

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG X90HLC       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513703050       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-134a                            |                                   |           |
| 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 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 255 V                      | -         |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -         |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -         |
| 9 Maximum condensing temperature   |                                   |                                   |           |
| 9.1 Operating                      | 14.2                              | [kgf/cm <sup>2</sup> ] (202 psig) | / °C - °F |
| 9.2 Peak                           | 15.9                              | [kgf/cm <sup>2</sup> ] (226 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1/4+          | [hp]                                       |
| 2 Displacement                | 7.15          | [cm <sup>3</sup> ] (0.436 cu.in)           |
| 2.1 Bore [mm]                 | 22.500        |  |
| 2.2 Stroke [mm]               | 18.000        |  |
| 3 Lubricant charge            | 230           | [ml] (7.78 fl.oz)                          |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 |  |
| 4 Weight (with oil charge)    | 11.3          | [kg] (24.91 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 | 220-240 V 50 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | TSD                                |                                    |
| 2.1 Starting device                          | TSD-220V0.6                        |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 4(350)                             | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM283KFBYY-53                     |                                    |
| 6 Start winding resistance                   | 20.62                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 16.42                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 5.83                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | 0.98                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | 1.19                               | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - UKCA - 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<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] |
| 763                           | 192      | 224 | 126                            | 0.60                             | 4.34   | 6.06                      | 1.53                                   | 1.78  |

### E - PERFORMANCE - CURVES

|                               |       |                            |          |     |                                |  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       | 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) | 434                        | 109      | 127 | 78                             | 0.39                                   | 2.46                       | 5.55                      | 1.40      | 1.63  |
| -30                           | (-22) | 572                        | 144      | 167 | 90                             | 0.45                                   | 3.24                       | 6.38                      | 1.61      | 1.87  |
| -25                           | (-13) | 746                        | 188      | 219 | 102                            | 0.50                                   | 4.24                       | 7.33                      | 1.85      | 2.15  |
| -20                           | (- 4) | 967                        | 244      | 283 | 115                            | 0.55                                   | 5.50                       | 8.42                      | 2.12      | 2.47  |
| -15                           | (+ 5) | 1242                       | 313      | 364 | 128                            | 0.61                                   | 7.09                       | 9.65                      | 2.43      | 2.83  |
| -10                           | (+14) | 1581                       | 398      | 463 | 143                            | 0.67                                   | 9.06                       | 11.04                     | 2.78      | 3.23  |

|                               |       |                            |          |     |                                |   |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       | 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) | 410                        | 103      | 120 | 83                             | 0.41                                    | 2.32                       | 4.96                      | 1.25      | 1.45  |
| -30                           | (-22) | 553                        | 139      | 162 | 98                             | 0.48                                    | 3.14                       | 5.69                      | 1.43      | 1.67  |
| -25                           | (-13) | 727                        | 183      | 213 | 112                            | 0.54                                    | 4.13                       | 6.49                      | 1.64      | 1.90  |
| -20                           | (- 4) | 939                        | 237      | 275 | 127                            | 0.61                                    | 5.35                       | 7.37                      | 1.86      | 2.16  |
| -15                           | (+ 5) | 1199                       | 302      | 351 | 143                            | 0.68                                    | 6.84                       | 8.34                      | 2.10      | 2.44  |
| -10                           | (+14) | 1515                       | 382      | 444 | 161                            | 0.76                                    | 8.68                       | 9.40                      | 2.37      | 2.76  |

|                               |       |                            |          |     |                                |   |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       | ASHRAE32<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) | 358                        | 90       | 105 | 82                             | 0.40                                    | 2.03                       | 4.36                      | 1.10      | 1.28  |
| -30                           | (-22) | 510                        | 129      | 150 | 101                            | 0.49                                    | 2.89                       | 5.02                      | 1.26      | 1.47  |
| -25                           | (-13) | 685                        | 173      | 201 | 120                            | 0.57                                    | 3.89                       | 5.69                      | 1.43      | 1.67  |
| -20                           | (- 4) | 891                        | 225      | 261 | 139                            | 0.66                                    | 5.07                       | 6.39                      | 1.61      | 1.87  |
| -15                           | (+ 5) | 1137                       | 287      | 333 | 160                            | 0.75                                    | 6.49                       | 7.12                      | 1.79      | 2.09  |
| -10                           | (+14) | 1433                       | 361      | 420 | 182                            | 0.85                                    | 8.21                       | 7.89                      | 1.99      | 2.31  |

### E - PERFORMANCE - CURVES

| 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) | 280                        | 71       | 82  | 75                                      | 0.37                          | 1.58                    | 3.72                      | 0.94      | 1.09  |
| -30                           | (-22) | 442                        | 111      | 130 | 100                                     | 0.48                          | 2.51                    | 4.34                      | 1.09      | 1.27  |
| -25                           | (-13) | 620                        | 156      | 182 | 125                                     | 0.60                          | 3.52                    | 4.91                      | 1.24      | 1.44  |
| -20                           | (- 4) | 822                        | 207      | 241 | 151                                     | 0.72                          | 4.68                    | 5.46                      | 1.37      | 1.60  |
| -15                           | (+ 5) | 1057                       | 266      | 310 | 178                                     | 0.84                          | 6.03                    | 5.98                      | 1.51      | 1.75  |
| -10                           | (+14) | 1334                       | 336      | 391 | 207                                     | 0.97                          | 7.64                    | 6.49                      | 1.63      | 1.90  |

### 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                  |      |                          |