

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Z55CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513309005 |

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 | 187 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 187 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 | 9.34 | [cm ³] (0.570 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 17.600 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO7 | |
| 4 Weight (with oil charge) | 7.94 | [kg] (17.50 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 | TSD | |
| 2.1 Starting device | TSD-220V | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(300) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189NFBYY-73 | |
| 6 Start winding resistance | 16.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 20.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 4.60 | [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 | | | 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] |
| 422 | 106 | 124 | 91 | 0.44 | 1.61 | 4.63 | 1.17 | 1.36 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 296 | 75 | 87 | 65 | 0.32 | 1.03 | 4.50 | 1.13 | 1.32 |
| -30 (-22) | 380 | 96 | 111 | 76 | 0.37 | 1.32 | 5.02 | 1.26 | 1.47 |
| -25 (-13) | 491 | 124 | 144 | 86 | 0.41 | 1.71 | 5.74 | 1.45 | 1.68 |
| -20 (- 4) | 632 | 159 | 185 | 96 | 0.45 | 2.20 | 6.63 | 1.67 | 1.94 |
| -15 (+ 5) | 805 | 203 | 236 | 105 | 0.49 | 2.81 | 7.64 | 1.92 | 2.24 |
| -10 (+14) | 1013 | 255 | 297 | 116 | 0.54 | 3.55 | 8.72 | 2.20 | 2.56 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 233 | 59 | 68 | 68 | 0.32 | 0.89 | 3.50 | 0.88 | 1.03 |
| -30 (-22) | 318 | 80 | 93 | 79 | 0.38 | 1.21 | 3.99 | 1.00 | 1.17 |
| -25 (-13) | 424 | 107 | 124 | 91 | 0.43 | 1.62 | 4.63 | 1.17 | 1.36 |
| -20 (- 4) | 554 | 140 | 162 | 102 | 0.48 | 2.12 | 5.39 | 1.36 | 1.58 |
| -15 (+ 5) | 712 | 179 | 209 | 114 | 0.53 | 2.73 | 6.22 | 1.57 | 1.82 |
| -10 (+14) | 899 | 227 | 263 | 127 | 0.58 | 3.45 | 7.09 | 1.79 | 2.08 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 204 | 52 | 60 | 69 | 0.32 | 0.86 | 2.96 | 0.74 | 0.87 |
| -30 (-22) | 273 | 69 | 80 | 82 | 0.38 | 1.15 | 3.31 | 0.83 | 0.97 |
| -25 (-13) | 357 | 90 | 105 | 94 | 0.44 | 1.51 | 3.78 | 0.95 | 1.11 |
| -20 (- 4) | 461 | 116 | 135 | 107 | 0.50 | 1.95 | 4.32 | 1.09 | 1.27 |
| -15 (+ 5) | 586 | 148 | 172 | 121 | 0.56 | 2.49 | 4.89 | 1.23 | 1.43 |
| -10 (+14) | 736 | 185 | 216 | 136 | 0.63 | 3.14 | 5.45 | 1.37 | 1.60 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 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 42° up + 45° to Back | | |
| 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 parallel BP+24°to Back | | |
| 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 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |