

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X70CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 898ZA98 |

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 254 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 254 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 | 11.36 | [cm ³] (0.693 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 21.400 | |
| 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) | 8.1 | [kg] (17.86 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 | MI.E-START 2021 | |
| 3 Start capacitor | - | [μF(VAC minimum)] |
| 4 Run capacitor | 5(330) | [μF(VAC minimum)] |
| 5 Motor protection | AE18BQ10 | |
| 6 Start winding resistance | 15.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 20.10 | [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] |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] |
| 11 Approval boards certification | VDE | |

D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS: @220V50Hz | | | CECOMAFLBP 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] |
| 491 | 124 | 144 | 107 | 0.48 | 1.87 | 4.59 | 1.16 | 1.34 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | | CECOMAF 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) | 377 | 95 | 111 | 74 | 0.35 | 1.21 | 5.10 | 1.29 | 1.50 |
| -30 | (-22) | 503 | 127 | 147 | 85 | 0.40 | 1.61 | 5.92 | 1.49 | 1.74 |
| -25 | (-13) | 658 | 166 | 193 | 98 | 0.45 | 2.11 | 6.77 | 1.71 | 1.98 |
| -20 | (- 4) | 843 | 213 | 247 | 111 | 0.51 | 2.71 | 7.65 | 1.93 | 2.24 |
| -15 | (+ 5) | 1062 | 268 | 311 | 124 | 0.57 | 3.42 | 8.58 | 2.16 | 2.51 |
| -10 | (+14) | 1318 | 332 | 386 | 138 | 0.62 | 4.25 | 9.56 | 2.41 | 2.80 |

| 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) | 321 | 81 | 94 | 76 | 0.36 | 1.12 | 4.22 | 1.06 | 1.24 |
| -30 | (-22) | 436 | 110 | 128 | 89 | 0.41 | 1.51 | 4.91 | 1.24 | 1.44 |
| -25 | (-13) | 576 | 145 | 169 | 103 | 0.47 | 2.00 | 5.60 | 1.41 | 1.64 |
| -20 | (- 4) | 744 | 188 | 218 | 118 | 0.53 | 2.59 | 6.30 | 1.59 | 1.85 |
| -15 | (+ 5) | 943 | 238 | 276 | 134 | 0.60 | 3.29 | 7.03 | 1.77 | 2.06 |
| -10 | (+14) | 1175 | 296 | 344 | 151 | 0.67 | 4.12 | 7.79 | 1.96 | 2.28 |

| 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) | 264 | 67 | 78 | 77 | 0.36 | 1.01 | 3.44 | 0.87 | 1.01 |
| -30 | (-22) | 366 | 92 | 107 | 91 | 0.42 | 1.39 | 4.02 | 1.01 | 1.18 |
| -25 | (-13) | 490 | 124 | 144 | 107 | 0.48 | 1.87 | 4.58 | 1.16 | 1.34 |
| -20 | (- 4) | 640 | 161 | 187 | 124 | 0.55 | 2.44 | 5.14 | 1.30 | 1.51 |
| -15 | (+ 5) | 817 | 206 | 239 | 143 | 0.64 | 3.13 | 5.70 | 1.44 | 1.67 |
| -10 | (+14) | 1024 | 258 | 300 | 163 | 0.73 | 3.93 | 6.28 | 1.58 | 1.84 |

E - PERFORMANCE - CURVES

| 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) | 213 | 54 | 62 | 78 | 0.37 | 0.90 | 2.73 | 0.69 | 0.80 |
| -30 | (-22) | 300 | 76 | 88 | 93 | 0.42 | 1.26 | 3.23 | 0.82 | 0.95 |
| -25 | (-13) | 407 | 103 | 119 | 110 | 0.50 | 1.72 | 3.70 | 0.93 | 1.08 |
| -20 | (- 4) | 536 | 135 | 157 | 130 | 0.58 | 2.27 | 4.14 | 1.04 | 1.21 |
| -15 | (+ 5) | 690 | 174 | 202 | 151 | 0.68 | 2.93 | 4.57 | 1.15 | 1.34 |
| -10 | (+14) | 871 | 220 | 255 | 175 | 0.78 | 3.72 | 4.98 | 1.25 | 1.46 |

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° | | |
| 3.2 DISCHARGE | 5.1 +0.10/+0.00 | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted 42° | | |
| 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 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |