

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2C46CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513304508 |

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 | 1/6 | [hp] |
| 2 Displacement | 7.96 | [cm ³] (0.486 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 17.600 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 7.91 | [kg] (17.44 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 | 7M220MD3/8EA17C3/QPS2-A22MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(310) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189KFBYY-53 | |
| 6 Start winding resistance | 20.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 23.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 4.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.60 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IRAM - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------------|-------------------------------|--|-------------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | CECOMAFLBP-NOFAN 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] |
| 342 | 86 | 100 | 74 | 0.34 | 1.30 | 4.60 | 1.16 | 1.35 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------------|-----|-----------------------------|-------------------------------|---------------------------------------|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN 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) | 260 | 66 | 76 | 51 | 0.23 | 0.83 | 5.10 | 1.28 | 1.49 | |
| -30 (-22) | 354 | 89 | 104 | 59 | 0.25 | 1.14 | 5.97 | 1.50 | 1.75 | |
| -25 (-13) | 464 | 117 | 136 | 68 | 0.28 | 1.49 | 6.90 | 1.74 | 2.02 | |
| -20 (- 4) | 595 | 150 | 174 | 76 | 0.32 | 1.91 | 7.91 | 1.99 | 2.32 | |
| -15 (+ 5) | 752 | 189 | 220 | 84 | 0.36 | 2.42 | 9.03 | 2.28 | 2.65 | |
| -10 (+14) | 939 | 237 | 275 | 91 | 0.39 | 3.03 | 10.28 | 2.59 | 3.01 | |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN 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) | 215 | 54 | 63 | 53 | 0.22 | 0.75 | 4.11 | 1.03 | 1.20 | |
| -30 (-22) | 301 | 76 | 88 | 62 | 0.25 | 1.05 | 4.85 | 1.22 | 1.42 | |
| -25 (-13) | 401 | 101 | 117 | 71 | 0.29 | 1.40 | 5.61 | 1.41 | 1.64 | |
| -20 (- 4) | 520 | 131 | 152 | 81 | 0.33 | 1.81 | 6.43 | 1.62 | 1.88 | |
| -15 (+ 5) | 663 | 167 | 194 | 90 | 0.38 | 2.31 | 7.32 | 1.84 | 2.14 | |
| -10 (+14) | 834 | 210 | 244 | 100 | 0.43 | 2.92 | 8.31 | 2.09 | 2.43 | |

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN 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) | 178 | 45 | 52 | 54 | 0.23 | 0.68 | 3.32 | 0.84 | 0.97 | |
| -30 (-22) | 253 | 64 | 74 | 64 | 0.26 | 0.96 | 3.96 | 1.00 | 1.16 | |
| -25 (-13) | 341 | 86 | 100 | 74 | 0.30 | 1.30 | 4.58 | 1.15 | 1.34 | |
| -20 (- 4) | 446 | 112 | 131 | 85 | 0.35 | 1.70 | 5.23 | 1.32 | 1.53 | |
| -15 (+ 5) | 573 | 144 | 168 | 97 | 0.41 | 2.19 | 5.91 | 1.49 | 1.73 | |
| -10 (+14) | 727 | 183 | 213 | 109 | 0.47 | 2.79 | 6.66 | 1.68 | 1.95 | |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN 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) | 149 | 38 | 44 | 54 | 0.24 | 0.63 | 2.74 | 0.69 | 0.80 |
| -30 | (-22) | 212 | 53 | 62 | 64 | 0.27 | 0.89 | 3.30 | 0.83 | 0.97 |
| -25 | (-13) | 285 | 72 | 84 | 75 | 0.31 | 1.20 | 3.82 | 0.96 | 1.12 |
| -20 | (- 4) | 374 | 94 | 110 | 87 | 0.37 | 1.59 | 4.31 | 1.09 | 1.26 |
| -15 | (+ 5) | 483 | 122 | 142 | 101 | 0.43 | 2.06 | 4.82 | 1.21 | 1.41 |
| -10 | (+14) | 616 | 155 | 181 | 115 | 0.50 | 2.63 | 5.35 | 1.35 | 1.57 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | No | | |
| 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 | | |