

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NB T1114Y</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>810CA52</b>         |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-600a                            |                                   |           |
| 3 Nominal voltage and frequency    | 220-240 / 50                      | [ V / Hz ]                        |           |
| 4 Application type                 | Low Back Pressure                 |                                   |           |
| 4.1 Evaporating temperature range  | -35°C to -10°C                    | (-31°F to 14°F)                   |           |
| 5 Motor type                       | RSIR                              |                                   |           |
| 6 Starting torque                  | LST - Low Starting Torque         |                                   |           |
| 7 Expansion device                 | Capillary tube                    |                                   |           |
| 8 Compressor cooling               |                                   | Operating voltage range           |           |
|                                    |                                   | 50 Hz                             | 60 Hz     |
| 8.1 LBP (32°C Ambient temperature) | Static                            | 198 to 254 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 254 V                      | -         |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -         |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -         |
| 9 Maximum condensing temperature   |                                   |                                   |           |
| 9.1 Operating                      | 6.9                               | [kgf/cm <sup>2</sup> ] (98 psig)  | / °C - °F |
| 9.2 Peak                           | 7.8                               | [kgf/cm <sup>2</sup> ] (111 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |                |                                  |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation      |                | [hp]                             |
| 2 Displacement                | 9.99           | [cm <sup>3</sup> ] (0.610 cu.in) |
| 2.1 Bore [mm]                 | 26.497         |                                  |
| 2.2 Stroke [mm]               | 18.120         |                                  |
| 3 Lubricant charge            | 350            | [ml] (11.84 fl.oz.)              |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 10.15          | [kg] (22.38 lb.)                 |
| 5 Nitrogen charge             | -              | [kgf/cm <sup>2</sup> ]           |

### C - ELETRICAL DATA

|  |                                    |                                    |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | PTC                                |                                    |
| 2.1 Starting device                          | 2019                               |                                    |
| 3 Start capacitor                            | -                                  | [μF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [μF(VAC minimum)]                  |
| 5 Motor protection                           | AD23FQ10                           |                                    |
| 6 Start winding resistance                   | 23.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 15.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 5.10                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.63                               | [A]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |  |       |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | ASHRAELBP32<br>Static       |                               | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°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] |
| 546                           | 138      | 160 | 113                         | 0.69                          | 1.71   | 4.85                      | 1.22                                   | 1.42  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                             |                                       |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            |          | ASHRAE32<br>Static |                             | (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] |
| -35 (-31)                     | 323                        | 81       | 95                 | 78                          | 0.60                                  | 1.01                    | 4.15                      | 1.05      | 1.22  |
| -30 (-22)                     | 418                        | 105      | 123                | 86                          | 0.63                                  | 1.31                    | 4.91                      | 1.24      | 1.44  |
| -25 (-13)                     | 555                        | 140      | 163                | 97                          | 0.66                                  | 1.74                    | 5.75                      | 1.45      | 1.69  |
| -20 (- 4)                     | 728                        | 184      | 213                | 110                         | 0.70                                  | 2.29                    | 6.65                      | 1.68      | 1.95  |
| -15 (+ 5)                     | 932                        | 235      | 273                | 122                         | 0.74                                  | 2.93                    | 7.60                      | 1.92      | 2.23  |
| -10 (+14)                     | 1160                       | 292      | 340                | 135                         | 0.78                                  | 3.66                    | 8.58                      | 2.16      | 2.51  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            |          | ASHRAE32<br>Static |                             | (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] |
| -35 (-31)                     | 298                        | 75       | 87                 | 77                          | 0.60                                   | 0.93                    | 3.80                      | 0.96      | 1.11  |
| -30 (-22)                     | 401                        | 101      | 118                | 89                          | 0.64                                   | 1.26                    | 4.52                      | 1.14      | 1.32  |
| -25 (-13)                     | 540                        | 136      | 158                | 102                         | 0.68                                   | 1.69                    | 5.26                      | 1.33      | 1.54  |
| -20 (- 4)                     | 710                        | 179      | 208                | 117                         | 0.73                                   | 2.23                    | 6.01                      | 1.51      | 1.76  |
| -15 (+ 5)                     | 904                        | 228      | 265                | 134                         | 0.79                                   | 2.85                    | 6.75                      | 1.70      | 1.98  |
| -10 (+14)                     | 1118                       | 282      | 327                | 150                         | 0.84                                   | 3.53                    | 7.47                      | 1.88      | 2.19  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |                            |          | ASHRAE32<br>Static |                             | (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] |
| -35 (-31)                     | 245                        | 62       | 72                 | 83                          | 0.60                                   | 0.77                    | 3.03                      | 0.76      | 0.89  |
| -30 (-22)                     | 352                        | 89       | 103                | 94                          | 0.64                                   | 1.10                    | 3.80                      | 0.96      | 1.11  |
| -25 (-13)                     | 489                        | 123      | 143                | 108                         | 0.69                                   | 1.54                    | 4.55                      | 1.15      | 1.33  |
| -20 (- 4)                     | 652                        | 164      | 191                | 124                         | 0.75                                   | 2.05                    | 5.25                      | 1.32      | 1.54  |
| -15 (+ 5)                     | 833                        | 210      | 244                | 141                         | 0.81                                   | 2.62                    | 5.89                      | 1.48      | 1.72  |
| -10 (+14)                     | 1028                       | 259      | 301                | 159                         | 0.88                                   | 3.24                    | 6.45                      | 1.62      | 1.89  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32<br>Static         |          |     | (Condensing temperature 65°C (+149°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] |
| -35                           | (-31) | 225                        | 57       | 66  | 85                                     | 0.60                          | 0.70                    | 2.61                      | 0.66      | 0.77  |
| -30                           | (-22) | 332                        | 84       | 97  | 94                                     | 0.64                          | 1.04                    | 3.54                      | 0.89      | 1.04  |
| -25                           | (-13) | 464                        | 117      | 136 | 105                                    | 0.70                          | 1.46                    | 4.39                      | 1.11      | 1.29  |
| -20                           | (- 4) | 616                        | 155      | 180 | 120                                    | 0.76                          | 1.94                    | 5.14                      | 1.29      | 1.50  |
| -15                           | (+ 5) | 781                        | 197      | 229 | 136                                    | 0.82                          | 2.46                    | 5.77                      | 1.45      | 1.69  |
| -10                           | (+14) | 954                        | 240      | 280 | 153                                    | 0.89                          | 3.01                    | 6.27                      | 1.58      | 1.84  |

### F - EXTERNAL CHARACTERISTICS

|                         |                                |      |                          |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate            | European Standard              |      |                          |
| 2 Tray holder           | No                             |      |                          |
| 3 Connectors            |                                |      |                          |
| 3.1 SUCTION             | 6.1 +0.10/+0.00                | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material          | Copper                         |      |                          |
| 3.1.2 Shape             | Slanted 42°                    |      |                          |
| 3.2 DISCHARGE           | 5.1 +0.10/+0.00                | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material          | Copper                         |      |                          |
| 3.2.2 Shape             | Slanted parallel to Base Plate |      |                          |
| 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                   |      |                          |