

### 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-RSCR                         |                                   |           |
| 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 pressures/temperature |                                   |                                   |           |
| 9.1 Operating (gauge)                      | 7.7                               | [kgf/cm <sup>2</sup> ] (109 psig) | / °C - °F |
| 9.2 Peak (gauge)                           | 9.8                               | [kgf/cm <sup>2</sup> ] (139 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                              | 4(450)                             | [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)     | 0.46                               | [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<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] |
| 546                           | 138      | 160 | 107                            | 0.50                             | 1.71   | 5.10                      | 1.29                                   | 1.49  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                    |     |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<br>Static |     | (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] |
| -35                           | (-31) | 303                        | 76                 | 89  | 74                                     | 0.36                             | 0.95                       | 4.07                      | 1.02      | 1.19  |
| -30                           | (-22) | 393                        | 99                 | 115 | 84                                     | 0.40                             | 1.23                       | 4.71                      | 1.19      | 1.38  |
| -25                           | (-13) | 528                        | 133                | 155 | 96                                     | 0.45                             | 1.66                       | 5.53                      | 1.39      | 1.62  |
| -20                           | (- 4) | 700                        | 176                | 205 | 109                                    | 0.51                             | 2.20                       | 6.43                      | 1.62      | 1.88  |
| -15                           | (+ 5) | 901                        | 227                | 264 | 122                                    | 0.57                             | 2.84                       | 7.35                      | 1.85      | 2.15  |
| -10                           | (+14) | 1122                       | 283                | 329 | 136                                    | 0.64                             | 3.54                       | 8.23                      | 2.07      | 2.41  |

|                               |       |                            |                    |     |  |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<br>Static |     | (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] |
| -35                           | (-31) | 247                        | 62                 | 72  | 77                                     | 0.35                             | 0.77                       | 3.23                      | 0.81      | 0.95  |
| -30                           | (-22) | 351                        | 88                 | 103 | 88                                     | 0.40                             | 1.10                       | 3.98                      | 1.00      | 1.17  |
| -25                           | (-13) | 490                        | 124                | 144 | 101                                    | 0.46                             | 1.54                       | 4.80                      | 1.21      | 1.41  |
| -20                           | (- 4) | 656                        | 165                | 192 | 116                                    | 0.53                             | 2.06                       | 5.64                      | 1.42      | 1.65  |
| -15                           | (+ 5) | 839                        | 211                | 246 | 131                                    | 0.61                             | 2.64                       | 6.41                      | 1.62      | 1.88  |
| -10                           | (+14) | 1031                       | 260                | 302 | 147                                    | 0.69                             | 3.25                       | 7.06                      | 1.78      | 2.07  |

### 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                   |      |                          |