

### COMPRESSOR DEFINITION

|                           |                    |
|---------------------------|--------------------|
| Designation               | EG ZS100HLC        |
| Nominal Voltage/Frequency | 220-240 V 50-60 Hz |
| Engineering Number        | 513701175          |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |              |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |              |
| 2 Refrigerant                      | R-134a                            |                                   |              |
| 3 Nominal voltage and frequency    | 220-240 / 50-60                   | [ 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                            | 198 to 255 V                      | 198 to 255 V |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 255 V                      | 198 to 255 V |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -            |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -            |
| 9 Maximum condensing temperature   |                                   |                                   |              |
| 9.1 Operating                      | 14.2                              | [kgf/cm <sup>2</sup> ] (202 psig) | / °C - °F    |
| 9.2 Peak                           | 15.9                              | [kgf/cm <sup>2</sup> ] (226 psig) | / °C - °F    |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |              |

### B - MECHANICAL DATA

|                               |              |  |
|-------------------------------|--------------|--|
| 1 Commercial designation      | 1/3          | [hp]                                       |
| 2 Displacement                | 7.95         | [cm <sup>3</sup> ] (0.485 cu.in)           |
| 2.1 Bore [mm]                 | 22.500       |  |
| 2.2 Stroke [mm]               | 20.000       |  |
| 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)    | 11.23        | [kg] (24.76 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 | 220-240 V 50-60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | PTC                                   |                                    |
| 2.1 Starting device                          | 5SP17X302K                            |                                    |
| 3 Start capacitor                            | -                                     | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 4(380)                                | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 5SP17X302KFX                          |                                    |
| 6 Start winding resistance                   | 25.08                                 | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 9.84                                  | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 9.85/8.85                             | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | -                                     | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | -                                     | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - IRAM - NOM - UKCA - VDE          |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |  |                           |  |       |  |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| TEST CONDITIONS:<br>@220V50Hz |          |     | 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] |  |
| 855                           | 215      | 251 | 143                            | 0.79                             | 4.86   | 5.99                      | 1.51                                   | 1.76  |  |

|                               |          |     |                                |                                  |  |                           |  |       |  |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| TEST CONDITIONS:<br>@220V60Hz |          |     | 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] |  |
| 1050                          | 265      | 308 | 171                            | 0.80                             | 5.97   | 6.15                      | 1.55                                   | 1.80  |  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                    |     |                                |  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | 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) | 442                        | 111                | 129 | 96                             | 0.55                                   | 2.50                       | 4.60                      | 1.16      | 1.35  |
| -30                           | (-22) | 620                        | 156                | 182 | 113                            | 0.64                                   | 3.52                       | 5.51                      | 1.39      | 1.61  |
| -25                           | (-13) | 828                        | 209                | 242 | 131                            | 0.73                                   | 4.70                       | 6.36                      | 1.60      | 1.86  |
| -20                           | (- 4) | 1074                       | 271                | 315 | 149                            | 0.82                                   | 6.11                       | 7.20                      | 1.82      | 2.11  |
| -15                           | (+ 5) | 1369                       | 345                | 401 | 169                            | 0.93                                   | 7.82                       | 8.08                      | 2.04      | 2.37  |
| -10                           | (+14) | 1724                       | 434                | 505 | 190                            | 1.04                                   | 9.88                       | 9.05                      | 2.28      | 2.65  |

|                               |       |                            |                    |     |                                |  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | 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) | 362                        | 91                 | 106 | 92                             | 0.53                                   | 2.05                       | 3.94                      | 0.99      | 1.16  |
| -30                           | (-22) | 554                        | 140                | 162 | 113                            | 0.64                                   | 3.14                       | 4.87                      | 1.23      | 1.43  |
| -25                           | (-13) | 769                        | 194                | 225 | 135                            | 0.75                                   | 4.36                       | 5.69                      | 1.43      | 1.67  |
| -20                           | (- 4) | 1016                       | 256                | 298 | 158                            | 0.87                                   | 5.78                       | 6.46                      | 1.63      | 1.89  |
| -15                           | (+ 5) | 1306                       | 329                | 383 | 181                            | 0.99                                   | 7.45                       | 7.20                      | 1.82      | 2.11  |
| -10                           | (+14) | 1648                       | 415                | 483 | 206                            | 1.13                                   | 9.44                       | 7.99                      | 2.01      | 2.34  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |                            | 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] |
| -35                           | (-31)                      | 263                | 66      | 77                          | 78                                     | 0.46                    | 1.49                      | 3.40   | 0.86     | 1.00      |
| -30                           | (-22)                      | 471                | 119     | 138                         | 106                                    | 0.61                    | 2.67                      | 4.34   | 1.09     | 1.27      |
| -25                           | (-13)                      | 695                | 175     | 204                         | 134                                    | 0.76                    | 3.94                      | 5.13   | 1.29     | 1.50      |
| -20                           | (- 4)                      | 945                | 238     | 277                         | 163                                    | 0.91                    | 5.38                      | 5.81   | 1.46     | 1.70      |
| -15                           | (+ 5)                      | 1231               | 310     | 361                         | 192                                    | 1.07                    | 7.03                      | 6.43   | 1.62     | 1.88      |
| -10                           | (+14)                      | 1564               | 394     | 458                         | 223                                    | 1.23                    | 8.96                      | 7.03   | 1.77     | 2.06      |

| TEST CONDITIONS:<br>@220V60Hz |                            | 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] |
| -35                           | (-31)                      | 543                | 137     | 159                         | 115                                    | 0.55                    | 3.07                      | 4.73   | 1.19     | 1.39      |
| -30                           | (-22)                      | 762                | 192     | 223                         | 135                                    | 0.64                    | 4.32                      | 5.67   | 1.43     | 1.66      |
| -25                           | (-13)                      | 1017               | 256     | 298                         | 156                                    | 0.74                    | 5.77                      | 6.54   | 1.65     | 1.92      |
| -20                           | (- 4)                      | 1319               | 332     | 387                         | 178                                    | 0.83                    | 7.51                      | 7.41   | 1.87     | 2.17      |
| -15                           | (+ 5)                      | 1682               | 424     | 493                         | 202                                    | 0.94                    | 9.60                      | 8.31   | 2.09     | 2.43      |
| -10                           | (+14)                      | 2117               | 534     | 620                         | 227                                    | 1.05                    | 12.13                     | 9.29   | 2.34     | 2.72      |

| TEST CONDITIONS:<br>@220V60Hz |                            | 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] |
| -35                           | (-31)                      | 445                | 112     | 130                         | 110                                    | 0.53                    | 2.52                      | 4.05   | 1.02     | 1.19      |
| -30                           | (-22)                      | 681                | 172     | 200                         | 136                                    | 0.64                    | 3.86                      | 5.01   | 1.26     | 1.47      |
| -25                           | (-13)                      | 945                | 238     | 277                         | 162                                    | 0.76                    | 5.36                      | 5.85   | 1.47     | 1.71      |
| -20                           | (- 4)                      | 1248               | 314     | 366                         | 189                                    | 0.88                    | 7.10                      | 6.63   | 1.67     | 1.94      |
| -15                           | (+ 5)                      | 1604               | 404     | 470                         | 217                                    | 1.01                    | 9.15                      | 7.40   | 1.87     | 2.17      |
| -10                           | (+14)                      | 2024               | 510     | 593                         | 246                                    | 1.14                    | 11.60                     | 8.21   | 2.07     | 2.41      |

| TEST CONDITIONS:<br>@220V60Hz |                            | 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] |
| -35                           | (-31)                      | 323                | 81      | 95                          | 93                                     | 0.46                    | 1.83                      | 3.49   | 0.88     | 1.02      |
| -30                           | (-22)                      | 578                | 146     | 170                         | 127                                    | 0.61                    | 3.28                      | 4.46   | 1.12     | 1.31      |
| -25                           | (-13)                      | 854                | 215     | 250                         | 161                                    | 0.76                    | 4.85                      | 5.27   | 1.33     | 1.55      |
| -20                           | (- 4)                      | 1160               | 292     | 340                         | 195                                    | 0.91                    | 6.60                      | 5.97   | 1.50     | 1.75      |
| -15                           | (+ 5)                      | 1512               | 381     | 443                         | 230                                    | 1.07                    | 8.63                      | 6.61   | 1.66     | 1.94      |
| -10                           | (+14)                      | 1921               | 484     | 563                         | 266                                    | 1.24                    | 11.00                     | 7.23   | 1.82     | 2.12      |

### 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                  |      |                          |