

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG ZS70HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513701013 |

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 temperature | | | |
| 9.1 Operating | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/4 | [hp] |
| 2 Displacement | 5.56 | [cm ³] (0.339 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 14.000 | |
| 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) | 10.34 | [kg] (22.80 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (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 | 8EA14C3/8EA21C3/QPS2-A4R7MD3/QPS2-A4R7MD3 094 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180)/15(200)/20(200) | [µF(VAC minimum)] |
| 5 Motor protection | BT127-120 | |
| 6 Start winding resistance | 6.94 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.88 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 11.30 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.70 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 2.07 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - UKCA - UL | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAELBP32 Static | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 54.4°C (129.92°F) | |
| Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 695 | 175 | 204 | 117 | 1.04 | 4.86 | 5.96 | 1.50 | 1.75 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Static | | (Condensing temperature 45°C (+113°F)) | | | | |
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 335 | 85 | 98 | 75 | 0.67 | 1.90 | 4.45 | 1.12 | 1.31 |
| -30 (-22) | 497 | 125 | 146 | 93 | 0.82 | 2.82 | 5.33 | 1.34 | 1.56 |
| -25 (-13) | 700 | 176 | 205 | 111 | 0.98 | 3.97 | 6.26 | 1.58 | 1.83 |
| -20 (- 4) | 938 | 236 | 275 | 130 | 1.15 | 5.34 | 7.24 | 1.83 | 2.12 |
| -15 (+ 5) | 1207 | 304 | 354 | 147 | 1.31 | 6.89 | 8.27 | 2.08 | 2.42 |
| -10 (+14) | 1501 | 378 | 440 | 162 | 1.45 | 8.60 | 9.33 | 2.35 | 2.74 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Static | | (Condensing temperature 55°C (+131°F)) | | | | |
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 286 | 72 | 84 | 67 | 0.61 | 1.62 | 4.30 | 1.08 | 1.26 |
| -30 (-22) | 426 | 107 | 125 | 86 | 0.78 | 2.42 | 4.95 | 1.25 | 1.45 |
| -25 (-13) | 616 | 155 | 180 | 109 | 0.97 | 3.50 | 5.65 | 1.42 | 1.66 |
| -20 (- 4) | 848 | 214 | 249 | 132 | 1.18 | 4.83 | 6.40 | 1.61 | 1.88 |
| -15 (+ 5) | 1119 | 282 | 328 | 155 | 1.39 | 6.39 | 7.20 | 1.81 | 2.11 |
| -10 (+14) | 1422 | 358 | 417 | 177 | 1.59 | 8.15 | 8.03 | 2.02 | 2.35 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | ASHRAE32 Static | | (Condensing temperature 65°C (+149°F)) | | | | |
| Evaporating temperature | Cooling capacity +/- 5% | | | Power consumption +/- 5% | Current consumption +/- 5% | Gas flow rate +/- 5% | EFFICIENCY RATE +/- 7% | | |
| °C (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31) | 224 | 56 | 66 | 60 | 0.55 | 1.27 | 3.74 | 0.94 | 1.10 |
| -30 (-22) | 340 | 86 | 100 | 81 | 0.72 | 1.93 | 4.29 | 1.08 | 1.26 |
| -25 (-13) | 512 | 129 | 150 | 105 | 0.93 | 2.91 | 4.90 | 1.24 | 1.44 |
| -20 (- 4) | 735 | 185 | 215 | 132 | 1.17 | 4.18 | 5.56 | 1.40 | 1.63 |
| -15 (+ 5) | 1004 | 253 | 294 | 159 | 1.43 | 5.73 | 6.26 | 1.58 | 1.83 |
| -10 (+14) | 1313 | 331 | 385 | 187 | 1.69 | 7.52 | 7.00 | 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 | 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 | | |