

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2C40CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513304607 |

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 | | [hp] |
| 2 Displacement | 7.23 | [cm ³] (0.441 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO5 | |
| 4 Weight (with oil charge) | 7.68 | [kg] (16.93 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELECTRICAL 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 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 2.5(300)/2(300)/3(300) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM134NFBYY-73 | |
| 6 Start winding resistance | 26.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 26.00 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 3.60 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.55 | [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-NOFAN Static | | Evaporating temperature (Condensing temperature | | -25°C (-13°F) 55°C (131°F) | |
|---------------------------------|----------|-----|-------------------------------|-------------------------------|--|--------------------------------|-------------------------------|-------|
| Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 310 | 78 | 91 | 67 | 0.30 | 1.18 | 4.64 | 1.17 | 1.36 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN Static | | | | (Condensing temperature 35°C (+95°F)) | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|--|-----------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 229 | 58 | 67 | 45 | 0.22 | 0.73 | 5.03 | 1.27 | 1.47 |
| -30 | (-22) | 314 | 79 | 92 | 53 | 0.25 | 1.01 | 5.91 | 1.49 | 1.73 |
| -25 | (-13) | 421 | 106 | 123 | 61 | 0.28 | 1.35 | 6.90 | 1.74 | 2.02 |
| -20 | (- 4) | 549 | 138 | 161 | 69 | 0.31 | 1.77 | 7.99 | 2.01 | 2.34 |
| -15 | (+ 5) | 698 | 176 | 205 | 77 | 0.34 | 2.25 | 9.16 | 2.31 | 2.69 |
| -10 | (+14) | 868 | 219 | 254 | 83 | 0.38 | 2.80 | 10.43 | 2.63 | 3.05 |

| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN Static | | | | (Condensing temperature 45°C (+113°F)) | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|---|-----------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 194 | 49 | 57 | 47 | 0.22 | 0.67 | 4.13 | 1.04 | 1.21 |
| -30 | (-22) | 269 | 68 | 79 | 55 | 0.26 | 0.94 | 4.87 | 1.23 | 1.43 |
| -25 | (-13) | 365 | 92 | 107 | 64 | 0.29 | 1.27 | 5.68 | 1.43 | 1.66 |
| -20 | (- 4) | 481 | 121 | 141 | 73 | 0.33 | 1.67 | 6.55 | 1.65 | 1.92 |
| -15 | (+ 5) | 616 | 155 | 180 | 82 | 0.37 | 2.15 | 7.48 | 1.89 | 2.19 |
| -10 | (+14) | 770 | 194 | 226 | 91 | 0.41 | 2.70 | 8.47 | 2.13 | 2.48 |

| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN Static | | | | (Condensing temperature 55°C (+131°F)) | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|---|-----------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 162 | 41 | 48 | 49 | 0.23 | 0.62 | 3.36 | 0.85 | 0.98 |
| -30 | (-22) | 227 | 57 | 67 | 57 | 0.26 | 0.86 | 3.99 | 1.00 | 1.17 |
| -25 | (-13) | 310 | 78 | 91 | 67 | 0.30 | 1.18 | 4.65 | 1.17 | 1.36 |
| -20 | (- 4) | 413 | 104 | 121 | 77 | 0.34 | 1.58 | 5.34 | 1.35 | 1.57 |
| -15 | (+ 5) | 533 | 134 | 156 | 88 | 0.39 | 2.04 | 6.06 | 1.53 | 1.78 |
| -10 | (+14) | 672 | 169 | 197 | 99 | 0.44 | 2.58 | 6.80 | 1.71 | 1.99 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | CECOMAF-NOFAN Static | | | (Condensing temperature 65°C (+149°F)) | | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|---|----------------------------|--------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 134 | 34 | 39 | 48 | 0.23 | 0.56 | 2.74 | 0.69 | 0.80 |
| -30 | (-22) | 187 | 47 | 55 | 57 | 0.27 | 0.79 | 3.28 | 0.83 | 0.96 |
| -25 | (-13) | 257 | 65 | 75 | 68 | 0.31 | 1.09 | 3.83 | 0.96 | 1.12 |
| -20 | (- 4) | 345 | 87 | 101 | 79 | 0.36 | 1.46 | 4.37 | 1.10 | 1.28 |
| -15 | (+ 5) | 450 | 113 | 132 | 92 | 0.42 | 1.91 | 4.91 | 1.24 | 1.44 |
| -10 | (+14) | 572 | 144 | 168 | 105 | 0.48 | 2.44 | 5.43 | 1.37 | 1.59 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | Universal EUEM | | |
| 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 | 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 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 | | |