

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG Z80HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513700196 |

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 | 6.76 | [cm ³] (0.413 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 17.000 | |
| 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) | 11.54 | [kg] (25.44 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 | Combo | |
| 2.1 Starting device | 5SP04X445K/5SP14X445K | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 15(180) | [µF(VAC minimum)] |
| 5 Motor protection | 5SP14X445KFX | |
| 6 Start winding resistance | 5.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.50 | [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 | 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] |
| 850 | 214 | 249 | 144 | 1.24 | 4.83 | 5.92 | 1.49 | 1.73 |

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] |
| -35 | (-31) | 511 | 129 | 150 | 110 | 0.80 | 2.89 | 4.60 | 1.16 | 1.35 |
| -30 | (-22) | 685 | 173 | 201 | 123 | 0.92 | 3.88 | 5.61 | 1.41 | 1.64 |
| -25 | (-13) | 889 | 224 | 261 | 134 | 1.04 | 5.05 | 6.71 | 1.69 | 1.97 |
| -20 | (- 4) | 1134 | 286 | 332 | 144 | 1.15 | 6.45 | 7.91 | 1.99 | 2.32 |
| -15 | (+ 5) | 1429 | 360 | 419 | 154 | 1.27 | 8.16 | 9.22 | 2.32 | 2.70 |
| -10 | (+14) | 1784 | 449 | 523 | 166 | 1.40 | 10.22 | 10.65 | 2.68 | 3.12 |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|---------|--------------------------------|----------------------------------|--|---------------------------|--------|----------|-----------|
| 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] |
| -35 | (-31) | 455 | 115 | 133 | 100 | 0.89 | 2.57 | 4.56 | 1.15 | 1.34 |
| -30 | (-22) | 642 | 162 | 188 | 118 | 1.03 | 3.64 | 5.47 | 1.38 | 1.60 |
| -25 | (-13) | 856 | 216 | 251 | 134 | 1.16 | 4.86 | 6.42 | 1.62 | 1.88 |
| -20 | (- 4) | 1105 | 278 | 324 | 149 | 1.29 | 6.29 | 7.40 | 1.87 | 2.17 |
| -15 | (+ 5) | 1399 | 353 | 410 | 165 | 1.43 | 7.99 | 8.43 | 2.12 | 2.47 |
| -10 | (+14) | 1750 | 441 | 513 | 182 | 1.58 | 10.03 | 9.50 | 2.39 | 2.78 |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|---------|--------------------------------|----------------------------------|--|---------------------------|--------|----------|-----------|
| 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] |
| -35 | (-31) | 357 | 90 | 105 | 90 | 0.84 | 2.02 | 3.97 | 1.00 | 1.16 |
| -30 | (-22) | 556 | 140 | 163 | 114 | 1.02 | 3.15 | 4.87 | 1.23 | 1.43 |
| -25 | (-13) | 778 | 196 | 228 | 136 | 1.19 | 4.41 | 5.73 | 1.44 | 1.68 |
| -20 | (- 4) | 1030 | 260 | 302 | 158 | 1.36 | 5.86 | 6.56 | 1.65 | 1.92 |
| -15 | (+ 5) | 1324 | 334 | 388 | 180 | 1.54 | 7.56 | 7.37 | 1.86 | 2.16 |
| -10 | (+14) | 1669 | 421 | 489 | 205 | 1.75 | 9.56 | 8.16 | 2.06 | 2.39 |

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) | 243 | 61 | 71 | 76 | 0.72 | 1.37 | 3.14 | 0.79 | 0.92 |
| -30 | (-22) | 454 | 114 | 133 | 107 | 0.96 | 2.57 | 4.08 | 1.03 | 1.20 |
| -25 | (-13) | 682 | 172 | 200 | 137 | 1.19 | 3.87 | 4.93 | 1.24 | 1.44 |
| -20 | (- 4) | 937 | 236 | 275 | 166 | 1.43 | 5.33 | 5.68 | 1.43 | 1.66 |
| -15 | (+ 5) | 1229 | 310 | 360 | 196 | 1.68 | 7.01 | 6.34 | 1.60 | 1.86 |
| -10 | (+14) | 1568 | 395 | 459 | 228 | 1.96 | 8.98 | 6.91 | 1.74 | 2.03 |

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 | | |