

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG Z90HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513700137 |

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 | 85 to 110 V | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 85 to 110 V | 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 | 7.55 | [cm ³] (0.461 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 19.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 | |
| 4 Weight (with oil charge) | 11.52 | [kg] (25.40 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 | TSD | |
| 2.1 Starting device | TSD- 115V | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 15(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM437NFBYY-53 | |
| 6 Start winding resistance | 6.05 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.95 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 15.10 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.40 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | 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] |
| 963 | 243 | 282 | 160 | 1.43 | 5.47 | 6.03 | 1.52 | 1.77 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|---------------------------------------|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @115V60Hz | | ASHRAE32 Static | | | | (Condensing temperature 35°C (+95°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) | 612 | 154 | 179 | 113 | 0.91 | 3.46 | 5.40 | 1.36 | 1.58 | |
| -30 (-22) | 786 | 198 | 230 | 128 | 1.04 | 4.45 | 6.17 | 1.55 | 1.81 | |
| -25 (-13) | 1009 | 254 | 296 | 143 | 1.17 | 5.73 | 7.06 | 1.78 | 2.07 | |
| -20 (- 4) | 1285 | 324 | 377 | 159 | 1.31 | 7.32 | 8.08 | 2.04 | 2.37 | |
| -15 (+ 5) | 1621 | 408 | 475 | 175 | 1.46 | 9.25 | 9.24 | 2.33 | 2.71 | |
| -10 (+14) | 2020 | 509 | 592 | 191 | 1.61 | 11.58 | 10.55 | 2.66 | 3.09 | |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|--|
| 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) | 525 | 132 | 154 | 109 | 1.04 | 2.97 | 4.86 | 1.23 | 1.42 | |
| -30 (-22) | 709 | 179 | 208 | 127 | 1.18 | 4.02 | 5.60 | 1.41 | 1.64 | |
| -25 (-13) | 938 | 236 | 275 | 147 | 1.33 | 5.33 | 6.41 | 1.62 | 1.88 | |
| -20 (- 4) | 1218 | 307 | 357 | 166 | 1.49 | 6.93 | 7.30 | 1.84 | 2.14 | |
| -15 (+ 5) | 1553 | 391 | 455 | 187 | 1.66 | 8.87 | 8.28 | 2.09 | 2.42 | |
| -10 (+14) | 1949 | 491 | 571 | 208 | 1.84 | 11.17 | 9.35 | 2.36 | 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) | 440 | 111 | 129 | 104 | 1.01 | 2.49 | 4.22 | 1.06 | 1.24 | |
| -30 (-22) | 634 | 160 | 186 | 127 | 1.19 | 3.59 | 4.98 | 1.25 | 1.46 | |
| -25 (-13) | 870 | 219 | 255 | 152 | 1.37 | 4.94 | 5.74 | 1.45 | 1.68 | |
| -20 (- 4) | 1153 | 291 | 338 | 177 | 1.57 | 6.56 | 6.53 | 1.65 | 1.91 | |
| -15 (+ 5) | 1489 | 375 | 436 | 203 | 1.78 | 8.50 | 7.36 | 1.85 | 2.16 | |
| -10 (+14) | 1882 | 474 | 552 | 229 | 2.00 | 10.78 | 8.23 | 2.07 | 2.41 | |

E - PERFORMANCE - CURVES

| 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) | 326 | 82 | 96 | 93 | 0.92 | 1.84 | 3.49 | 0.88 | 1.02 |
| -30 | (-22) | 531 | 134 | 155 | 123 | 1.15 | 3.01 | 4.28 | 1.08 | 1.26 |
| -25 | (-13) | 774 | 195 | 227 | 153 | 1.39 | 4.40 | 5.04 | 1.27 | 1.48 |
| -20 | (- 4) | 1062 | 268 | 311 | 184 | 1.64 | 6.04 | 5.78 | 1.46 | 1.69 |
| -15 | (+ 5) | 1398 | 352 | 410 | 216 | 1.90 | 7.98 | 6.49 | 1.64 | 1.90 |
| -10 | (+14) | 1789 | 451 | 524 | 249 | 2.18 | 10.25 | 7.19 | 1.81 | 2.11 |

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 | | |