

### COMPRESSOR DEFINITION

|                           |                                   |
|---------------------------|-----------------------------------|
| Designation               | NE K6210Z                         |
| Nominal Voltage/Frequency | 200-230 V 50 Hz / 208-230 V 60 Hz |
| Engineering Number        | 269EB51                           |

### 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                       | 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      | 1/2-          | [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)    | 11.6          | [kg] (25.57 lb.)                           |
| 5 Nitrogen charge             | 0.2 to 0.3    | [kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig) |

### C - ELETRICAL 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                       | Current Relay  |                                    |
| 2.1 Starting device                          | MTRP-0012  |                                    |
| 3 Start capacitor                            | 64-77(330)   | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | MST22AKK-3259  |                                    |
| 6 Start winding resistance                   | 15.50  | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 3.20   | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | -  | [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             | CCC - UL - VDE                                       |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |      |                                |                                  |  |                           |                                      |       |
|-------------------------------|----------|------|--------------------------------|----------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS:<br>@200V50Hz |          |      | 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<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] |
| 3770                          | 950      | 1105 | 518                            | 3.83                             | 24.44  | 7.28                      | 1.83                                 | 2.13  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                 |      |                                       |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@200V50Hz |       |                            | ASHRAE46<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] |
| -15                           | (+5)  | 2072                       | 522             | 607  | 313                                   | 3.20                             | 11.22                      | 6.60                      | 1.66      | 1.94  |
| -10                           | (+14) | 2273                       | 573             | 666  | 327                                   | 3.25                             | 12.34                      | 6.97                      | 1.76      | 2.04  |
| -5                            | (+23) | 2722                       | 686             | 798  | 349                                   | 3.31                             | 14.82                      | 7.82                      | 1.97      | 2.29  |
| 0                             | (+32) | 3420                       | 862             | 1002 | 378                                   | 3.39                             | 18.71                      | 9.04                      | 2.28      | 2.65  |
| +5                            | (+41) | 4368                       | 1101            | 1280 | 416                                   | 3.50                             | 24.03                      | 10.49                     | 2.64      | 3.07  |
| +10                           | (+50) | 5564                       | 1402            | 1630 | 461                                   | 3.64                             | 30.81                      | 12.08                     | 3.04      | 3.54  |

|                               |       |                            |                 |      |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@200V50Hz |       |                            | ASHRAE46<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] |
| -15                           | (+5)  | 1746                       | 440             | 512  | 332                                    | 3.24                             | 10.19                      | 5.27                      | 1.33      | 1.54  |
| -10                           | (+14) | 1953                       | 492             | 572  | 349                                    | 3.29                             | 11.46                      | 5.59                      | 1.41      | 1.64  |
| -5                            | (+23) | 2374                       | 598             | 696  | 376                                    | 3.36                             | 13.98                      | 6.31                      | 1.59      | 1.85  |
| 0                             | (+32) | 3007                       | 758             | 881  | 410                                    | 3.47                             | 17.80                      | 7.32                      | 1.84      | 2.14  |
| +5                            | (+41) | 3854                       | 971             | 1129 | 454                                    | 3.61                             | 22.94                      | 8.48                      | 2.14      | 2.49  |
| +10                           | (+50) | 4914                       | 1238            | 1440 | 507                                    | 3.81                             | 29.44                      | 9.70                      | 2.45      | 2.84  |

|                               |       |                            |                 |      |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@200V50Hz |       |                            | ASHRAE46<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] |
| -15                           | (+5)  | 1523                       | 384             | 446  | 345                                    | 3.28                             | 9.70                       | 4.42                      | 1.12      | 1.30  |
| -10                           | (+14) | 1724                       | 434             | 505  | 367                                    | 3.32                             | 11.03                      | 4.68                      | 1.18      | 1.37  |
| -5                            | (+23) | 2101                       | 529             | 616  | 399                                    | 3.41                             | 13.50                      | 5.26                      | 1.33      | 1.54  |
| 0                             | (+32) | 2656                       | 669             | 778  | 440                                    | 3.54                             | 17.15                      | 6.04                      | 1.52      | 1.77  |
| +5                            | (+41) | 3388                       | 854             | 993  | 492                                    | 3.72                             | 22.03                      | 6.91                      | 1.74      | 2.03  |
| +10                           | (+50) | 4298                       | 1083            | 1259 | 554                                    | 3.97                             | 28.15                      | 7.75                      | 1.95      | 2.27  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@200V60Hz |                            | 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)                      | 2300                       | 580             | 674      | 330                         | 2.59                                  | 12.44                   | 6.97                      | 1.76     | 2.04      |       |
| -10 (+14)                     | 2552                       | 643             | 748      | 347                         | 2.64                                  | 13.85                   | 7.37                      | 1.86     | 2.16      |       |
| -5 (+23)                      | 3076                       | 775             | 901      | 379                         | 2.76                                  | 16.76                   | 8.11                      | 2.04     | 2.38      |       |
| 0 (+32)                       | 3874                       | 976             | 1135     | 426                         | 2.95                                  | 21.19                   | 9.07                      | 2.29     | 2.66      |       |
| +5 (+41)                      | 4942                       | 1245            | 1448     | 488                         | 3.22                                  | 27.19                   | 10.12                     | 2.55     | 2.97      |       |
| +10 (+50)                     | 6282                       | 1583            | 1841     | 565                         | 3.56                                  | 34.78                   | 11.12                     | 2.80     | 3.26      |       |

| TEST CONDITIONS:<br>@200V60Hz |                            | 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)                      | 2016                       | 508             | 591      | 352                         | 2.67                                   | 11.78                   | 5.72                      | 1.44     | 1.68      |       |
| -10 (+14)                     | 2223                       | 560             | 651      | 373                         | 2.74                                   | 13.04                   | 5.97                      | 1.50     | 1.75      |       |
| -5 (+23)                      | 2683                       | 676             | 786      | 408                         | 2.87                                   | 15.79                   | 6.57                      | 1.66     | 1.93      |       |
| 0 (+32)                       | 3397                       | 856             | 995      | 459                         | 3.09                                   | 20.09                   | 7.40                      | 1.86     | 2.17      |       |
| +5 (+41)                      | 4363                       | 1100            | 1279     | 526                         | 3.38                                   | 25.97                   | 8.31                      | 2.09     | 2.43      |       |
| +10 (+50)                     | 5581                       | 1406            | 1635     | 607                         | 3.75                                   | 33.45                   | 9.18                      | 2.31     | 2.69      |       |

| TEST CONDITIONS:<br>@200V60Hz |                            | 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)                      | 1737                       | 438             | 509      | 366                         | 2.72                                   | 11.06                   | 4.76                      | 1.20     | 1.40      |       |
| -10 (+14)                     | 1911                       | 482             | 560      | 393                         | 2.82                                   | 12.23                   | 4.86                      | 1.22     | 1.42      |       |
| -5 (+23)                      | 2320                       | 585             | 680      | 436                         | 2.99                                   | 14.91                   | 5.31                      | 1.34     | 1.56      |       |
| 0 (+32)                       | 2964                       | 747             | 868      | 494                         | 3.24                                   | 19.14                   | 6.00                      | 1.51     | 1.76      |       |
| +5 (+41)                      | 3840                       | 968             | 1125     | 568                         | 3.58                                   | 24.97                   | 6.78                      | 1.71     | 1.99      |       |
| +10 (+50)                     | 4949                       | 1247            | 1450     | 658                         | 4.00                                   | 32.41                   | 7.52                      | 1.90     | 2.20      |       |

### 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      |      |                          |