | 7.56                      | 1.91      | 2.22  |
| 0                             | (+32) | 4118                       | 1038            | 1207 | 493                                     | 5.74                          | 24.36                   | 8.35                      | 2.10      | 2.45  |
| +5                            | (+41) | 5018                       | 1265            | 1470 | 550                                     | 6.15                          | 29.86                   | 9.12                      | 2.30      | 2.67  |
| +10                           | (+50) | 6028                       | 1519            | 1766 | 612                                     | 6.61                          | 36.13                   | 9.84                      | 2.48      | 2.88  |

|                               |       |                            |                 |      |   |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       |                            | 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)  | 1805                       | 455             | 529  | 364                                     | 4.91                          | 11.50                   | 4.97                      | 1.25      | 1.46  |
| -10                           | (+14) | 2301                       | 580             | 674  | 417                                     | 5.23                          | 14.72                   | 5.52                      | 1.39      | 1.62  |
| -5                            | (+23) | 2906                       | 732             | 851  | 473                                     | 5.60                          | 18.67                   | 6.13                      | 1.55      | 1.80  |
| 0                             | (+32) | 3618                       | 912             | 1060 | 533                                     | 6.02                          | 23.37                   | 6.78                      | 1.71      | 1.99  |
| +5                            | (+41) | 4437                       | 1118            | 1300 | 596                                     | 6.48                          | 28.85                   | 7.45                      | 1.88      | 2.18  |
| +10                           | (+50) | 5364                       | 1352            | 1572 | 662                                     | 6.99                          | 35.12                   | 8.11                      | 2.04      | 2.38  |

### 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     |      |                          |