

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM C80CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 701UA77 |

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 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 | 12.21 | [cm ³] (0.745 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 23.000 | |
| 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) | 8.15 | [kg] (17.97 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 | M.I.E-START 2021 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(300) | [µF(VAC minimum)] |
| 5 Motor protection | AE15BU | |
| 6 Start winding resistance | 23.17 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 13.86 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 7.12 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.22 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | 1.48 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | 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] |
| 552 | 139 | 162 | 113 | 0.53 | 2.10 | 4.91 | 1.24 | 1.44 |

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) | 432 | 109 | 127 | 71 | 0.36 | 1.39 | 6.03 | 1.52 | 1.77 |
| -30 (-22) | 565 | 142 | 165 | 85 | 0.42 | 1.81 | 6.68 | 1.68 | 1.96 |
| -25 (-13) | 733 | 185 | 215 | 99 | 0.48 | 2.35 | 7.46 | 1.88 | 2.18 |
| -20 (- 4) | 939 | 237 | 275 | 113 | 0.54 | 3.02 | 8.34 | 2.10 | 2.44 |
| -15 (+ 5) | 1181 | 298 | 346 | 127 | 0.61 | 3.80 | 9.31 | 2.35 | 2.73 |
| -10 (+14) | 1460 | 368 | 428 | 141 | 0.68 | 4.71 | 10.33 | 2.60 | 3.03 |

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|-------------------------------|----------------------------|--------------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|
| 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) | 371 | 93 | 109 | 77 | 0.37 | 1.29 | 4.85 | 1.22 | 1.42 |
| -30 (-22) | 492 | 124 | 144 | 91 | 0.43 | 1.71 | 5.41 | 1.36 | 1.58 |
| -25 (-13) | 646 | 163 | 189 | 106 | 0.50 | 2.25 | 6.06 | 1.53 | 1.78 |
| -20 (- 4) | 832 | 210 | 244 | 122 | 0.57 | 2.90 | 6.80 | 1.71 | 1.99 |
| -15 (+ 5) | 1051 | 265 | 308 | 138 | 0.65 | 3.67 | 7.59 | 1.91 | 2.22 |
| -10 (+14) | 1303 | 328 | 382 | 155 | 0.73 | 4.57 | 8.40 | 2.12 | 2.46 |

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|-------------------------------|----------------------------|--------------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|
| 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) | 309 | 78 | 90 | 79 | 0.37 | 1.17 | 3.95 | 1.00 | 1.16 |
| -30 (-22) | 417 | 105 | 122 | 94 | 0.44 | 1.59 | 4.42 | 1.11 | 1.30 |
| -25 (-13) | 554 | 140 | 162 | 111 | 0.52 | 2.11 | 4.96 | 1.25 | 1.45 |
| -20 (- 4) | 719 | 181 | 211 | 129 | 0.60 | 2.75 | 5.55 | 1.40 | 1.63 |
| -15 (+ 5) | 914 | 230 | 268 | 148 | 0.69 | 3.50 | 6.17 | 1.55 | 1.81 |
| -10 (+14) | 1137 | 286 | 333 | 168 | 0.79 | 4.36 | 6.78 | 1.71 | 1.99 |

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) | 249 | 63 | 73 | 76 | 0.36 | 1.05 | 3.27 | 0.82 | 0.96 |
| -30 | (-22) | 342 | 86 | 100 | 93 | 0.45 | 1.44 | 3.66 | 0.92 | 1.07 |
| -25 | (-13) | 461 | 116 | 135 | 112 | 0.54 | 1.95 | 4.09 | 1.03 | 1.20 |
| -20 | (- 4) | 603 | 152 | 177 | 133 | 0.63 | 2.56 | 4.55 | 1.15 | 1.33 |
| -15 | (+ 5) | 770 | 194 | 226 | 155 | 0.74 | 3.27 | 5.00 | 1.26 | 1.46 |
| -10 | (+14) | 962 | 243 | 282 | 179 | 0.85 | 4.10 | 5.41 | 1.36 | 1.59 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 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 0° up + 45° 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 | | |