

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM C80CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 701UA90 |

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 | | | ASHRAE LBP-NOFAN Static | | Evaporating temperature (Condensing temperature | | -23.3°C (-9.94°F) 54.4°C (129.92°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] |
| 733 | 185 | 215 | 117 | 0.55 | 2.30 | 6.24 | 1.57 | 1.83 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|---------------------------------------|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-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) | 442 | 111 | 130 | 71 | 0.36 | 1.38 | 6.18 | 1.56 | 1.81 | |
| -30 (-22) | 578 | 146 | 169 | 85 | 0.42 | 1.81 | 6.83 | 1.72 | 2.00 | |
| -25 (-13) | 750 | 189 | 220 | 99 | 0.48 | 2.35 | 7.62 | 1.92 | 2.23 | |
| -20 (- 4) | 961 | 242 | 282 | 113 | 0.54 | 3.02 | 8.53 | 2.15 | 2.50 | |
| -15 (+ 5) | 1209 | 305 | 354 | 127 | 0.61 | 3.80 | 9.53 | 2.40 | 2.79 | |
| -10 (+14) | 1495 | 377 | 438 | 141 | 0.68 | 4.71 | 10.58 | 2.67 | 3.10 | |

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|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-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) | 411 | 104 | 120 | 77 | 0.37 | 1.29 | 5.38 | 1.36 | 1.58 | |
| -30 (-22) | 545 | 137 | 160 | 91 | 0.43 | 1.71 | 6.00 | 1.51 | 1.76 | |
| -25 (-13) | 716 | 181 | 210 | 106 | 0.50 | 2.25 | 6.73 | 1.70 | 1.97 | |
| -20 (- 4) | 924 | 233 | 271 | 122 | 0.57 | 2.90 | 7.55 | 1.90 | 2.21 | |
| -15 (+ 5) | 1168 | 294 | 342 | 138 | 0.65 | 3.68 | 8.43 | 2.12 | 2.47 | |
| -10 (+14) | 1448 | 365 | 424 | 155 | 0.73 | 4.57 | 9.33 | 2.35 | 2.73 | |

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|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-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) | 376 | 95 | 110 | 79 | 0.37 | 1.18 | 4.80 | 1.21 | 1.41 | |
| -30 (-22) | 507 | 128 | 149 | 94 | 0.44 | 1.59 | 5.38 | 1.36 | 1.58 | |
| -25 (-13) | 673 | 170 | 197 | 111 | 0.52 | 2.11 | 6.04 | 1.52 | 1.77 | |
| -20 (- 4) | 875 | 221 | 256 | 129 | 0.60 | 2.75 | 6.76 | 1.70 | 1.98 | |
| -15 (+ 5) | 1112 | 280 | 326 | 148 | 0.69 | 3.50 | 7.51 | 1.89 | 2.20 | |
| -10 (+14) | 1385 | 349 | 406 | 168 | 0.79 | 4.37 | 8.26 | 2.08 | 2.42 | |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-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) | 334 | 84 | 98 | 76 | 0.36 | 1.05 | 4.40 | 1.11 | 1.29 |
| -30 | (-22) | 460 | 116 | 135 | 93 | 0.45 | 1.44 | 4.93 | 1.24 | 1.44 |
| -25 | (-13) | 619 | 156 | 181 | 112 | 0.54 | 1.94 | 5.51 | 1.39 | 1.61 |
| -20 | (- 4) | 813 | 205 | 238 | 133 | 0.63 | 2.55 | 6.12 | 1.54 | 1.79 |
| -15 | (+ 5) | 1040 | 262 | 305 | 155 | 0.74 | 3.28 | 6.73 | 1.70 | 1.97 |
| -10 | (+14) | 1303 | 328 | 382 | 179 | 0.85 | 4.11 | 7.31 | 1.84 | 2.14 |

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 +0.08/-0.08 | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 43° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |