

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG Y100HLP      |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513700142       |

### 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                            | 85 to 110 V                       | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature)         | Static                            | 85 to 110 V                       | 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      | 1/3           | [hp]                                       |
| 2 Displacement                | 8.59          | [cm <sup>3</sup> ] (0.524 cu.in)           |
| 2.1 Bore [mm]                 | 24.000        |  |
| 2.2 Stroke [mm]               | 19.000        |  |
| 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)    | 11.27         | [kg] (24.85 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                          | 8EA14C3/8EA1B3/8EA21C3/8EA3B3/8EA4B3 |                                    |
| 3 Start capacitor                            | -                                    | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 15(180)                              | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM445NFBYY-53                       |                                    |
| 6 Start winding resistance                   | 5.90                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 2.75                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 17.00                                | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 2.70                                 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz)      | -                                    | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | TUV - 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] |
| 1061                          | 267      | 311 | 190                            | 1.74                             | 6.03   | 5.60                      | 1.41                                   | 1.64  |

### 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)                     | 571                        | 144      | 167                | 127                            | 1.24                                   | 3.23                       | 4.47                      | 1.13      | 1.31  |
| -30 (-22)                     | 803                        | 202      | 235                | 150                            | 1.44                                   | 4.55                       | 5.35                      | 1.35      | 1.57  |
| -25 (-13)                     | 1070                       | 270      | 314                | 173                            | 1.63                                   | 6.08                       | 6.20                      | 1.56      | 1.82  |
| -20 (- 4)                     | 1383                       | 349      | 405                | 197                            | 1.83                                   | 7.87                       | 7.04                      | 1.77      | 2.06  |
| -15 (+ 5)                     | 1752                       | 442      | 513                | 222                            | 2.04                                   | 10.00                      | 7.90                      | 1.99      | 2.31  |
| -10 (+14)                     | 2187                       | 551      | 641                | 248                            | 2.28                                   | 12.53                      | 8.80                      | 2.22      | 2.58  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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)                     | 475                        | 120      | 139                | 122                            | 1.18                                   | 2.69                       | 3.91                      | 0.99      | 1.15  |
| -30 (-22)                     | 703                        | 177      | 206                | 149                            | 1.42                                   | 3.98                       | 4.71                      | 1.19      | 1.38  |
| -25 (-13)                     | 967                        | 244      | 283                | 177                            | 1.66                                   | 5.49                       | 5.46                      | 1.38      | 1.60  |
| -20 (- 4)                     | 1278                       | 322      | 375                | 207                            | 1.90                                   | 7.27                       | 6.19                      | 1.56      | 1.81  |
| -15 (+ 5)                     | 1645                       | 415      | 482                | 238                            | 2.16                                   | 9.39                       | 6.92                      | 1.74      | 2.03  |
| -10 (+14)                     | 2079                       | 524      | 609                | 270                            | 2.44                                   | 11.91                      | 7.68                      | 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)                     | 399                        | 100      | 117                | 113                            | 1.11                                   | 2.26                       | 3.53                      | 0.89      | 1.03  |
| -30 (-22)                     | 620                        | 156      | 182                | 144                            | 1.40                                   | 3.51                       | 4.28                      | 1.08      | 1.25  |
| -25 (-13)                     | 879                        | 221      | 257                | 177                            | 1.68                                   | 4.99                       | 4.97                      | 1.25      | 1.46  |
| -20 (- 4)                     | 1184                       | 298      | 347                | 211                            | 1.98                                   | 6.74                       | 5.62                      | 1.42      | 1.65  |
| -15 (+ 5)                     | 1548                       | 390      | 453                | 247                            | 2.28                                   | 8.83                       | 6.26                      | 1.58      | 1.83  |
| -10 (+14)                     | 1978                       | 498      | 580                | 286                            | 2.61                                   | 11.33                      | 6.91                      | 1.74      | 2.02  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal EG/F/AMEM version 2 |      |                          |
| 2 Tray holder           | No                            |      |                          |
| 3 Connectors            |                               |      |                          |
| 3.1 SUCTION             | 8.2 +0.12/-0.08               | [mm] | (0.323" +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                  |      |                          |