

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG ZS80HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513701089 |

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 ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/4 | [hp] |
| 2 Displacement | 6.36 | [cm ³] (0.388 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 230 | [ml] (7.78 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 10.29 | [kg] (22.69 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 | 8EA14E61/8EA14E62/8EA14E63/8EA21E62 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM445KFBYY-53 | |
| 6 Start winding resistance | 6.02 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.96 | [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 | TUV | |

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] |
| 812 | 205 | 238 | 138 | 1.30 | 4.61 | 5.88 | 1.48 | 1.72 |

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) | 401 | 101 | 117 | 90 | 0.85 | 2.27 | 4.46 | 1.12 | 1.31 |
| -30 (-22) | 602 | 152 | 176 | 110 | 1.03 | 3.41 | 5.45 | 1.37 | 1.60 |
| -25 (-13) | 823 | 207 | 241 | 130 | 1.21 | 4.67 | 6.35 | 1.60 | 1.86 |
| -20 (- 4) | 1074 | 271 | 315 | 149 | 1.39 | 6.11 | 7.23 | 1.82 | 2.12 |
| -15 (+ 5) | 1366 | 344 | 400 | 168 | 1.56 | 7.80 | 8.17 | 2.06 | 2.39 |
| -10 (+14) | 1710 | 431 | 501 | 185 | 1.73 | 9.80 | 9.22 | 2.32 | 2.70 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 324 | 82 | 95 | 80 | 0.77 | 1.83 | 4.03 | 1.02 | 1.18 |
| -30 (-22) | 517 | 130 | 151 | 104 | 0.99 | 2.93 | 4.93 | 1.24 | 1.44 |
| -25 (-13) | 734 | 185 | 215 | 128 | 1.22 | 4.17 | 5.72 | 1.44 | 1.67 |
| -20 (- 4) | 988 | 249 | 289 | 153 | 1.45 | 5.62 | 6.46 | 1.63 | 1.89 |
| -15 (+ 5) | 1287 | 324 | 377 | 178 | 1.68 | 7.35 | 7.23 | 1.82 | 2.12 |
| -10 (+14) | 1644 | 414 | 482 | 203 | 1.91 | 9.42 | 8.08 | 2.04 | 2.37 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 248 | 63 | 73 | 74 | 0.70 | 1.41 | 3.39 | 0.86 | 0.99 |
| -30 (-22) | 426 | 107 | 125 | 99 | 0.94 | 2.41 | 4.28 | 1.08 | 1.26 |
| -25 (-13) | 633 | 159 | 185 | 126 | 1.19 | 3.59 | 5.04 | 1.27 | 1.48 |
| -20 (- 4) | 881 | 222 | 258 | 154 | 1.45 | 5.01 | 5.72 | 1.44 | 1.68 |
| -15 (+ 5) | 1181 | 298 | 346 | 184 | 1.72 | 6.74 | 6.41 | 1.61 | 1.88 |
| -10 (+14) | 1542 | 389 | 452 | 215 | 2.00 | 8.84 | 7.16 | 1.80 | 2.10 |

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 | 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 | | |