

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG Y90HLP       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513700159       |

### 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      | 1/4+         | [hp]                                       |
| 2 Displacement                | 7.55         | [cm <sup>3</sup> ] (0.461 cu.in)           |
| 2.1 Bore [mm]                 | 22.500       |  |
| 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 / ISO7 |  |
| 4 Weight (with oil charge)    | 11.34        | [kg] (25.00 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                       | Combo                              |                                    |
| 2.1 Starting device                          | 3ARR51D4A/3ARR55D4A                |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 20(180)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 3ARR55D4A                          |                                    |
| 6 Start winding resistance                   | 6.05                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 2.95                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 15.10                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 2.40                               | [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 consumption<br>+/- 5% | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5%                            | EFFICIENCY RATE<br>+/- 7% |  |       |
| [Btu/h]                       | [kcal/h] | [W] | [W]                         | [A]                           | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                              | [W/W] |
| 950                           | 239      | 278 | 168                         | 1.53                          | 5.40   | 5.65                      | 1.42                                   | 1.66  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 520                        | 131      | 152                | 113                         | 1.09                                   | 2.94                    | 4.59                      | 1.16      | 1.34  |
| -30 (-22)                     | 729                        | 184      | 213                | 132                         | 1.25                                   | 4.13                    | 5.47                      | 1.38      | 1.60  |
| -25 (-13)                     | 963                        | 243      | 282                | 152                         | 1.42                                   | 5.47                    | 6.31                      | 1.59      | 1.85  |
| -20 (- 4)                     | 1235                       | 311      | 362                | 173                         | 1.59                                   | 7.03                    | 7.15                      | 1.80      | 2.10  |
| -15 (+ 5)                     | 1558                       | 393      | 456                | 194                         | 1.77                                   | 8.89                    | 8.03                      | 2.02      | 2.35  |
| -10 (+14)                     | 1943                       | 490      | 569                | 216                         | 1.96                                   | 11.13                   | 8.99                      | 2.27      | 2.64  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 453                        | 114      | 133                | 114                         | 1.08                                   | 2.56                    | 3.98                      | 1.00      | 1.17  |
| -30 (-22)                     | 647                        | 163      | 190                | 135                         | 1.26                                   | 3.67                    | 4.77                      | 1.20      | 1.40  |
| -25 (-13)                     | 873                        | 220      | 256                | 158                         | 1.44                                   | 4.96                    | 5.52                      | 1.39      | 1.62  |
| -20 (- 4)                     | 1142                       | 288      | 335                | 182                         | 1.64                                   | 6.50                    | 6.26                      | 1.58      | 1.84  |
| -15 (+ 5)                     | 1468                       | 370      | 430                | 208                         | 1.86                                   | 8.38                    | 7.05                      | 1.78      | 2.07  |
| -10 (+14)                     | 1861                       | 469      | 545                | 235                         | 2.09                                   | 10.66                   | 7.92                      | 1.99      | 2.32  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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)                     | 409                        | 103      | 120                | 111                         | 1.06                                   | 2.31                    | 3.67                      | 0.92      | 1.08  |
| -30 (-22)                     | 578                        | 146      | 169                | 134                         | 1.25                                   | 3.28                    | 4.34                      | 1.09      | 1.27  |
| -25 (-13)                     | 784                        | 198      | 230                | 159                         | 1.45                                   | 4.45                    | 4.96                      | 1.25      | 1.45  |
| -20 (- 4)                     | 1039                       | 262      | 305                | 187                         | 1.69                                   | 5.91                    | 5.58                      | 1.41      | 1.64  |
| -15 (+ 5)                     | 1356                       | 342      | 397                | 217                         | 1.94                                   | 7.74                    | 6.24                      | 1.57      | 1.83  |
| -10 (+14)                     | 1746                       | 440      | 511                | 249                         | 2.23                                   | 10.00                   | 6.98                      | 1.76      | 2.05  |

### 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                  |      |                          |