

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X80CLT |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 701AA77 |

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 | 1/7 | [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) | 7.9 | [kg] (17.42 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/V230 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350)/4(350) | [µF(VAC minimum)] |
| 5 Motor protection | AE19BU | |
| 6 Start winding resistance | 18.65 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 13.71 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 7.47 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.24 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | 1.52 | [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] |
| 726 | 183 | 213 | 125 | 0.60 | 2.28 | 5.81 | 1.46 | 1.70 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 392 | 99 | 115 | 85 | 0.40 | 1.23 | 4.63 | 1.17 | 1.36 |
| -30 (-22) | 529 | 133 | 155 | 99 | 0.46 | 1.66 | 5.35 | 1.35 | 1.57 |
| -25 (-13) | 702 | 177 | 206 | 115 | 0.53 | 2.20 | 6.13 | 1.54 | 1.80 |
| -20 (- 4) | 910 | 229 | 267 | 131 | 0.61 | 2.86 | 6.96 | 1.75 | 2.04 |
| -15 (+ 5) | 1155 | 291 | 339 | 148 | 0.69 | 3.64 | 7.82 | 1.97 | 2.29 |
| -10 (+14) | 1438 | 362 | 421 | 165 | 0.77 | 4.54 | 8.69 | 2.19 | 2.55 |

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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) | 361 | 91 | 106 | 86 | 0.41 | 1.13 | 4.18 | 1.05 | 1.22 |
| -30 (-22) | 493 | 124 | 145 | 102 | 0.49 | 1.55 | 4.82 | 1.21 | 1.41 |
| -25 (-13) | 660 | 166 | 193 | 119 | 0.57 | 2.07 | 5.52 | 1.39 | 1.62 |
| -20 (- 4) | 861 | 217 | 252 | 138 | 0.66 | 2.71 | 6.25 | 1.58 | 1.83 |
| -15 (+ 5) | 1099 | 277 | 322 | 157 | 0.74 | 3.46 | 7.00 | 1.76 | 2.05 |
| -10 (+14) | 1375 | 346 | 403 | 178 | 0.84 | 4.34 | 7.75 | 1.95 | 2.27 |

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|-------------------------------|----------------------------|----------|--------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 326 | 82 | 95 | 84 | 0.40 | 1.02 | 3.89 | 0.98 | 1.14 |
| -30 (-22) | 452 | 114 | 132 | 102 | 0.48 | 1.42 | 4.45 | 1.12 | 1.30 |
| -25 (-13) | 612 | 154 | 179 | 121 | 0.58 | 1.92 | 5.06 | 1.27 | 1.48 |
| -20 (- 4) | 807 | 203 | 236 | 142 | 0.67 | 2.54 | 5.68 | 1.43 | 1.67 |
| -15 (+ 5) | 1037 | 261 | 304 | 164 | 0.78 | 3.27 | 6.31 | 1.59 | 1.85 |
| -10 (+14) | 1305 | 329 | 382 | 188 | 0.88 | 4.12 | 6.93 | 1.75 | 2.03 |

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 | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |