

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG ZS90HLPW |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513701134 |

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 | 7.15 | [cm ³] (0.436 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 18.000 | |
| 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) | 10.33 | [kg] (22.77 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) | [μF(VAC minimum)] |
| 5 Motor protection | 4TM437NFBYY-53 | |
| 6 Start winding resistance | 7.76 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.23 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 16.20 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.52 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 3.05 | [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] |
| 950 | 239 | 278 | 158 | 1.49 | 5.40 | 6.00 | 1.51 | 1.76 |

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) | 499 | 126 | 146 | 105 | 1.01 | 2.82 | 4.74 | 1.20 | 1.39 |
| -30 (-22) | 704 | 177 | 206 | 125 | 1.18 | 3.99 | 5.63 | 1.42 | 1.65 |
| -25 (-13) | 934 | 235 | 274 | 146 | 1.37 | 5.30 | 6.42 | 1.62 | 1.88 |
| -20 (- 4) | 1205 | 304 | 353 | 168 | 1.58 | 6.86 | 7.20 | 1.81 | 2.11 |
| -15 (+ 5) | 1535 | 387 | 450 | 190 | 1.78 | 8.77 | 8.07 | 2.03 | 2.36 |
| -10 (+14) | 1942 | 489 | 569 | 212 | 1.97 | 11.13 | 9.12 | 2.30 | 2.67 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 412 | 104 | 121 | 100 | 0.98 | 2.33 | 4.14 | 1.04 | 1.21 |
| -30 (-22) | 626 | 158 | 183 | 124 | 1.18 | 3.55 | 5.01 | 1.26 | 1.47 |
| -25 (-13) | 859 | 217 | 252 | 150 | 1.41 | 4.88 | 5.73 | 1.45 | 1.68 |
| -20 (- 4) | 1130 | 285 | 331 | 177 | 1.65 | 6.43 | 6.40 | 1.61 | 1.88 |
| -15 (+ 5) | 1454 | 366 | 426 | 204 | 1.90 | 8.30 | 7.10 | 1.79 | 2.08 |
| -10 (+14) | 1851 | 466 | 542 | 232 | 2.14 | 10.60 | 7.93 | 2.00 | 2.32 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 316 | 80 | 92 | 89 | 0.88 | 1.78 | 3.54 | 0.89 | 1.04 |
| -30 (-22) | 533 | 134 | 156 | 118 | 1.12 | 3.02 | 4.43 | 1.12 | 1.30 |
| -25 (-13) | 765 | 193 | 224 | 149 | 1.39 | 4.34 | 5.13 | 1.29 | 1.50 |
| -20 (- 4) | 1029 | 259 | 302 | 181 | 1.68 | 5.86 | 5.70 | 1.44 | 1.67 |
| -15 (+ 5) | 1343 | 339 | 394 | 215 | 1.99 | 7.67 | 6.27 | 1.58 | 1.84 |
| -10 (+14) | 1724 | 435 | 505 | 249 | 2.31 | 9.88 | 6.90 | 1.74 | 2.02 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | Yes | | |
| 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) | 4.9 +0.02/-0.05 | [mm] | (0.193" +0.001"/-0.002") |
| 3.5 Connector sealing | Rubber Plugs | | |