

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EG ZS60HLP      |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513701002       |

### 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                            | -                                 | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature)         | Static                            | -                                 | 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      | 1/5          | [hp]                                       |
| 2 Displacement                | 5.09         | [cm <sup>3</sup> ] (0.311 cu.in)           |
| 2.1 Bore [mm]                 | 22.500       |  |
| 2.2 Stroke [mm]               | 12.800       |  |
| 3 Lubricant charge            | 230          | [ml] (7.78 fl.oz.)                         |
| 3.1 Lubricants approved       |              |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 |  |
| 4 Weight (with oil charge)    | 11.21        | [kg] (24.71 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                       | TSD                                |                                    |
| 2.1 Starting device                          | TSD- 115V                          |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 12(180)/15(200)/20(200)            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM427KFBYY-53                     |                                    |
| 6 Start winding resistance                   | 6.00                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 5.15                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | -                                  | [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] |
| 610                           | 154      | 179 | 101                            | 0.91                             | 3.47   | 6.05                      | 1.52                                   | 1.77  |

### 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] |
| -35                           | (-31)                      | 314                | 79      | 92                             | 67                               | 0.61                                   | 1.78                      | 4.73   | 1.19     | 1.38      |
| -30                           | (-22)                      | 423                | 107     | 124                            | 80                               | 0.72                                   | 2.40                      | 5.41   | 1.36     | 1.58      |
| -25                           | (-13)                      | 600                | 151     | 176                            | 95                               | 0.86                                   | 3.41                      | 6.30   | 1.59     | 1.85      |
| -20                           | (- 4)                      | 833                | 210     | 244                            | 113                              | 1.01                                   | 4.74                      | 7.37   | 1.86     | 2.16      |
| -15                           | (+ 5)                      | 1109               | 280     | 325                            | 129                              | 1.16                                   | 6.33                      | 8.58   | 2.16     | 2.51      |
| -10                           | (+14)                      | 1417               | 357     | 415                            | 144                              | 1.28                                   | 8.12                      | 9.89   | 2.49     | 2.90      |

|                               |                            |                    |         |                                |                                  |  |                           |        |          |           |
|-------------------------------|----------------------------|--------------------|---------|--------------------------------|----------------------------------|--|---------------------------|--------|----------|-----------|
| 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] |
| -35                           | (-31)                      | 249                | 63      | 73                             | 59                               | 0.55                                   | 1.41                      | 4.13   | 1.04     | 1.21      |
| -30                           | (-22)                      | 358                | 90      | 105                            | 74                               | 0.68                                   | 2.03                      | 4.84   | 1.22     | 1.42      |
| -25                           | (-13)                      | 533                | 134     | 156                            | 94                               | 0.84                                   | 3.02                      | 5.67   | 1.43     | 1.66      |
| -20                           | (- 4)                      | 762                | 192     | 223                            | 115                              | 1.03                                   | 4.33                      | 6.59   | 1.66     | 1.93      |
| -15                           | (+ 5)                      | 1032               | 260     | 303                            | 137                              | 1.22                                   | 5.89                      | 7.55   | 1.90     | 2.21      |
| -10                           | (+14)                      | 1332               | 336     | 390                            | 157                              | 1.40                                   | 7.63                      | 8.52   | 2.15     | 2.50      |

|                               |                            |                    |         |                                |                                  |  |                           |        |          |           |
|-------------------------------|----------------------------|--------------------|---------|--------------------------------|----------------------------------|--|---------------------------|--------|----------|-----------|
| 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] |
| -35                           | (-31)                      | 155                | 39      | 45                             | 53                               | 0.50                                   | 0.88                      | 2.97   | 0.75     | 0.87      |
| -30                           | (-22)                      | 267                | 67      | 78                             | 70                               | 0.64                                   | 1.51                      | 3.89   | 0.98     | 1.14      |
| -25                           | (-13)                      | 444                | 112     | 130                            | 91                               | 0.82                                   | 2.52                      | 4.84   | 1.22     | 1.42      |
| -20                           | (- 4)                      | 673                | 170     | 197                            | 116                              | 1.04                                   | 3.83                      | 5.78   | 1.46     | 1.69      |
| -15                           | (+ 5)                      | 942                | 237     | 276                            | 142                              | 1.26                                   | 5.38                      | 6.67   | 1.68     | 1.95      |
| -10                           | (+14)                      | 1239               | 312     | 363                            | 167                              | 1.50                                   | 7.10                      | 7.47   | 1.88     | 2.19      |

### 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                  |      |                          |