

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>EM X46CLC</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>898EA72</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                | 7.96           | [cm <sup>3</sup> ] (0.486 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 17.600         |                                  |
| 3 Lubricant charge            | 180            | [ml] (6.09 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 7.8            | [kg] (17.20 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                       | TSD                                |                                    |
| 2.1 Starting device                          | MI.E-START 2021                    |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 4(440)                             | [µF(VAC minimum)]                  |
| 5 Motor protection                           | AE37FN10                           |                                    |
| 6 Start winding resistance                   | 17.80                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 25.00                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 3.80                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.22                               | [A]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 11 Approval boards certification             | IRAM - 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 consumption<br>+/- 5% | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5%                            | EFFICIENCY RATE<br>+/- 7% |                                |       |
| [Btu/h]                       | [kcal/h] | [W] | [W]                         | [A]                           | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                      | [W/W] |
| 348                           | 88       | 102 | 75                          | 0.35                          | 1.33   | 4.64                      | 1.17                           | 1.36  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       |                            | CECOMAF<br>Static |     | (Condensing temperature 45°C (+113°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) | 213                        | 54                | 62  | 53                                     | 0.25                          | 0.74                    | 4.02                      | 1.01      | 1.18  |
| -30                           | (-22) | 300                        | 76                | 88  | 62                                     | 0.29                          | 1.04                    | 4.83                      | 1.22      | 1.41  |
| -25                           | (-13) | 403                        | 102               | 118 | 71                                     | 0.34                          | 1.40                    | 5.65                      | 1.42      | 1.66  |
| -20                           | (- 4) | 526                        | 132               | 154 | 81                                     | 0.38                          | 1.83                    | 6.50                      | 1.64      | 1.91  |
| -15                           | (+ 5) | 670                        | 169               | 196 | 91                                     | 0.43                          | 2.34                    | 7.38                      | 1.86      | 2.16  |
| -10                           | (+14) | 837                        | 211               | 245 | 101                                    | 0.48                          | 2.93                    | 8.29                      | 2.09      | 2.43  |

| TEST CONDITIONS:<br>@220V50Hz |       |                            | CECOMAF<br>Static |     | (Condensing temperature 55°C (+131°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) | 181                        | 46                | 53  | 53                                     | 0.25                          | 0.69                    | 3.39                      | 0.85      | 0.99  |
| -30                           | (-22) | 258                        | 65                | 76  | 64                                     | 0.30                          | 0.98                    | 4.02                      | 1.01      | 1.18  |
| -25                           | (-13) | 349                        | 88                | 102 | 75                                     | 0.35                          | 1.33                    | 4.65                      | 1.17      | 1.36  |
| -20                           | (- 4) | 457                        | 115               | 134 | 86                                     | 0.40                          | 1.75                    | 5.29                      | 1.33      | 1.55  |
| -15                           | (+ 5) | 584                        | 147               | 171 | 98                                     | 0.46                          | 2.24                    | 5.95                      | 1.50      | 1.74  |
| -10                           | (+14) | 732                        | 184               | 214 | 110                                    | 0.52                          | 2.81                    | 6.62                      | 1.67      | 1.94  |

| 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) | 145                        | 37                | 43  | 52                                     | 0.25                          | 0.61                    | 2.79                      | 0.70      | 0.82  |
| -30                           | (-22) | 215                        | 54                | 63  | 65                                     | 0.30                          | 0.91                    | 3.32                      | 0.84      | 0.97  |
| -25                           | (-13) | 298                        | 75                | 87  | 78                                     | 0.36                          | 1.26                    | 3.83                      | 0.97      | 1.12  |
| -20                           | (- 4) | 394                        | 99                | 115 | 91                                     | 0.42                          | 1.67                    | 4.34                      | 1.09      | 1.27  |
| -15                           | (+ 5) | 506                        | 128               | 148 | 105                                    | 0.49                          | 2.15                    | 4.84                      | 1.22      | 1.42  |
| -10                           | (+14) | 637                        | 161               | 187 | 119                                    | 0.56                          | 2.72                    | 5.36                      | 1.35      | 1.57  |

### 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             | Straight          |      |                          |
| 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      |      |                          |