

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM X32CLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513301889       |

### 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) | -                                 | -                                 | -         |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 187 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      | 1/7            | [hp]                             |
| 2 Displacement                | 5.96           | [cm <sup>3</sup> ] (0.364 cu.in) |
| 2.1 Bore [mm]                 | 22.500         |                                  |
| 2.2 Stroke [mm]               | 15.000         |                                  |
| 3 Lubricant charge            | 150            | [ml] (5.07 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 7.3            | [kg] (16.09 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                          | 8EA20E61                           |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 2.5(300)                           | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM189KFBYY-73                     |                                    |
| 6 Start winding resistance                   | 22.72                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 42.27                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 3.30                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.40                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | 0.50                               | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | 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] |
| 237                             | 60       | 69  | 53                            | 0.26                          | 0.90   | 4.44                           | 1.12                          | 1.30  |

### 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) | 216                             | 54       | 63  | 35                            | 0.20                                  | 0.69                        | 6.10                           | 1.54      | 1.79  |
| -30                           | (-22) | 281                             | 71       | 82  | 45                            | 0.23                                  | 0.90                        | 6.45                           | 1.63      | 1.89  |
| -25                           | (-13) | 359                             | 90       | 105 | 51                            | 0.25                                  | 1.15                        | 7.17                           | 1.81      | 2.10  |
| -20                           | (- 4) | 453                             | 114      | 133 | 56                            | 0.28                                  | 1.46                        | 8.18                           | 2.06      | 2.40  |
| -15                           | (+ 5) | 568                             | 143      | 167 | 60                            | 0.30                                  | 1.83                        | 9.40                           | 2.37      | 2.76  |
| -10                           | (+14) | 707                             | 178      | 207 | 65                            | 0.32                                  | 2.28                        | 10.75                          | 2.71      | 3.15  |

| 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) | 156                             | 39       | 46  | 35                            | 0.19                                   | 0.54                        | 4.46                           | 1.12      | 1.31  |
| -30                           | (-22) | 220                             | 55       | 64  | 45                            | 0.23                                   | 0.76                        | 4.85                           | 1.22      | 1.42  |
| -25                           | (-13) | 293                             | 74       | 86  | 53                            | 0.26                                   | 1.02                        | 5.53                           | 1.39      | 1.62  |
| -20                           | (- 4) | 380                             | 96       | 111 | 59                            | 0.29                                   | 1.33                        | 6.41                           | 1.61      | 1.88  |
| -15                           | (+ 5) | 484                             | 122      | 142 | 65                            | 0.32                                   | 1.69                        | 7.41                           | 1.87      | 2.17  |
| -10                           | (+14) | 610                             | 154      | 179 | 72                            | 0.35                                   | 2.13                        | 8.46                           | 2.13      | 2.48  |

| 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) | 108                             | 27       | 32  | 34                            | 0.19                                   | 0.41                        | 3.28                           | 0.83      | 0.96  |
| -30                           | (-22) | 168                             | 42       | 49  | 45                            | 0.23                                   | 0.64                        | 3.73                           | 0.94      | 1.09  |
| -25                           | (-13) | 235                             | 59       | 69  | 53                            | 0.26                                   | 0.90                        | 4.39                           | 1.11      | 1.29  |
| -20                           | (- 4) | 313                             | 79       | 92  | 60                            | 0.30                                   | 1.20                        | 5.16                           | 1.30      | 1.51  |
| -15                           | (+ 5) | 405                             | 102      | 119 | 68                            | 0.34                                   | 1.55                        | 5.97                           | 1.50      | 1.75  |
| -10                           | (+14) | 515                             | 130      | 151 | 76                            | 0.38                                   | 1.98                        | 6.73                           | 1.70      | 1.97  |

### 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) | 75                              | 19       | 22  | 31                                      | 0.18                       | 0.32                     | 2.38                           | 0.60      | 0.70  |
| -30                           | (-22) | 130                             | 33       | 38  | 43                                      | 0.22                       | 0.55                     | 2.91                           | 0.73      | 0.85  |
| -25                           | (-13) | 189                             | 48       | 55  | 52                                      | 0.26                       | 0.80                     | 3.57                           | 0.90      | 1.05  |
| -20                           | (- 4) | 256                             | 64       | 75  | 61                                      | 0.30                       | 1.08                     | 4.25                           | 1.07      | 1.25  |
| -15                           | (+ 5) | 334                             | 84       | 98  | 70                                      | 0.34                       | 1.42                     | 4.89                           | 1.23      | 1.43  |
| -10                           | (+14) | 427                             | 108      | 125 | 80                                      | 0.39                       | 1.82                     | 5.39                           | 1.36      | 1.58  |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard            |      |                          |
| 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           | 4.94 +0.08/-0.08             | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material          | Copper                       |      |                          |
| 3.2.2 Shape             | Slanted 0° up + 24° to Back  |      |                          |
| 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 45° up + 45° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                           | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                 |      |                          |