

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG ZS80CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513701140 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [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 | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 7.7 | [kgf/cm ²] (109 psig) | / °C - °F |
| 9.2 Peak (gauge) | 9.8 | [kgf/cm ²] (139 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | | [hp] |
| 2 Displacement | 11.14 | [cm ³] (0.680 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 21.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 10.97 | [kg] (24.18 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Combo | |
| 2.1 Starting device | 5SP17X283K | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(270)/4(270) | [µF(VAC minimum)] |
| 5 Motor protection | 5SP17X283KFX | |
| 6 Start winding resistance | 18.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 13.70 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| 681 | 172 | 200 | 112 | 0.56 | 2.14 | 6.10 | 1.54 | 1.79 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | 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) | 396 | 100 | 116 | 76 | 0.47 | 1.24 | 5.21 | 1.31 | 1.53 |
| -30 | (-22) | 525 | 132 | 154 | 86 | 0.49 | 1.65 | 6.08 | 1.53 | 1.78 |
| -25 | (-13) | 675 | 170 | 198 | 97 | 0.53 | 2.12 | 7.00 | 1.76 | 2.05 |
| -20 | (- 4) | 858 | 216 | 251 | 107 | 0.58 | 2.69 | 8.01 | 2.02 | 2.35 |
| -15 | (+ 5) | 1086 | 274 | 318 | 119 | 0.64 | 3.42 | 9.15 | 2.31 | 2.68 |
| -10 | (+14) | 1372 | 346 | 402 | 131 | 0.70 | 4.33 | 10.48 | 2.64 | 3.07 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | 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) | 381 | 96 | 112 | 80 | 0.47 | 1.19 | 4.79 | 1.21 | 1.40 |
| -30 | (-22) | 509 | 128 | 149 | 91 | 0.49 | 1.59 | 5.59 | 1.41 | 1.64 |
| -25 | (-13) | 654 | 165 | 192 | 102 | 0.53 | 2.05 | 6.40 | 1.61 | 1.88 |
| -20 | (- 4) | 830 | 209 | 243 | 114 | 0.59 | 2.61 | 7.27 | 1.83 | 2.13 |
| -15 | (+ 5) | 1048 | 264 | 307 | 127 | 0.66 | 3.30 | 8.25 | 2.08 | 2.42 |
| -10 | (+14) | 1321 | 333 | 387 | 140 | 0.72 | 4.17 | 9.38 | 2.36 | 2.75 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | 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) | 360 | 91 | 106 | 82 | 0.47 | 1.13 | 4.39 | 1.11 | 1.29 |
| -30 | (-22) | 487 | 123 | 143 | 95 | 0.50 | 1.53 | 5.12 | 1.29 | 1.50 |
| -25 | (-13) | 628 | 158 | 184 | 108 | 0.55 | 1.97 | 5.82 | 1.47 | 1.71 |
| -20 | (- 4) | 796 | 201 | 233 | 121 | 0.61 | 2.50 | 6.56 | 1.65 | 1.92 |
| -15 | (+ 5) | 1004 | 253 | 294 | 136 | 0.69 | 3.16 | 7.37 | 1.86 | 2.16 |
| -10 | (+14) | 1263 | 318 | 370 | 152 | 0.77 | 3.99 | 8.30 | 2.09 | 2.43 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | 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) | 335 | 84 | 98 | 83 | 0.50 | 1.05 | 4.05 | 1.02 | 1.19 |
| -30 | (-22) | 460 | 116 | 135 | 97 | 0.53 | 1.44 | 4.69 | 1.18 | 1.38 |
| -25 | (-13) | 597 | 150 | 175 | 113 | 0.58 | 1.87 | 5.29 | 1.33 | 1.55 |
| -20 | (- 4) | 758 | 191 | 222 | 129 | 0.66 | 2.38 | 5.89 | 1.48 | 1.73 |
| -15 | (+ 5) | 955 | 241 | 280 | 147 | 0.74 | 3.01 | 6.53 | 1.64 | 1.91 |
| -10 | (+14) | 1201 | 303 | 352 | 165 | 0.84 | 3.79 | 7.25 | 1.83 | 2.13 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate | European Standard EG/F/AMEM Version 2 | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted | | |
| 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 | Slanted | | |
| 3.3 PROCESS | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |