

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG Y70HLP       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513700161       |

### 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                               | RSIR                              |                                   |              |
| 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                            | -                                 | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature)         | Static                            | -                                 | 103 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                | 5.96          | [cm <sup>3</sup> ] (0.364 cu.in)           |
| 2.1 Bore [mm]                 | 22.500        |  |
| 2.2 Stroke [mm]               | 15.000        |  |
| 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)    | 11.3          | [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 | 115-127 V 60 Hz 1 ~ (Single phase)   |                                    |
| 2 Starting device type                       | PTC                                  |                                    |
| 2.1 Starting device                          | 8EA14C1/8EA1B1/8EA21C1/8EA3B1/8EA4B1 |                                    |
| 3 Start capacitor                            | -                                    | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                    | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM319RFBYY-53                       |                                    |
| 6 Start winding resistance                   | 6.25                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 4.40                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 10.00                                | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 1.80                                 | [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] |
| 685                           | 173      | 201 | 128                            | 1.48                             | 3.89   | 5.33                      | 1.34                                   | 1.56  |

### 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)                     | 368                        | 93       | 108                | 85                             | 1.20                                   | 2.08                       | 4.34                      | 1.09      | 1.27  |
| -30 (-22)                     | 508                        | 128      | 149                | 102                            | 1.32                                   | 2.88                       | 5.02                      | 1.27      | 1.47  |
| -25 (-13)                     | 683                        | 172      | 200                | 118                            | 1.43                                   | 3.88                       | 5.81                      | 1.46      | 1.70  |
| -20 (- 4)                     | 900                        | 227      | 264                | 135                            | 1.55                                   | 5.12                       | 6.66                      | 1.68      | 1.95  |
| -15 (+ 5)                     | 1166                       | 294      | 342                | 154                            | 1.69                                   | 6.66                       | 7.55                      | 1.90      | 2.21  |
| -10 (+14)                     | 1487                       | 375      | 436                | 175                            | 1.87                                   | 8.52                       | 8.44                      | 2.13      | 2.47  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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)                     | 300                        | 76       | 88                 | 83                             | 1.19                                   | 1.70                       | 3.63                      | 0.92      | 1.06  |
| -30 (-22)                     | 443                        | 112      | 130                | 103                            | 1.32                                   | 2.51                       | 4.32                      | 1.09      | 1.27  |
| -25 (-13)                     | 618                        | 156      | 181                | 122                            | 1.45                                   | 3.51                       | 5.07                      | 1.28      | 1.48  |
| -20 (- 4)                     | 831                        | 209      | 243                | 142                            | 1.60                                   | 4.73                       | 5.84                      | 1.47      | 1.71  |
| -15 (+ 5)                     | 1088                       | 274      | 319                | 164                            | 1.77                                   | 6.21                       | 6.61                      | 1.67      | 1.94  |
| -10 (+14)                     | 1397                       | 352      | 409                | 190                            | 1.98                                   | 8.00                       | 7.35                      | 1.85      | 2.15  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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)                     | 239                        | 60       | 70                 | 76                             | 1.15                                   | 1.35                       | 3.12                      | 0.79      | 0.91  |
| -30 (-22)                     | 380                        | 96       | 111                | 99                             | 1.30                                   | 2.15                       | 3.80                      | 0.96      | 1.11  |
| -25 (-13)                     | 549                        | 138      | 161                | 122                            | 1.46                                   | 3.12                       | 4.49                      | 1.13      | 1.32  |
| -20 (- 4)                     | 752                        | 190      | 220                | 146                            | 1.63                                   | 4.28                       | 5.18                      | 1.31      | 1.52  |
| -15 (+ 5)                     | 997                        | 251      | 292                | 172                            | 1.84                                   | 5.69                       | 5.82                      | 1.47      | 1.71  |
| -10 (+14)                     | 1288                       | 325      | 378                | 203                            | 2.09                                   | 7.38                       | 6.38                      | 1.61      | 1.87  |

### 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           | 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                  |      |                          |