

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X70CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513309546 |

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 | 1/4 | [hp] |
| 2 Displacement | 11.14 | [cm ³] (0.680 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 21.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 8.6 | [kg] (18.96 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 | MI2021 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(300) | [µF(VAC minimum)] |
| 5 Motor protection | AE37FQ | |
| 6 Start winding resistance | 14.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 18.80 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 4.90 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.85 | [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

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|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|-------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | CECOMAF 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] |
| 488 | 123 | 143 | 107 | 0.53 | 1.86 | 4.58 | 1.15 | 1.34 |

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) | 283 | 71 | 83 | 87 | 0.48 | 0.98 | 3.25 | 0.82 | 0.95 |
| -30 (-22) | 419 | 106 | 123 | 93 | 0.44 | 1.46 | 4.50 | 1.13 | 1.32 |
| -25 (-13) | 560 | 141 | 164 | 104 | 0.47 | 1.95 | 5.38 | 1.36 | 1.58 |
| -20 (- 4) | 717 | 181 | 210 | 119 | 0.55 | 2.50 | 6.04 | 1.52 | 1.77 |
| -15 (+ 5) | 898 | 226 | 263 | 136 | 0.66 | 3.13 | 6.59 | 1.66 | 1.93 |
| -10 (+14) | 1115 | 281 | 327 | 155 | 0.77 | 3.90 | 7.16 | 1.81 | 2.10 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 221 | 56 | 65 | 86 | 0.40 | 0.84 | 2.59 | 0.65 | 0.76 |
| -30 (-22) | 352 | 89 | 103 | 94 | 0.37 | 1.34 | 3.73 | 0.94 | 1.09 |
| -25 (-13) | 485 | 122 | 142 | 107 | 0.42 | 1.85 | 4.51 | 1.14 | 1.32 |
| -20 (- 4) | 629 | 158 | 184 | 125 | 0.52 | 2.40 | 5.04 | 1.27 | 1.48 |
| -15 (+ 5) | 794 | 200 | 233 | 145 | 0.65 | 3.04 | 5.47 | 1.38 | 1.60 |
| -10 (+14) | 991 | 250 | 290 | 167 | 0.78 | 3.80 | 5.91 | 1.49 | 1.73 |

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|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 171 | 43 | 50 | 85 | 0.48 | 0.72 | 2.01 | 0.51 | 0.59 |
| -30 (-22) | 292 | 74 | 85 | 95 | 0.46 | 1.23 | 3.05 | 0.77 | 0.89 |
| -25 (-13) | 410 | 103 | 120 | 111 | 0.51 | 1.73 | 3.71 | 0.93 | 1.09 |
| -20 (- 4) | 537 | 135 | 157 | 131 | 0.62 | 2.27 | 4.12 | 1.04 | 1.21 |
| -15 (+ 5) | 680 | 171 | 199 | 154 | 0.75 | 2.89 | 4.42 | 1.11 | 1.30 |
| -10 (+14) | 851 | 214 | 249 | 179 | 0.88 | 3.63 | 4.73 | 1.19 | 1.39 |

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 | Straight | | |
| 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 | Straight | | |
| 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 | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |