

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>EM X40CLC</b>       |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>898DA88</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                | 7.23           | [cm <sup>3</sup> ] (0.441 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 16.000         |                                  |
| 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                       | PTC                                |                                    |
| 2.1 Starting device                          | 2019                               |                                    |
| 3 Start capacitor                            | -                                  | [μF(VAC minimum)]                  |
| 4 Run capacitor                              | 4(440)                             | [μF(VAC minimum)]                  |
| 5 Motor protection                           | AE37FN10                           |                                    |
| 6 Start winding resistance                   | 22.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 28.80                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 3.10                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.30                               | [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 |          |     | ASHRAELBP32<br>Static       |                               | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°F)<br>54.4°C (129.92°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] |
| 412                           | 104      | 121 | 73                          | 0.33                          | 1.29   | 5.63                      | 1.42                                   | 1.65  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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  | 48                                     | 0.23                          | 0.67                    | 4.45                      | 1.12      | 1.30  |
| -30                           | (-22) | 297                        | 75                 | 87  | 58                                     | 0.27                          | 0.93                    | 5.14                      | 1.30      | 1.51  |
| -25                           | (-13) | 396                        | 100                | 116 | 67                                     | 0.31                          | 1.24                    | 5.95                      | 1.50      | 1.74  |
| -20                           | (- 4) | 513                        | 129                | 150 | 75                                     | 0.35                          | 1.61                    | 6.85                      | 1.73      | 2.01  |
| -15                           | (+ 5) | 651                        | 164                | 191 | 83                                     | 0.39                          | 2.05                    | 7.82                      | 1.97      | 2.29  |
| -10                           | (+14) | 814                        | 205                | 239 | 92                                     | 0.43                          | 2.57                    | 8.82                      | 2.22      | 2.58  |

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 188                        | 47                 | 55  | 49                                     | 0.23                          | 0.59                    | 3.88                      | 0.98      | 1.14  |
| -30                           | (-22) | 273                        | 69                 | 80  | 60                                     | 0.27                          | 0.86                    | 4.54                      | 1.15      | 1.33  |
| -25                           | (-13) | 372                        | 94                 | 109 | 70                                     | 0.32                          | 1.17                    | 5.30                      | 1.34      | 1.55  |
| -20                           | (- 4) | 489                        | 123                | 143 | 80                                     | 0.36                          | 1.54                    | 6.12                      | 1.54      | 1.79  |
| -15                           | (+ 5) | 626                        | 158                | 183 | 90                                     | 0.41                          | 1.97                    | 6.97                      | 1.76      | 2.04  |
| -10                           | (+14) | 788                        | 199                | 231 | 101                                    | 0.46                          | 2.49                    | 7.83                      | 1.97      | 2.29  |

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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) | 170                        | 43                 | 50  | 48                                     | 0.23                          | 0.53                    | 3.53                      | 0.89      | 1.03  |
| -30                           | (-22) | 251                        | 63                 | 74  | 60                                     | 0.28                          | 0.79                    | 4.17                      | 1.05      | 1.22  |
| -25                           | (-13) | 347                        | 87                 | 102 | 71                                     | 0.33                          | 1.09                    | 4.87                      | 1.23      | 1.43  |
| -20                           | (- 4) | 460                        | 116                | 135 | 82                                     | 0.38                          | 1.45                    | 5.60                      | 1.41      | 1.64  |
| -15                           | (+ 5) | 593                        | 150                | 174 | 94                                     | 0.44                          | 1.87                    | 6.33                      | 1.60      | 1.86  |
| -10                           | (+14) | 751                        | 189                | 220 | 107                                    | 0.50                          | 2.37                    | 7.04                      | 1.77      | 2.06  |

### 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           | 5.1 +0.10/+0.00   | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material          | Copper            |      |                          |
| 3.2.2 Shape             | Slanted 42°       |      |                          |
| 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 42°       |      |                          |
| 3.4 Oil cooler (Copper) | No                | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs      |      |                          |