

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM 2C55CLT      |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513304636       |

### 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 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 255 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                | 9.04           | [cm <sup>3</sup> ] (0.552 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 20.000         |                                  |
| 3 Lubricant charge            | 150            | [ml] (5.07 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | MINERAL / ISO5 |                                  |
| 4 Weight (with oil charge)    | 8.36           | [kg] (18.43 lb.)                 |
| 5 Nitrogen charge             | -              | [kgf/cm <sup>2</sup> ]           |

### C - ELECTRICAL 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                          | MI2021                             |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 5(310)/4(300)                      | [µF(VAC minimum)]                  |
| 5 Motor protection                           | AE64FS                             |                                    |
| 6 Start winding resistance                   | 18.00                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 20.80                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 4.30                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.65                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - UKCA - VDE                    |                                    |

### D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS:<br>@220V50Hz   |          |     | CECOMAFLBP-NOFAN<br>Static    |                               | Evaporating temperature<br>(Condensing temperature |                                | -25°C (-13°F)<br>55°C (131°F) |       |
|---------------------------------|----------|-----|-------------------------------|-------------------------------|--|--------------------------------|-------------------------------|-------|
| Cooling capacity (Qe)<br>+/- 5% |          |     | Input power<br>(We)<br>+/- 5% | Electric<br>current<br>+/- 5% | Mass flow<br>rate<br>+/- 5%                        | Efficiency EER & COP<br>+/- 7% |                               |       |
| [Btu/h]                         | [kcal/h] | [W] | [W]                           | [A]                           | [kg/h]   | [Btu/Wh]                       | [kcal/Wh]                     | [W/W] |
| 386                             | 97       | 113 | 81                            | 0.37                          | 1.47   | 4.79                           | 1.21                          | 1.40  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF-NOFAN<br>Static         |          |     |                               | (Condensing temperature 35°C (+95°F) ) |                             |                                |           |       |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|--|-----------------------------|--------------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity (Qe)<br>+/- 5% |          |     | Input power<br>(We)<br>+/- 5% | Electric current<br>+/- 5%             | Mass flow<br>rate<br>+/- 5% | Efficiency EER & COP<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                         | [kcal/h] | [W] | [W]                           | [A]                                    | [kg/h]                      | [Btu/Wh]                       | [kcal/Wh] | [W/W] |
| -35                           | (-31) | 295                             | 74       | 86  | 57                            | 0.27                                   | 0.94                        | 5.13                           | 1.29      | 1.50  |
| -30                           | (-22) | 403                             | 101      | 118 | 66                            | 0.31                                   | 1.30                        | 6.09                           | 1.53      | 1.78  |
| -25                           | (-13) | 525                             | 132      | 154 | 75                            | 0.35                                   | 1.69                        | 7.01                           | 1.77      | 2.05  |
| -20                           | (- 4) | 669                             | 169      | 196 | 84                            | 0.39                                   | 2.15                        | 7.95                           | 2.00      | 2.33  |
| -15                           | (+ 5) | 842                             | 212      | 247 | 94                            | 0.43                                   | 2.71                        | 8.97                           | 2.26      | 2.63  |
| -10                           | (+14) | 1051                            | 265      | 308 | 104                           | 0.47                                   | 3.39                        | 10.10                          | 2.54      | 2.96  |

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF-NOFAN<br>Static         |          |     |                               | (Condensing temperature 45°C (+113°F) ) |                             |                                |           |       |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|---|-----------------------------|--------------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity (Qe)<br>+/- 5% |          |     | Input power<br>(We)<br>+/- 5% | Electric current<br>+/- 5%              | Mass flow<br>rate<br>+/- 5% | Efficiency EER & COP<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                         | [kcal/h] | [W] | [W]                           | [A]                                     | [kg/h]                      | [Btu/Wh]                       | [kcal/Wh] | [W/W] |
| -35                           | (-31) | 248                             | 63       | 73  | 57                            | 0.27                                    | 0.86                        | 4.32                           | 1.09      | 1.27  |
| -30                           | (-22) | 345                             | 87       | 101 | 67                            | 0.31                                    | 1.20                        | 5.09                           | 1.28      | 1.49  |
| -25                           | (-13) | 454                             | 114      | 133 | 78                            | 0.36                                    | 1.58                        | 5.81                           | 1.46      | 1.70  |
| -20                           | (- 4) | 582                             | 147      | 170 | 89                            | 0.41                                    | 2.03                        | 6.53                           | 1.64      | 1.91  |
| -15                           | (+ 5) | 736                             | 185      | 216 | 101                           | 0.46                                    | 2.57                        | 7.29                           | 1.84      | 2.14  |
| -10                           | (+14) | 924                             | 233      | 271 | 113                           | 0.52                                    | 3.23                        | 8.16                           | 2.06      | 2.39  |

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF-NOFAN<br>Static         |          |     |                               | (Condensing temperature 55°C (+131°F) ) |                             |                                |           |       |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|---|-----------------------------|--------------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity (Qe)<br>+/- 5% |          |     | Input power<br>(We)<br>+/- 5% | Electric current<br>+/- 5%              | Mass flow<br>rate<br>+/- 5% | Efficiency EER & COP<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                         | [kcal/h] | [W] | [W]                           | [A]                                     | [kg/h]                      | [Btu/Wh]                       | [kcal/Wh] | [W/W] |
| -35                           | (-31) | 204                             | 51       | 60  | 57                            | 0.27                                    | 0.78                        | 3.58                           | 0.90      | 1.05  |
| -30                           | (-22) | 290                             | 73       | 85  | 69                            | 0.32                                    | 1.10                        | 4.22                           | 1.06      | 1.24  |
| -25                           | (-13) | 386                             | 97       | 113 | 81                            | 0.37                                    | 1.47                        | 4.78                           | 1.21      | 1.40  |
| -20                           | (- 4) | 498                             | 126      | 146 | 94                            | 0.43                                    | 1.90                        | 5.33                           | 1.34      | 1.56  |
| -15                           | (+ 5) | 634                             | 160      | 186 | 107                           | 0.49                                    | 2.43                        | 5.92                           | 1.49      | 1.73  |
| -10                           | (+14) | 801                             | 202      | 235 | 121                           | 0.56                                    | 3.08                        | 6.58                           | 1.66      | 1.93  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | CECOMAF-NOFAN<br>Static         |          |     | (Condensing temperature 65°C (+149°F) ) |                            |                          |                                |           |       |
|-------------------------------|-------|---------------------------------|----------|-----|---|----------------------------|--------------------------|--------------------------------|-----------|-------|
| Evaporating temperature       |       | Cooling capacity (Qe)<br>+/- 5% |          |     | Input power (We)<br>+/- 5%              | Electric current<br>+/- 5% | Mass flow rate<br>+/- 5% | Efficiency EER & COP<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                         | [kcal/h] | [W] | [W]                                     | [A]                        | [kg/h]                   | [Btu/Wh]                       | [kcal/Wh] | [W/W] |
| -35                           | (-31) | 161                             | 41       | 47  | 55                                      | 0.27                       | 0.68                     | 2.90                           | 0.73      | 0.85  |
| -30                           | (-22) | 238                             | 60       | 70  | 68                                      | 0.32                       | 1.00                     | 3.46                           | 0.87      | 1.01  |
| -25                           | (-13) | 321                             | 81       | 94  | 82                                      | 0.37                       | 1.35                     | 3.94                           | 0.99      | 1.15  |
| -20                           | (- 4) | 418                             | 105      | 123 | 96                                      | 0.44                       | 1.77                     | 4.38                           | 1.10      | 1.28  |
| -15                           | (+ 5) | 537                             | 135      | 157 | 111                                     | 0.51                       | 2.29                     | 4.83                           | 1.22      | 1.42  |
| -10                           | (+14) | 683                             | 172      | 200 | 127                                     | 0.59                       | 2.92                     | 5.35                           | 1.35      | 1.57  |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EUEM       |      |                          |
| 2 Tray holder           | Yes                          |      |                          |
| 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° up + 45° to Back |      |                          |
| 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 0° up + 24° to Back  |      |                          |
| 3.3 PROCESS             | 6 +0.08/-0.08                | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material          | Copper(OD)                   |      |                          |
| 3.3.2 Shape             | Slanted 43° up + 45° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                           | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                 |      |                          |