

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | NB T1116Y       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 851EA28         |

### 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                | 12.11          | [cm <sup>3</sup> ] (0.739 cu.in) |
| 2.1 Bore [mm]                 | 27.775         |                                  |
| 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)    | 10.75          | [kg] (23.70 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                   | 21.30                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 12.10                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 6.00                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.88                               | [A]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS:<br>@220V50Hz |          |     | CECOMAF<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] |
| 539                           | 136      | 158 | 129                            | 0.87                             | 2.06   | 4.19                      | 1.06                          | 1.23  |

### 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) | 415                        | 105      | 122 | 93                             | 0.77                                  | 1.33                       | 4.48                      | 1.13      | 1.31  |
| -30                           | (-22) | 543                        | 137      | 159 | 105                            | 0.80                                  | 1.74                       | 5.21                      | 1.31      | 1.53  |
| -25                           | (-13) | 698                        | 176      | 205 | 117                            | 0.84                                  | 2.24                       | 5.98                      | 1.51      | 1.75  |
| -20                           | (- 4) | 885                        | 223      | 259 | 130                            | 0.88                                  | 2.84                       | 6.81                      | 1.71      | 1.99  |
| -15                           | (+ 5) | 1109                       | 280      | 325 | 144                            | 0.92                                  | 3.57                       | 7.69                      | 1.94      | 2.25  |
| -10                           | (+14) | 1377                       | 347      | 403 | 159                            | 0.97                                  | 4.44                       | 8.66                      | 2.18      | 2.54  |

| 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) | 353                        | 89       | 104 | 93                             | 0.77                                   | 1.23                       | 3.79                      | 0.95      | 1.11  |
| -30                           | (-22) | 475                        | 120      | 139 | 108                            | 0.81                                   | 1.65                       | 4.39                      | 1.11      | 1.29  |
| -25                           | (-13) | 617                        | 156      | 181 | 123                            | 0.85                                   | 2.15                       | 5.01                      | 1.26      | 1.47  |
| -20                           | (- 4) | 787                        | 198      | 231 | 139                            | 0.90                                   | 2.75                       | 5.65                      | 1.42      | 1.66  |
| -15                           | (+ 5) | 989                        | 249      | 290 | 156                            | 0.96                                   | 3.45                       | 6.33                      | 1.60      | 1.85  |
| -10                           | (+14) | 1228                       | 309      | 360 | 174                            | 1.02                                   | 4.30                       | 7.06                      | 1.78      | 2.07  |

| 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) | 293                        | 74       | 86  | 93                             | 0.78                                   | 1.11                       | 3.16                      | 0.80      | 0.93  |
| -30                           | (-22) | 408                        | 103      | 120 | 110                            | 0.82                                   | 1.55                       | 3.68                      | 0.93      | 1.08  |
| -25                           | (-13) | 540                        | 136      | 158 | 129                            | 0.87                                   | 2.06                       | 4.18                      | 1.05      | 1.23  |
| -20                           | (- 4) | 693                        | 175      | 203 | 148                            | 0.93                                   | 2.65                       | 4.69                      | 1.18      | 1.37  |
| -15                           | (+ 5) | 872                        | 220      | 256 | 168                            | 1.00                                   | 3.34                       | 5.20                      | 1.31      | 1.52  |
| -10                           | (+14) | 1084                       | 273      | 317 | 189                            | 1.08                                   | 4.16                       | 5.74                      | 1.45      | 1.68  |

### 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) | 226                        | 57       | 66  | 91                                      | 0.78                          | 0.95                    | 2.50                      | 0.63      | 0.73  |
| -30                           | (-22) | 336                        | 85       | 98  | 112                                     | 0.82                          | 1.41                    | 2.97                      | 0.75      | 0.87  |
| -25                           | (-13) | 457                        | 115      | 134 | 134                                     | 0.88                          | 1.93                    | 3.40                      | 0.86      | 1.00  |
| -20                           | (- 4) | 594                        | 150      | 174 | 156                                     | 0.95                          | 2.51                    | 3.81                      | 0.96      | 1.12  |
| -15                           | (+ 5) | 752                        | 189      | 220 | 180                                     | 1.04                          | 3.20                    | 4.20                      | 1.06      | 1.23  |
| -10                           | (+14) | 937                        | 236      | 275 | 205                                     | 1.13                          | 4.00                    | 4.59                      | 1.16      | 1.35  |

### 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                 |      |                          |