

### 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                          | 8EA17C3/QPS2-A22MD3/QPS2-A22MD3 091   |                                    |
| 3 Start capacitor                            | -                                     | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 5(400)/4(380)                         | [µF(VAC minimum)]                  |
| 5 Motor protection                           | BT104-105                             |                                    |
| 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)  | 1.60/1.38                             | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | 1.90/1.70                             | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - 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] | [W/W] |
| -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] | [W/W] |
| -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] | [W/W] |
| -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] | [W/W] |
| -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                  |      |                          |