

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 | 187 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 187 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 | 1/7 | [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 | TSD | |
| 2.1 Starting device | TSD2-220V/TSD2-220V1.2/TSD2-D-220V | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350)/4(350) | [µF(VAC minimum)] |
| 5 Motor protection | CP4TMC288K61A5 | |
| 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) | 1.26 | [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 | 123 | 0.60 | 2.28 | 5.90 | 1.49 | 1.73 |

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 | 83 | 0.40 | 1.23 | 4.74 | 1.19 | 1.39 |
| -30 (-22) | 529 | 133 | 155 | 97 | 0.46 | 1.66 | 5.46 | 1.38 | 1.60 |
| -25 (-13) | 702 | 177 | 206 | 113 | 0.53 | 2.20 | 6.24 | 1.57 | 1.83 |
| -20 (- 4) | 910 | 229 | 267 | 129 | 0.61 | 2.86 | 7.07 | 1.78 | 2.07 |
| -15 (+ 5) | 1155 | 291 | 339 | 146 | 0.69 | 3.64 | 7.93 | 2.00 | 2.32 |
| -10 (+14) | 1438 | 362 | 421 | 163 | 0.77 | 4.54 | 8.80 | 2.22 | 2.58 |

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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 | 84 | 0.41 | 1.13 | 4.27 | 1.08 | 1.25 |
| -30 (-22) | 493 | 124 | 145 | 100 | 0.49 | 1.55 | 4.92 | 1.24 | 1.44 |
| -25 (-13) | 660 | 166 | 193 | 117 | 0.57 | 2.07 | 5.61 | 1.41 | 1.64 |
| -20 (- 4) | 861 | 217 | 252 | 136 | 0.66 | 2.71 | 6.34 | 1.60 | 1.86 |
| -15 (+ 5) | 1099 | 277 | 322 | 155 | 0.74 | 3.46 | 7.09 | 1.79 | 2.08 |
| -10 (+14) | 1375 | 346 | 403 | 176 | 0.84 | 4.34 | 7.84 | 1.98 | 2.30 |

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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 | 82 | 0.40 | 1.02 | 3.98 | 1.00 | 1.17 |
| -30 (-22) | 452 | 114 | 132 | 100 | 0.48 | 1.42 | 4.54 | 1.14 | 1.33 |
| -25 (-13) | 612 | 154 | 179 | 119 | 0.58 | 1.92 | 5.14 | 1.30 | 1.51 |
| -20 (- 4) | 807 | 203 | 236 | 140 | 0.67 | 2.54 | 5.76 | 1.45 | 1.69 |
| -15 (+ 5) | 1037 | 261 | 304 | 162 | 0.78 | 3.27 | 6.39 | 1.61 | 1.87 |
| -10 (+14) | 1305 | 329 | 382 | 186 | 0.88 | 4.12 | 7.01 | 1.77 | 2.05 |

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 | | |