

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>NB U1118Y</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>854CA28</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                       | 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 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                | 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 | MINERAL / ISO7 |                                  |
| 4 Weight (with oil charge)    | 10.8           | [kg] (23.81 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                           | AD18BQ10                           |                                    |
| 6 Start winding resistance                   | 14.70                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 12.90                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 6.80                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.68                               | [A]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 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] |
| 631                           | 159      | 185 | 141                            | 0.68                             | 2.41   | 4.47                      | 1.13                           | 1.31  |

### 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) | 485                        | 122               | 142 | 96                                    | 0.51                             | 1.55                       | 5.02                      | 1.27      | 1.47  |
| -30                           | (-22) | 624                        | 157               | 183 | 110                                   | 0.56                             | 2.00                       | 5.69                      | 1.43      | 1.67  |
| -25                           | (-13) | 802                        | 202               | 235 | 125                                   | 0.62                             | 2.58                       | 6.44                      | 1.62      | 1.89  |
| -20                           | (- 4) | 1024                       | 258               | 300 | 141                                   | 0.68                             | 3.29                       | 7.24                      | 1.83      | 2.12  |
| -15                           | (+ 5) | 1291                       | 325               | 378 | 159                                   | 0.75                             | 4.15                       | 8.11                      | 2.04      | 2.38  |
| -10                           | (+14) | 1607                       | 405               | 471 | 177                                   | 0.83                             | 5.18                       | 9.04                      | 2.28      | 2.65  |

| 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) | 414                        | 104               | 121 | 100                                    | 0.52                             | 1.43                       | 4.15                      | 1.05      | 1.22  |
| -30                           | (-22) | 542                        | 137               | 159 | 116                                    | 0.58                             | 1.89                       | 4.69                      | 1.18      | 1.37  |
| -25                           | (-13) | 704                        | 177               | 206 | 134                                    | 0.65                             | 2.45                       | 5.28                      | 1.33      | 1.55  |
| -20                           | (- 4) | 901                        | 227               | 264 | 153                                    | 0.73                             | 3.14                       | 5.90                      | 1.49      | 1.73  |
| -15                           | (+ 5) | 1138                       | 287               | 333 | 173                                    | 0.81                             | 3.98                       | 6.56                      | 1.65      | 1.92  |
| -10                           | (+14) | 1418                       | 357               | 416 | 195                                    | 0.91                             | 4.96                       | 7.26                      | 1.83      | 2.13  |

| 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) | 363                        | 91                | 106 | 102                                    | 0.52                             | 1.38                       | 3.55                      | 0.89      | 1.04  |
| -30                           | (-22) | 484                        | 122               | 142 | 120                                    | 0.60                             | 1.84                       | 3.99                      | 1.01      | 1.17  |
| -25                           | (-13) | 631                        | 159               | 185 | 141                                    | 0.68                             | 2.41                       | 4.46                      | 1.12      | 1.31  |
| -20                           | (- 4) | 808                        | 204               | 237 | 163                                    | 0.77                             | 3.09                       | 4.94                      | 1.25      | 1.45  |
| -15                           | (+ 5) | 1018                       | 257               | 298 | 187                                    | 0.87                             | 3.90                       | 5.44                      | 1.37      | 1.59  |
| -10                           | (+14) | 1264                       | 319               | 371 | 213                                    | 0.98                             | 4.85                       | 5.94                      | 1.50      | 1.74  |

### 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) | 290                        | 73       | 85  | 101                                    | 0.52                          | 1.23                    | 2.89                      | 0.73      | 0.85  |
| -30                           | (-22) | 406                        | 102      | 119 | 123                                    | 0.61                          | 1.71                    | 3.28                      | 0.83      | 0.96  |
| -25                           | (-13) | 542                        | 137      | 159 | 147                                    | 0.71                          | 2.29                    | 3.66                      | 0.92      | 1.07  |
| -20                           | (- 4) | 701                        | 177      | 205 | 174                                    | 0.82                          | 2.97                    | 4.04                      | 1.02      | 1.18  |
| -15                           | (+ 5) | 887                        | 224      | 260 | 202                                    | 0.94                          | 3.77                    | 4.41                      | 1.11      | 1.29  |
| -10                           | (+14) | 1103                       | 278      | 323 | 233                                    | 1.07                          | 4.70                    | 4.76                      | 1.20      | 1.39  |

### 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 B.Plate 30° |      |                          |
| 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                 |      |                          |