

### COMPRESSOR DEFINITION

|                           |                |
|---------------------------|----------------|
| Designation               | EG X80CLC      |
| Nominal Voltage/Frequency | 100 V 50-60 Hz |
| Engineering Number        | 513703084      |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |             |
|------------------------------------|-----------------------------------|-----------------------------------|-------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |             |
| 2 Refrigerant                      | R-600a                            |                                   |             |
| 3 Nominal voltage and frequency    | 100 / 50-60                       | [ 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/Fan                        | 85 to 110 V                       | 90 to 110 V |
| 8.2 LBP (43°C Ambient temperature) | -                                 | -                                 | -           |
| 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                | 11.14          | [cm <sup>3</sup> ] (0.680 cu.in) |
| 2.1 Bore [mm]                 | 26.000         |                                  |
| 2.2 Stroke [mm]               | 21.000         |                                  |
| 3 Lubricant charge            | 280            | [ml] (9.47 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 10.97          | [kg] (24.18 lb.)                 |
| 5 Nitrogen charge             | -              | [kgf/cm <sup>2</sup> ]           |

### C - ELETRICAL DATA

|  |   |                                    |
|--|---|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 100 V 50-60 Hz 1 ~ (Single phase)         |                                    |
| 2 Starting device type                       | PTC                                       |                                    |
| 2.1 Starting device                          | 8EA14C3/8EA21C3/QPS2-*4R7MD3/QPS2-A4R7MD3 |                                    |
| 3 Start capacitor                            | -   | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 20(180)                                   | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM427KFBYY-53                            |                                    |
| 6 Start winding resistance                   | 4.17                                      | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 2.70                                      | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 15.87/14.33                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | 2.19/1.72                                 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | 2.73/2.37                                 | [A] - Measured according to UL 984 |
| 11 Approval boards certification             |   |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |  |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V50Hz |          |     | 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<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] |
| 667                           | 168      | 195 | 110                            | 1.23                             | 2.09   | 6.05                      | 1.52                                   | 1.77  |

|                               |          |     |                                |                                  |  |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V60Hz |          |     | 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<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] |
| 850                           | 214      | 249 | 137                            | 1.35                             | 2.67   | 6.22                      | 1.57                                   | 1.82  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                                |                                       |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@100V50Hz |                            |          | ASHRAE32<br>Static |                                | (Condensing temperature 35°C (+95°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)                     | 389                        | 98       | 114                | 72                             | 0.92                                  | 1.22                       | 5.35                      | 1.35      | 1.57  |
| -30 (-22)                     | 519                        | 131      | 152                | 84                             | 1.01                                  | 1.63                       | 6.16                      | 1.55      | 1.80  |
| -25 (-13)                     | 677                        | 171      | 198                | 96                             | 1.11                                  | 2.12                       | 7.04                      | 1.77      | 2.06  |
| -20 (- 4)                     | 870                        | 219      | 255                | 109                            | 1.22                                  | 2.73                       | 8.04                      | 2.03      | 2.36  |
| -15 (+ 5)                     | 1106                       | 279      | 324                | 121                            | 1.34                                  | 3.48                       | 9.20                      | 2.32      | 2.70  |
| -10 (+14)                     | 1391                       | 351      | 408                | 132                            | 1.45                                  | 4.39                       | 10.57                     | 2.66      | 3.10  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@100V50Hz |                            |          | ASHRAE32<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)                     | 364                        | 92       | 107                | 77                             | 0.95                                   | 1.14                       | 4.76                      | 1.20      | 1.40  |
| -30 (-22)                     | 492                        | 124      | 144                | 89                             | 1.05                                   | 1.54                       | 5.53                      | 1.39      | 1.62  |
| -25 (-13)                     | 649                        | 164      | 190                | 102                            | 1.16                                   | 2.04                       | 6.36                      | 1.60      | 1.86  |
| -20 (- 4)                     | 842                        | 212      | 247                | 115                            | 1.29                                   | 2.65                       | 7.28                      | 1.83      | 2.13  |
| -15 (+ 5)                     | 1079                       | 272      | 316                | 129                            | 1.43                                   | 3.40                       | 8.34                      | 2.10      | 2.44  |
| -10 (+14)                     | 1366                       | 344      | 400                | 142                            | 1.56                                   | 4.31                       | 9.59                      | 2.42      | 2.81  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@100V50Hz |                            | 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)                     | 341                        | 86                 | 100      | 78                          | 0.96                                   | 1.07                    | 4.37                      | 1.10     | 1.28      |       |
| -30 (-22)                     | 461                        | 116                | 135      | 91                          | 1.07                                   | 1.45                    | 5.07                      | 1.28     | 1.48      |       |
| -25 (-13)                     | 611                        | 154                | 179      | 105                         | 1.20                                   | 1.92                    | 5.79                      | 1.46     | 1.70      |       |
| -20 (- 4)                     | 798                        | 201                | 234      | 121                         | 1.35                                   | 2.51                    | 6.60                      | 1.66     | 1.93      |       |
| -15 (+ 5)                     | 1030                       | 260                | 302      | 137                         | 1.50                                   | 3.24                    | 7.52                      | 1.90     | 2.20      |       |
| -10 (+14)                     | 1314                       | 331                | 385      | 152                         | 1.67                                   | 4.15                    | 8.61                      | 2.17     | 2.52      |       |

| TEST CONDITIONS:<br>@100V50Hz |                            | 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)                     | 318                        | 80                 | 93       | 76                          | 0.94                                   | 1.00                    | 4.14                      | 1.04     | 1.21      |       |
| -30 (-22)                     | 424                        | 107                | 124      | 91                          | 1.06                                   | 1.33                    | 4.72                      | 1.19     | 1.38      |       |
| -25 (-13)                     | 562                        | 142                | 165      | 107                         | 1.21                                   | 1.76                    | 5.31                      | 1.34     | 1.56      |       |
| -20 (- 4)                     | 738                        | 186                | 216      | 125                         | 1.38                                   | 2.32                    | 5.95                      | 1.50     | 1.74      |       |
| -15 (+ 5)                     | 960                        | 242                | 281      | 143                         | 1.57                                   | 3.02                    | 6.69                      | 1.69     | 1.96      |       |
| -10 (+14)                     | 1234                       | 311                | 362      | 162                         | 1.76                                   | 3.90                    | 7.58                      | 1.91     | 2.22      |       |

| TEST CONDITIONS:<br>@100V60Hz |                            | ASHRAE32<br>Static |          |                             | (Condensing temperature 35°C (+95°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)                     | 469                        | 118                | 137      | 85                          | 0.85                                  | 1.47                    | 5.52                      | 1.39     | 1.62      |       |
| -30 (-22)                     | 615                        | 155                | 180      | 98                          | 0.98                                  | 1.93                    | 6.26                      | 1.58     | 1.83      |       |
| -25 (-13)                     | 787                        | 198                | 231      | 111                         | 1.11                                  | 2.47                    | 7.10                      | 1.79     | 2.08      |       |
| -20 (- 4)                     | 996                        | 251                | 292      | 124                         | 1.25                                  | 3.13                    | 8.04                      | 2.03     | 2.36      |       |
| -15 (+ 5)                     | 1250                       | 315                | 366      | 137                         | 1.39                                  | 3.93                    | 9.10                      | 2.29     | 2.67      |       |
| -10 (+14)                     | 1561                       | 393                | 457      | 152                         | 1.53                                  | 4.92                    | 10.26                     | 2.59     | 3.01      |       |

| TEST CONDITIONS:<br>@100V60Hz |                            | 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)                     | 458                        | 115                | 134      | 93                          | 0.93                                   | 1.43                    | 4.96                      | 1.25     | 1.45      |       |
| -30 (-22)                     | 609                        | 153                | 178      | 107                         | 1.07                                   | 1.91                    | 5.68                      | 1.43     | 1.66      |       |
| -25 (-13)                     | 786                        | 198                | 230      | 121                         | 1.22                                   | 2.47                    | 6.49                      | 1.64     | 1.90      |       |
| -20 (- 4)                     | 999                        | 252                | 293      | 135                         | 1.37                                   | 3.14                    | 7.40                      | 1.86     | 2.17      |       |
| -15 (+ 5)                     | 1257                       | 317                | 368      | 149                         | 1.53                                   | 3.96                    | 8.41                      | 2.12     | 2.46      |       |
| -10 (+14)                     | 1571                       | 396                | 460      | 165                         | 1.68                                   | 4.95                    | 9.52                      | 2.40     | 2.79      |       |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@100V60Hz |       | 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) | 418                        | 105      | 123 | 92                                      | 0.93                          | 1.31                    | 4.54                      | 1.14      | 1.33  |
| -30                           | (-22) | 574                        | 145      | 168 | 110                                     | 1.11                          | 1.80                    | 5.17                      | 1.30      | 1.52  |
| -25                           | (-13) | 755                        | 190      | 221 | 128                                     | 1.29                          | 2.37                    | 5.90                      | 1.49      | 1.73  |
| -20                           | (- 4) | 971                        | 245      | 285 | 145                                     | 1.47                          | 3.05                    | 6.72                      | 1.69      | 1.97  |
| -15                           | (+ 5) | 1233                       | 311      | 361 | 162                                     | 1.66                          | 3.88                    | 7.63                      | 1.92      | 2.24  |
| -10                           | (+14) | 1549                       | 390      | 454 | 180                                     | 1.85                          | 4.89                    | 8.63                      | 2.18      | 2.53  |

| TEST CONDITIONS:<br>@100V60Hz |       | 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) | 350                        | 88       | 102 | 83                                      | 0.85                          | 1.10                    | 4.24                      | 1.07      | 1.24  |
| -30                           | (-22) | 510                        | 128      | 149 | 107                                     | 1.08                          | 1.60                    | 4.75                      | 1.20      | 1.39  |
| -25                           | (-13) | 694                        | 175      | 203 | 130                                     | 1.31                          | 2.18                    | 5.33                      | 1.34      | 1.56  |
| -20                           | (- 4) | 914                        | 230      | 268 | 152                                     | 1.55                          | 2.87                    | 6.00                      | 1.51      | 1.76  |
| -15                           | (+ 5) | 1178                       | 297      | 345 | 174                                     | 1.79                          | 3.71                    | 6.75                      | 1.70      | 1.98  |
| -10                           | (+14) | 1496                       | 377      | 438 | 197                                     | 2.03                          | 4.72                    | 7.59                      | 1.91      | 2.22  |

### 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                  |      |                          |