

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG X80HLC       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513703019       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|  |                                   |                                   |             |
|--|-----------------------------------|-----------------------------------|-------------|
| 1 Type                                     | Hermetic reciprocating compressor |                                   |             |
| 2 Refrigerant                              | R-134a                            |                                   |             |
| 3 Nominal voltage and frequency            | 115-127 / 60                      | [ 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                            | -                                 | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature)         | Static                            | -                                 | 98 to 140 V |
| 8.3 HBP (32°C Ambient temperature)         | -                                 | -                                 | -           |
| 8.4 HBP (43°C Ambient temperature)         | -                                 | -                                 | -           |
| 9 Maximum condensing pressures/temperature |                                   |                                   |             |
| 9.1 Operating (gauge)                      | 16.2                              | [kgf/cm <sup>2</sup> ] (230 psig) | / °C - °F   |
| 9.2 Peak (gauge)                           | 20.6                              | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F   |
| 10 Maximum winding temperature             | 130                               | [ °C ]                            |             |

### B - MECHANICAL DATA

|                               |              |  |
|-------------------------------|--------------|--|
| 1 Commercial designation      | 1/4          | [hp]                                       |
| 2 Displacement                | 6.36         | [cm <sup>3</sup> ] (0.388 cu.in)           |
| 2.1 Bore [mm]                 | 22.500       |  |
| 2.2 Stroke [mm]               | 16.000       |  |
| 3 Lubricant charge            | 230          | [ml] (7.78 fl.oz.)                         |
| 3.1 Lubricants approved       |              |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 |  |
| 4 Weight (with oil charge)    | 10.96        | [kg] (24.16 lb.)                           |
| 5 Nitrogen charge             | 0.2 to 0.3   | [kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig) |

### C - ELETRICAL DATA

|  |                                    |                                    |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Combo                              |                                    |
| 2.1 Starting device                          | 3ARR5XM4BX                         |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 12(180)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 3ARR5XM4B                          |                                    |
| 6 Start winding resistance                   | 5.60                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 3.50                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | -                                  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | UL                                 |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |  |       |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@115V60Hz |          |     | 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] |
| 820                           | 207      | 240 | 132                         | 1.18                          | 4.66   | 6.20                      | 1.56                                   | 1.82  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 401                        | 101      | 117                | 87                          | 0.78                                   | 2.27                    | 4.60                      | 1.16      | 1.35  |
| -30 (-22)                     | 602                        | 152      | 176                | 107                         | 0.95                                   | 3.41                    | 5.62                      | 1.42      | 1.65  |
| -25 (-13)                     | 823                        | 207      | 241                | 126                         | 1.11                                   | 4.67                    | 6.55                      | 1.65      | 1.92  |
| -20 (- 4)                     | 1074                       | 271      | 315                | 145                         | 1.27                                   | 6.11                    | 7.46                      | 1.88      | 2.19  |
| -15 (+ 5)                     | 1366                       | 344      | 400                | 163                         | 1.43                                   | 7.80                    | 8.42                      | 2.12      | 2.47  |
| -10 (+14)                     | 1710                       | 431      | 501                | 180                         | 1.58                                   | 9.80                    | 9.50                      | 2.39      | 2.78  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 324                        | 82       | 95                 | 78                          | 0.70                                   | 1.83                    | 4.16                      | 1.05      | 1.22  |
| -30 (-22)                     | 517                        | 130      | 151                | 101                         | 0.90                                   | 2.93                    | 5.08                      | 1.28      | 1.49  |
| -25 (-13)                     | 734                        | 185      | 215                | 124                         | 1.11                                   | 4.17                    | 5.89                      | 1.49      | 1.73  |
| -20 (- 4)                     | 988                        | 249      | 289                | 148                         | 1.32                                   | 5.62                    | 6.66                      | 1.68      | 1.95  |
| -15 (+ 5)                     | 1287                       | 324      | 377                | 173                         | 1.53                                   | 7.35                    | 7.45                      | 1.88      | 2.18  |
| -10 (+14)                     | 1644                       | 414      | 482                | 197                         | 1.75                                   | 9.42                    | 8.33                      | 2.10      | 2.44  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 248                        | 63       | 73                 | 71                          | 0.65                                   | 1.41                    | 3.50                      | 0.88      | 1.02  |
| -30 (-22)                     | 426                        | 107      | 125                | 96                          | 0.86                                   | 2.41                    | 4.41                      | 1.11      | 1.29  |
| -25 (-13)                     | 633                        | 159      | 185                | 122                         | 1.09                                   | 3.59                    | 5.19                      | 1.31      | 1.52  |
| -20 (- 4)                     | 881                        | 222      | 258                | 150                         | 1.32                                   | 5.01                    | 5.90                      | 1.49      | 1.73  |
| -15 (+ 5)                     | 1181                       | 298      | 346                | 178                         | 1.57                                   | 6.74                    | 6.61                      | 1.66      | 1.94  |
| -10 (+14)                     | 1542                       | 389      | 452                | 208                         | 1.83                                   | 8.84                    | 7.38                      | 1.86      | 2.16  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal EG/F/AMEM version 2 |      |                          |
| 2 Tray holder           | No                            |      |                          |
| 3 Connectors            |                               |      |                          |
| 3.1 SUCTION             | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material          | Copper                        |      |                          |
| 3.1.2 Shape             | Straight                      |      |                          |
| 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             | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material          | Copper                        |      |                          |
| 3.3.2 Shape             | Straight                      |      |                          |
| 3.4 Oil cooler (Copper) | No                            | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                  |      |                          |