

### COMPRESSOR DEFINITION

|                           |                                      |
|---------------------------|--------------------------------------|
| Designation               | <b>NE 6187Z</b>                      |
| Nominal Voltage/Frequency | <b>200-240 V 50 Hz / 230 V 60 Hz</b> |
| Engineering Number        | <b>262EN51</b>                       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|  |   |                                   |           |
|--|---|-----------------------------------|-----------|
| 1 Type                                     | Hermetic reciprocating compressor           |                                   |           |
| 2 Refrigerant                              | R-134a                                      |                                   |           |
| 3 Nominal voltage and frequency            | 200-240 / 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 pressures/temperature |   |                                   |           |
| 9.1 Operating (gauge)                      | 16.2  | [kgf/cm <sup>2</sup> ] (230 psig) | / °C - °F |
| 9.2 Peak (gauge)                           | 20.6  | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F |
| 10 Maximum winding temperature             | 130   | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1/3           | [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            | [kg] (24.25 lb.)                           |
| 5 Nitrogen charge             | 0.2 to 0.3    | [kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig) |

### C - ELECTRICAL DATA

|  |  |                                    |
|--|--|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 200-240 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                                    |                                    |
| 2.1 Starting device                          | MTRP-0029  |                                    |
| 3 Start capacitor                            | 53-64(330)                                       | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | T0817/G6   |                                    |
| 6 Start winding resistance                   | 35.30  | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 5.70   | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 16.80  | [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)      | 3.03   | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CCC - IMQ  |                                    |

### 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 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] |
| 3766                          | 949      | 1104 | 480                         | 2.86                          | 24.42  | 7.85                      | 1.98                                 | 2.30  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                 |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@200V50Hz |       |                            | 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)  | 1809                       | 456             | 530  | 271                                    | 2.09                          | 9.79                    | 6.67                      | 1.68      | 1.95  |
| -10                           | (+14) | 2304                       | 581             | 675  | 301                                    | 2.19                          | 12.50                   | 7.65                      | 1.93      | 2.24  |
| -5                            | (+23) | 2916                       | 735             | 855  | 331                                    | 2.29                          | 15.88                   | 8.82                      | 2.22      | 2.59  |
| 0                             | (+32) | 3647                       | 919             | 1069 | 359                                    | 2.40                          | 19.95                   | 10.16                     | 2.56      | 2.98  |
| +5                            | (+41) | 4495                       | 1133            | 1317 | 386                                    | 2.50                          | 24.73                   | 11.64                     | 2.93      | 3.41  |
| +10                           | (+50) | 5462                       | 1376            | 1600 | 412                                    | 2.60                          | 30.24                   | 13.25                     | 3.34      | 3.88  |

|                               |       |                            |                 |      |   |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@200V50Hz |       |                            | 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)  | 1552                       | 391             | 455  | 277                                     | 2.09                          | 9.06                    | 5.62                      | 1.42      | 1.65  |
| -10                           | (+14) | 2003                       | 505             | 587  | 313                                     | 2.22                          | 11.75                   | 6.39                      | 1.61      | 1.87  |
| -5                            | (+23) | 2558                       | 645             | 750  | 350                                     | 2.36                          | 15.06                   | 7.30                      | 1.84      | 2.14  |
| 0                             | (+32) | 3217                       | 811             | 943  | 386                                     | 2.49                          | 19.04                   | 8.32                      | 2.10      | 2.44  |
| +5                            | (+41) | 3979                       | 1003            | 1166 | 422                                     | 2.63                          | 23.68                   | 9.42                      | 2.37      | 2.76  |
| +10                           | (+50) | 4845                       | 1221            | 1420 | 458                                     | 2.76                          | 29.03                   | 10.59                     | 2.67      | 3.10  |

|                               |       |                            |                 |      |   |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@200V50Hz |       |                            | 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)  | 1284                       | 324             | 376  | 283                                     | 2.09                          | 8.18                    | 4.53                      | 1.14      | 1.33  |
| -10                           | (+14) | 1690                       | 426             | 495  | 326                                     | 2.26                          | 10.81                   | 5.18                      | 1.31      | 1.52  |
| -5                            | (+23) | 2185                       | 551             | 640  | 370                                     | 2.43                          | 14.04                   | 5.91                      | 1.49      | 1.73  |
| 0                             | (+32) | 2769                       | 698             | 811  | 415                                     | 2.60                          | 17.88                   | 6.68                      | 1.68      | 1.96  |
| +5                            | (+41) | 3442                       | 867             | 1008 | 460                                     | 2.77                          | 22.37                   | 7.49                      | 1.89      | 2.19  |
| +10                           | (+50) | 4203                       | 1059            | 1232 | 506                                     | 2.94                          | 27.53                   | 8.30                      | 2.09      | 2.43  |

### 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]  |
| -15                           | (+ 5)                      | 2117            | 534     | 620                         | 317                                   | 2.09                    | 11.45                     | 6.67  | 1.68 | 1.95 |
| -10                           | (+14)                      | 2696            | 679     | 790                         | 353                                   | 2.19                    | 14.63                     | 7.65  | 1.93 | 2.24 |
| -5                            | (+23)                      | 3412            | 860     | 1000                        | 387                                   | 2.29                    | 18.58                     | 8.82  | 2.22 | 2.58 |
| 0                             | (+32)                      | 4267            | 1075    | 1250                        | 420                                   | 2.40                    | 23.35                     | 10.16 | 2.56 | 2.98 |
| +5                            | (+41)                      | 5260            | 1325    | 1541                        | 452                                   | 2.50                    | 28.94                     | 11.64 | 2.93 | 3.41 |
| +10                           | (+50)                      | 6390            | 1610    | 1873                        | 483                                   | 2.60                    | 35.38                     | 13.23 | 3.33 | 3.88 |

| 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]  |
| -15                           | (+ 5)                      | 1816            | 458     | 532                         | 324                                    | 2.09                    | 10.60                     | 5.61  | 1.41 | 1.64 |
| -10                           | (+14)                      | 2344            | 591     | 687                         | 367                                    | 2.22                    | 13.75                     | 6.38  | 1.61 | 1.87 |
| -5                            | (+23)                      | 2994            | 754     | 877                         | 410                                    | 2.36                    | 17.63                     | 7.30  | 1.84 | 2.14 |
| 0                             | (+32)                      | 3764            | 949     | 1103                        | 452                                    | 2.49                    | 22.27                     | 8.32  | 2.10 | 2.44 |
| +5                            | (+41)                      | 4656            | 1173    | 1364                        | 494                                    | 2.63                    | 27.71                     | 9.42  | 2.37 | 2.76 |
| +10                           | (+50)                      | 5668            | 1428    | 1661                        | 536                                    | 2.76                    | 33.96                     | 10.58 | 2.67 | 3.10 |

| 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]  |
| -15                           | (+ 5)                      | 1502            | 379     | 440                         | 331                                    | 2.09                    | 9.57                      | 4.54 | 1.14 | 1.33 |
| -10                           | (+14)                      | 1977            | 498     | 579                         | 382                                    | 2.26                    | 12.65                     | 5.18 | 1.30 | 1.52 |
| -5                            | (+23)                      | 2557            | 644     | 749                         | 433                                    | 2.43                    | 16.42                     | 5.90 | 1.49 | 1.73 |
| 0                             | (+32)                      | 3240            | 816     | 949                         | 485                                    | 2.60                    | 20.92                     | 6.68 | 1.68 | 1.96 |
| +5                            | (+41)                      | 4027            | 1015    | 1180                        | 538                                    | 2.77                    | 26.18                     | 7.49 | 1.89 | 2.20 |
| +10                           | (+50)                      | 4917            | 1239    | 1441                        | 592                                    | 2.94                    | 32.21                     | 8.30 | 2.09 | 2.43 |

### 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      |      |                          |