

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | EM X20CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 875AA90 |

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 | 3.97 | [cm ³] (0.242 cu.in) |
| 2.1 Bore [mm] | 19.000 | |
| 2.2 Stroke [mm] | 14.000 | |
| 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) | 7.5 | [kg] (16.53 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 | 3(440) | [μF(VAC minimum)] |
| 5 Motor protection | AX23AHY | |
| 6 Start winding resistance | 21.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 67.22 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [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] |
| 155 | 39 | 45 | 39 | 0.19 | 0.59 | 4.01 | 1.01 | 1.18 |

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) | 99 | 25 | 29 | 29 | 0.13 | 0.34 | 3.40 | 0.86 | 1.00 |
| -30 | (-22) | 141 | 35 | 41 | 33 | 0.15 | 0.49 | 4.26 | 1.07 | 1.25 |
| -25 | (-13) | 188 | 47 | 55 | 38 | 0.17 | 0.65 | 5.02 | 1.27 | 1.47 |
| -20 | (- 4) | 243 | 61 | 71 | 42 | 0.19 | 0.85 | 5.77 | 1.45 | 1.69 |
| -15 | (+ 5) | 311 | 78 | 91 | 47 | 0.21 | 1.08 | 6.57 | 1.66 | 1.93 |
| -10 | (+14) | 393 | 99 | 115 | 52 | 0.23 | 1.37 | 7.50 | 1.89 | 2.20 |

| 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) | 70 | 18 | 20 | 29 | 0.13 | 0.26 | 2.43 | 0.61 | 0.71 |
| -30 | (-22) | 111 | 28 | 33 | 33 | 0.16 | 0.42 | 3.29 | 0.83 | 0.96 |
| -25 | (-13) | 155 | 39 | 45 | 39 | 0.18 | 0.59 | 4.00 | 1.01 | 1.17 |
| -20 | (- 4) | 204 | 52 | 60 | 44 | 0.20 | 0.78 | 4.63 | 1.17 | 1.36 |
| -15 | (+ 5) | 263 | 66 | 77 | 50 | 0.22 | 1.01 | 5.25 | 1.32 | 1.54 |
| -10 | (+14) | 333 | 84 | 98 | 56 | 0.25 | 1.28 | 5.93 | 1.49 | 1.74 |

| 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) | 43 | 11 | 13 | 27 | 0.13 | 0.18 | 1.59 | 0.40 | 0.46 |
| -30 | (-22) | 85 | 21 | 25 | 33 | 0.16 | 0.36 | 2.50 | 0.63 | 0.73 |
| -25 | (-13) | 127 | 32 | 37 | 39 | 0.18 | 0.53 | 3.19 | 0.80 | 0.94 |
| -20 | (- 4) | 171 | 43 | 50 | 46 | 0.20 | 0.72 | 3.74 | 0.94 | 1.10 |
| -15 | (+ 5) | 222 | 56 | 65 | 53 | 0.23 | 0.94 | 4.22 | 1.06 | 1.24 |
| -10 | (+14) | 281 | 71 | 82 | 60 | 0.26 | 1.20 | 4.69 | 1.18 | 1.37 |

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 | 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 +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 | | |