

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG U70HLC       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513700087       |

### 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/Fan                        | -                                 | 94 to 140 V |
| 8.2 LBP (43°C Ambient temperature)         | Static/Fan                        | -                                 | 94 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            | 280           | [ml] (9.47 fl.oz.)                         |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 |  |
| 4 Weight (with oil charge)    | 11.14         | [kg] (24.56 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                       | PTC                                |                                    |
| 2.1 Starting device                          | 5SP04X427N/5SP14X427N              |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 20(180)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM427NFBYY-53                     |                                    |
| 6 Start winding resistance                   | 3.50                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 3.80                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 11.50                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 2.00                               | [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<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] |
| 700                           | 176      | 205 | 126                            | 1.10                             | 3.98   | 5.56                      | 1.40                                   | 1.63  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 366                        | 92       | 107                | 85                             | 0.79                                   | 2.07                       | 4.28                      | 1.08      | 1.25  |
| -30 (-22)                     | 530                        | 133      | 155                | 102                            | 0.92                                   | 3.00                       | 5.22                      | 1.31      | 1.53  |
| -25 (-13)                     | 722                        | 182      | 212                | 119                            | 1.06                                   | 4.10                       | 6.10                      | 1.54      | 1.79  |
| -20 (- 4)                     | 954                        | 240      | 280                | 136                            | 1.21                                   | 5.43                       | 7.02                      | 1.77      | 2.06  |
| -15 (+ 5)                     | 1238                       | 312      | 363                | 153                            | 1.36                                   | 7.07                       | 8.06                      | 2.03      | 2.36  |
| -10 (+14)                     | 1585                       | 399      | 464                | 170                            | 1.52                                   | 9.08                       | 9.30                      | 2.34      | 2.73  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 286                        | 72       | 84                 | 82                             | 0.75                                   | 1.62                       | 3.49                      | 0.88      | 1.02  |
| -30 (-22)                     | 446                        | 112      | 131                | 100                            | 0.90                                   | 2.53                       | 4.47                      | 1.13      | 1.31  |
| -25 (-13)                     | 628                        | 158      | 184                | 119                            | 1.06                                   | 3.56                       | 5.29                      | 1.33      | 1.55  |
| -20 (- 4)                     | 844                        | 213      | 247                | 140                            | 1.23                                   | 4.80                       | 6.04                      | 1.52      | 1.77  |
| -15 (+ 5)                     | 1105                       | 279      | 324                | 162                            | 1.41                                   | 6.31                       | 6.81                      | 1.72      | 2.00  |
| -10 (+14)                     | 1424                       | 359      | 417                | 185                            | 1.61                                   | 8.16                       | 7.67                      | 1.93      | 2.25  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | ASHRAE32<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)                     | 185                        | 47       | 54                 | 67                             | 0.71                                   | 1.05                       | 2.74                      | 0.69      | 0.80  |
| -30 (-22)                     | 349                        | 88       | 102                | 87                             | 0.87                                   | 1.98                       | 3.91                      | 0.99      | 1.15  |
| -25 (-13)                     | 529                        | 133      | 155                | 109                            | 1.05                                   | 3.01                       | 4.82                      | 1.21      | 1.41  |
| -20 (- 4)                     | 738                        | 186      | 216                | 134                            | 1.24                                   | 4.20                       | 5.56                      | 1.40      | 1.63  |
| -15 (+ 5)                     | 987                        | 249      | 289                | 160                            | 1.45                                   | 5.63                       | 6.20                      | 1.56      | 1.82  |
| -10 (+14)                     | 1287                       | 324      | 377                | 189                            | 1.69                                   | 7.37                       | 6.83                      | 1.72      | 2.00  |

### 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           | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-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                  |      |                          |