

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>EM X46CLC</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>875EA77</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)    | 7.66           | [kg] (16.89 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                          | TSD3-220V                          |                                    |
| 3 Start capacitor                            | -                                  | [μF(VAC minimum)]                  |
| 4 Run capacitor                              | 4(440)                             | [μF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM189KFBYY-73                     |                                    |
| 6 Start winding resistance                   | 21.00                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 27.00                              | [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)     | -                                  | [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] |
| 344                           | 87       | 101 | 75                             | 0.36                             | 1.31                                               | 4.62                      | 1.16                           | 1.35  |

### E - PERFORMANCE - CURVES

| 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) | 229                        | 58                | 67  | 54                                     | 0.27                             | 0.79                       | 4.27                      | 1.08      | 1.25  |
| -30                           | (-22) | 307                        | 77                | 90  | 62                                     | 0.31                             | 1.07                       | 4.95                      | 1.25      | 1.45  |
| -25                           | (-13) | 404                        | 102               | 118 | 72                                     | 0.35                             | 1.41                       | 5.65                      | 1.42      | 1.66  |
| -20                           | (- 4) | 523                        | 132               | 153 | 82                                     | 0.39                             | 1.82                       | 6.40                      | 1.61      | 1.87  |
| -15                           | (+ 5) | 663                        | 167               | 194 | 92                                     | 0.44                             | 2.32                       | 7.19                      | 1.81      | 2.11  |
| -10                           | (+14) | 827                        | 209               | 242 | 103                                    | 0.49                             | 2.90                       | 8.06                      | 2.03      | 2.36  |

| 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) | 188                        | 47                | 55  | 54                                     | 0.27                             | 0.72                       | 3.48                      | 0.88      | 1.02  |
| -30                           | (-22) | 258                        | 65                | 76  | 64                                     | 0.31                             | 0.98                       | 4.05                      | 1.02      | 1.19  |
| -25                           | (-13) | 345                        | 87                | 101 | 75                                     | 0.36                             | 1.31                       | 4.62                      | 1.16      | 1.35  |
| -20                           | (- 4) | 450                        | 113               | 132 | 86                                     | 0.41                             | 1.72                       | 5.20                      | 1.31      | 1.52  |
| -15                           | (+ 5) | 574                        | 145               | 168 | 99                                     | 0.47                             | 2.20                       | 5.81                      | 1.46      | 1.70  |
| -10                           | (+14) | 720                        | 181               | 211 | 111                                    | 0.53                             | 2.76                       | 6.45                      | 1.63      | 1.89  |

| TEST CONDITIONS:<br>@220V50Hz |       |                            | CECOMAF<br>Static |     | (Condensing temperature 65°C (+149°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) | 148                        | 37                | 43  | 54                                     | 0.27                             | 0.62                       | 2.75                      | 0.69      | 0.80  |
| -30                           | (-22) | 210                        | 53                | 62  | 65                                     | 0.32                             | 0.89                       | 3.25                      | 0.82      | 0.95  |
| -25                           | (-13) | 287                        | 72                | 84  | 77                                     | 0.37                             | 1.21                       | 3.72                      | 0.94      | 1.09  |
| -20                           | (- 4) | 379                        | 95                | 111 | 91                                     | 0.44                             | 1.60                       | 4.17                      | 1.05      | 1.22  |
| -15                           | (+ 5) | 488                        | 123               | 143 | 105                                    | 0.51                             | 2.07                       | 4.63                      | 1.17      | 1.36  |
| -10                           | (+14) | 615                        | 155               | 180 | 121                                    | 0.58                             | 2.62                       | 5.10                      | 1.29      | 1.50  |

### 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°       |      |                          |
| 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      |      |                          |