

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG ZS80CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513701319 |

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 temperature | | | |
| 9.1 Operating | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | 1/4 | [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) | 10.93 | [kg] (24.10 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 | PTC | |
| 2.1 Starting device | 8EA17C3/QPS2-A22MD3/QPS2-A22MD3 091 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(270)/4(270) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283KFBYY-53 | |
| 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) | 7.60 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.13 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - IRAM - UKCA - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|-------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | CECOMAFLBP Static | | Evaporating temperature (Condensing temperature | | -25°C (-13°F) 55°C (131°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] |
| 513 | 129 | 150 | 108 | 0.54 | 1.96 | 4.77 | 1.20 | 1.40 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 387 | 98 | 114 | 76 | 0.47 | 1.24 | 5.09 | 1.28 | 1.49 |
| -30 | (-22) | 511 | 129 | 150 | 86 | 0.49 | 1.65 | 5.94 | 1.50 | 1.74 |
| -25 | (-13) | 658 | 166 | 193 | 97 | 0.53 | 2.12 | 6.84 | 1.72 | 2.00 |
| -20 | (- 4) | 839 | 211 | 246 | 107 | 0.58 | 2.69 | 7.83 | 1.97 | 2.30 |
| -15 | (+ 5) | 1064 | 268 | 312 | 119 | 0.64 | 3.42 | 8.96 | 2.26 | 2.63 |
| -10 | (+14) | 1343 | 338 | 394 | 131 | 0.70 | 4.33 | 10.25 | 2.58 | 3.00 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 344 | 87 | 101 | 80 | 0.47 | 1.19 | 4.32 | 1.09 | 1.27 |
| -30 | (-22) | 458 | 115 | 134 | 91 | 0.49 | 1.59 | 5.03 | 1.27 | 1.47 |
| -25 | (-13) | 589 | 148 | 173 | 102 | 0.53 | 2.05 | 5.76 | 1.45 | 1.69 |
| -20 | (- 4) | 748 | 188 | 219 | 114 | 0.59 | 2.61 | 6.55 | 1.65 | 1.92 |
| -15 | (+ 5) | 945 | 238 | 277 | 127 | 0.66 | 3.30 | 7.43 | 1.87 | 2.18 |
| -10 | (+14) | 1191 | 300 | 349 | 140 | 0.72 | 4.17 | 8.45 | 2.13 | 2.48 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | CECOMAF 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) | 297 | 75 | 87 | 82 | 0.47 | 1.13 | 3.62 | 0.91 | 1.06 |
| -30 | (-22) | 401 | 101 | 118 | 95 | 0.50 | 1.53 | 4.21 | 1.06 | 1.23 |
| -25 | (-13) | 517 | 130 | 151 | 108 | 0.55 | 1.97 | 4.79 | 1.21 | 1.40 |
| -20 | (- 4) | 655 | 165 | 192 | 121 | 0.61 | 2.50 | 5.39 | 1.36 | 1.58 |
| -15 | (+ 5) | 825 | 208 | 242 | 136 | 0.69 | 3.16 | 6.05 | 1.53 | 1.77 |
| -10 | (+14) | 1038 | 262 | 304 | 152 | 0.77 | 3.99 | 6.82 | 1.72 | 2.00 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF 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 | 62 | 73 | 83 | 0.50 | 1.05 | 3.00 | 0.76 | 0.88 |
| -30 | (-22) | 344 | 87 | 101 | 97 | 0.53 | 1.44 | 3.49 | 0.88 | 1.02 |
| -25 | (-13) | 445 | 112 | 130 | 113 | 0.58 | 1.87 | 3.94 | 0.99 | 1.15 |
| -20 | (- 4) | 563 | 142 | 165 | 129 | 0.66 | 2.38 | 4.37 | 1.10 | 1.28 |
| -15 | (+ 5) | 707 | 178 | 207 | 147 | 0.74 | 3.01 | 4.84 | 1.22 | 1.42 |
| -10 | (+14) | 888 | 224 | 260 | 165 | 0.84 | 3.79 | 5.37 | 1.35 | 1.57 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +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 | | |