

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NB M1118Y</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>818BA47</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                | 14.28          | [cm <sup>3</sup> ] (0.871 cu.in) |
| 2.1 Bore [mm]                 | 30.157         |                                  |
| 2.2 Stroke [mm]               | 20.000         |                                  |
| 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                           | AD55BU10                           |                                    |
| 6 Start winding resistance                   | 49.80                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 8.40                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 8.10                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 1.10                               | [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] |
| 597                           | 150      | 175 | 157                            | 1.07                             | 2.28   | 3.80                      | 0.96                          | 1.11  |

### 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) | 469                        | 118      | 137 | 110                                    | 0.96                             | 1.50                       | 4.27                      | 1.08      | 1.25  |
| -30                           | (-22) | 622                        | 157      | 182 | 126                                    | 1.00                             | 2.00                       | 4.94                      | 1.24      | 1.45  |
| -25                           | (-13) | 798                        | 201      | 234 | 142                                    | 1.04                             | 2.57                       | 5.63                      | 1.42      | 1.65  |
| -20                           | (- 4) | 1004                       | 253      | 294 | 158                                    | 1.09                             | 3.23                       | 6.35                      | 1.60      | 1.86  |
| -15                           | (+ 5) | 1252                       | 316      | 367 | 175                                    | 1.15                             | 4.03                       | 7.13                      | 1.80      | 2.09  |
| -10                           | (+14) | 1551                       | 391      | 454 | 194                                    | 1.22                             | 5.00                       | 7.97                      | 2.01      | 2.34  |

| 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) | 401                        | 101      | 118 | 113                                     | 0.96                             | 1.39                       | 3.54                      | 0.89      | 1.04  |
| -30                           | (-22) | 542                        | 136      | 159 | 132                                     | 1.01                             | 1.89                       | 4.10                      | 1.03      | 1.20  |
| -25                           | (-13) | 699                        | 176      | 205 | 150                                     | 1.06                             | 2.44                       | 4.67                      | 1.18      | 1.37  |
| -20                           | (- 4) | 884                        | 223      | 259 | 169                                     | 1.12                             | 3.08                       | 5.25                      | 1.32      | 1.54  |
| -15                           | (+ 5) | 1106                       | 279      | 324 | 189                                     | 1.20                             | 3.86                       | 5.86                      | 1.48      | 1.72  |
| -10                           | (+14) | 1374                       | 346      | 403 | 211                                     | 1.28                             | 4.81                       | 6.52                      | 1.64      | 1.91  |

| 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) | 327                        | 83       | 96  | 116                                     | 0.97                             | 1.24                       | 2.82                      | 0.71      | 0.83  |
| -30                           | (-22) | 456                        | 115      | 134 | 136                                     | 1.02                             | 1.74                       | 3.32                      | 0.84      | 0.97  |
| -25                           | (-13) | 598                        | 151      | 175 | 157                                     | 1.08                             | 2.28                       | 3.80                      | 0.96      | 1.11  |
| -20                           | (- 4) | 763                        | 192      | 224 | 178                                     | 1.15                             | 2.91                       | 4.28                      | 1.08      | 1.26  |
| -15                           | (+ 5) | 960                        | 242      | 281 | 201                                     | 1.24                             | 3.68                       | 4.77                      | 1.20      | 1.40  |
| -10                           | (+14) | 1200                       | 302      | 351 | 227                                     | 1.34                             | 4.61                       | 5.29                      | 1.33      | 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) | 243                        | 61       | 71  | 118                                     | 0.98                          | 1.03                    | 2.07                      | 0.52      | 0.61  |
| -30                           | (-22) | 362                        | 91       | 106 | 140                                     | 1.03                          | 1.52                    | 2.55                      | 0.64      | 0.75  |
| -25                           | (-13) | 490                        | 123      | 143 | 163                                     | 1.10                          | 2.06                    | 2.99                      | 0.75      | 0.88  |
| -20                           | (- 4) | 636                        | 160      | 186 | 187                                     | 1.18                          | 2.69                    | 3.41                      | 0.86      | 1.00  |
| -15                           | (+ 5) | 810                        | 204      | 237 | 213                                     | 1.28                          | 3.45                    | 3.82                      | 0.96      | 1.12  |
| -10                           | (+14) | 1022                       | 258      | 299 | 242                                     | 1.39                          | 4.36                    | 4.23                      | 1.07      | 1.24  |

### 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                   |      |                          |