

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NB M1114Y</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>817BA47</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 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)    | 11             | [kg] (24.25 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                           | AD58FJ10                           |                                    |
| 6 Start winding resistance                   | 58.00                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 12.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 5.90                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.82                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS:<br>@220V50Hz |          |     | CECOMAFLBP<br>Static           |                                  | Evaporating temperature<br>(Condensing temperature |                           | -25°C (-13°F)<br>55°C (131°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] |
| 406                           | 102      | 119 | 113                            | 0.82                             | 1.55   | 3.59                      | 0.90                          | 1.05  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<br>Static          |          |     |                                | (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] |
| -35                           | (-31) | 301                        | 76       | 88  | 81                             | 0.71                                   | 0.96                       | 3.71                      | 0.94      | 1.09  |
| -30                           | (-22) | 410                        | 103      | 120 | 92                             | 0.75                                   | 1.32                       | 4.47                      | 1.13      | 1.31  |
| -25                           | (-13) | 547                        | 138      | 160 | 104                            | 0.79                                   | 1.75                       | 5.26                      | 1.33      | 1.54  |
| -20                           | (- 4) | 711                        | 179      | 208 | 116                            | 0.83                                   | 2.28                       | 6.11                      | 1.54      | 1.79  |
| -15                           | (+ 5) | 903                        | 228      | 265 | 129                            | 0.88                                   | 2.91                       | 7.01                      | 1.77      | 2.05  |
| -10                           | (+14) | 1126                       | 284      | 330 | 141                            | 0.92                                   | 3.63                       | 7.97                      | 2.01      | 2.33  |

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<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) | 253                        | 64       | 74  | 81                             | 0.71                                    | 0.88                       | 3.13                      | 0.79      | 0.92  |
| -30                           | (-22) | 353                        | 89       | 103 | 94                             | 0.76                                    | 1.23                       | 3.75                      | 0.94      | 1.10  |
| -25                           | (-13) | 476                        | 120      | 140 | 108                            | 0.80                                    | 1.66                       | 4.39                      | 1.11      | 1.29  |
| -20                           | (- 4) | 625                        | 157      | 183 | 123                            | 0.85                                    | 2.18                       | 5.07                      | 1.28      | 1.48  |
| -15                           | (+ 5) | 799                        | 201      | 234 | 138                            | 0.91                                    | 2.79                       | 5.78                      | 1.46      | 1.69  |
| -10                           | (+14) | 1000                       | 252      | 293 | 153                            | 0.96                                    | 3.50                       | 6.54                      | 1.65      | 1.92  |

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<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) | 205                        | 52       | 60  | 81                             | 0.71                                    | 0.78                       | 2.54                      | 0.64      | 0.75  |
| -30                           | (-22) | 294                        | 74       | 86  | 96                             | 0.76                                    | 1.12                       | 3.06                      | 0.77      | 0.90  |
| -25                           | (-13) | 405                        | 102      | 119 | 113                            | 0.82                                    | 1.54                       | 3.59                      | 0.90      | 1.05  |
| -20                           | (- 4) | 537                        | 135      | 157 | 130                            | 0.88                                    | 2.05                       | 4.13                      | 1.04      | 1.21  |
| -15                           | (+ 5) | 693                        | 175      | 203 | 147                            | 0.94                                    | 2.65                       | 4.70                      | 1.19      | 1.38  |
| -10                           | (+14) | 873                        | 220      | 256 | 165                            | 1.01                                    | 3.35                       | 5.30                      | 1.34      | 1.55  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF<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) | 153                        | 39       | 45  | 79                                      | 0.70                          | 0.65                    | 1.92                      | 0.48      | 0.56  |
| -30                           | (-22) | 233                        | 59       | 68  | 98                                      | 0.76                          | 0.98                    | 2.38                      | 0.60      | 0.70  |
| -25                           | (-13) | 330                        | 83       | 97  | 117                                     | 0.82                          | 1.40                    | 2.83                      | 0.71      | 0.83  |
| -20                           | (- 4) | 447                        | 113      | 131 | 136                                     | 0.89                          | 1.89                    | 3.28                      | 0.83      | 0.96  |
| -15                           | (+ 5) | 584                        | 147      | 171 | 156                                     | 0.97                          | 2.48                    | 3.74                      | 0.94      | 1.10  |
| -10                           | (+14) | 743                        | 187      | 218 | 176                                     | 1.05                          | 3.16                    | 4.21                      | 1.06      | 1.23  |

### 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           | 4.94 +0.08/-0.08               | [mm] | (0.194" +0.003"/-0.003") |
| 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                   |      |                          |