

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X20CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 875AA81 |

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 | | | ASHRAELBP32 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] |
| 207 | 52 | 61 | 40 | 0.19 | 0.65 | 5.16 | 1.30 | 1.51 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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) | 108 | 27 | 32 | 29 | 0.13 | 0.34 | 3.71 | 0.93 | 1.09 |
| -30 (-22) | 153 | 39 | 45 | 33 | 0.15 | 0.48 | 4.63 | 1.17 | 1.36 |
| -25 (-13) | 206 | 52 | 60 | 38 | 0.17 | 0.65 | 5.52 | 1.39 | 1.62 |
| -20 (- 4) | 271 | 68 | 79 | 42 | 0.19 | 0.85 | 6.42 | 1.62 | 1.88 |
| -15 (+ 5) | 348 | 88 | 102 | 47 | 0.21 | 1.09 | 7.37 | 1.86 | 2.16 |
| -10 (+14) | 439 | 111 | 129 | 52 | 0.23 | 1.38 | 8.40 | 2.12 | 2.46 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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) | 84 | 21 | 25 | 29 | 0.13 | 0.26 | 2.94 | 0.74 | 0.86 |
| -30 (-22) | 130 | 33 | 38 | 33 | 0.16 | 0.41 | 3.88 | 0.98 | 1.14 |
| -25 (-13) | 183 | 46 | 54 | 39 | 0.18 | 0.57 | 4.74 | 1.20 | 1.39 |
| -20 (- 4) | 246 | 62 | 72 | 44 | 0.20 | 0.77 | 5.57 | 1.40 | 1.63 |
| -15 (+ 5) | 320 | 81 | 94 | 50 | 0.22 | 1.01 | 6.39 | 1.61 | 1.87 |
| -10 (+14) | 407 | 103 | 119 | 56 | 0.25 | 1.28 | 7.26 | 1.83 | 2.13 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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) | 61 | 15 | 18 | 27 | 0.13 | 0.19 | 2.25 | 0.57 | 0.66 |
| -30 (-22) | 109 | 27 | 32 | 33 | 0.16 | 0.34 | 3.25 | 0.82 | 0.95 |
| -25 (-13) | 162 | 41 | 48 | 39 | 0.18 | 0.51 | 4.11 | 1.04 | 1.20 |
| -20 (- 4) | 224 | 57 | 66 | 46 | 0.20 | 0.71 | 4.89 | 1.23 | 1.43 |
| -15 (+ 5) | 296 | 75 | 87 | 53 | 0.23 | 0.93 | 5.62 | 1.42 | 1.65 |
| -10 (+14) | 381 | 96 | 112 | 60 | 0.26 | 1.20 | 6.35 | 1.60 | 1.86 |

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 | | |