

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X55CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 711UA97 |

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 | | [hp] |
| 2 Displacement | 9.04 | [cm ³] (0.552 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 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) | 7.65 | [kg] (16.87 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 | TSD3-220V/TY-QZ003 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350)/4(350) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM232KDB | |
| 6 Start winding resistance | 16.55 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 25.00 | [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] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [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] |
| 532 | 134 | 156 | 90 | 0.42 | 1.67 | 5.94 | 1.50 | 1.74 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|--|---------------------------|-----------|-------|--|
| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN 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) | 305 | 77 | 89 | 62 | 0.30 | 0.95 | 4.86 | 1.22 | 1.42 | |
| -30 (-22) | 401 | 101 | 118 | 72 | 0.34 | 1.26 | 5.59 | 1.41 | 1.64 | |
| -25 (-13) | 523 | 132 | 153 | 81 | 0.38 | 1.64 | 6.47 | 1.63 | 1.89 | |
| -20 (- 4) | 671 | 169 | 197 | 90 | 0.42 | 2.11 | 7.47 | 1.88 | 2.19 | |
| -15 (+ 5) | 846 | 213 | 248 | 99 | 0.47 | 2.66 | 8.60 | 2.17 | 2.52 | |
| -10 (+14) | 1049 | 264 | 307 | 107 | 0.51 | 3.31 | 9.85 | 2.48 | 2.89 | |

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|-------------------------------|----------------------------|--------------------------|-----|-----------------------------|-------------------------------|---|---------------------------|-----------|-------|--|
| 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) | 286 | 72 | 84 | 61 | 0.30 | 0.90 | 4.72 | 1.19 | 1.38 | |
| -30 (-22) | 386 | 97 | 113 | 72 | 0.35 | 1.21 | 5.38 | 1.36 | 1.58 | |
| -25 (-13) | 511 | 129 | 150 | 83 | 0.40 | 1.60 | 6.15 | 1.55 | 1.80 | |
| -20 (- 4) | 663 | 167 | 194 | 94 | 0.45 | 2.08 | 7.01 | 1.77 | 2.05 | |
| -15 (+ 5) | 842 | 212 | 247 | 106 | 0.50 | 2.65 | 7.95 | 2.00 | 2.33 | |
| -10 (+14) | 1049 | 264 | 307 | 117 | 0.56 | 3.31 | 8.97 | 2.26 | 2.63 | |

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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) | 266 | 67 | 78 | 61 | 0.31 | 0.83 | 4.39 | 1.11 | 1.29 | |
| -30 (-22) | 363 | 91 | 106 | 72 | 0.36 | 1.14 | 5.02 | 1.27 | 1.47 | |
| -25 (-13) | 487 | 123 | 143 | 85 | 0.41 | 1.53 | 5.71 | 1.44 | 1.67 | |
| -20 (- 4) | 637 | 161 | 187 | 98 | 0.47 | 2.00 | 6.45 | 1.63 | 1.89 | |
| -15 (+ 5) | 816 | 206 | 239 | 112 | 0.53 | 2.57 | 7.24 | 1.82 | 2.12 | |
| -10 (+14) | 1023 | 258 | 300 | 127 | 0.60 | 3.23 | 8.07 | 2.03 | 2.37 | |

E - PERFORMANCE - CURVES

| 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) | 242 | 61 | 71 | 61 | 0.31 | 0.76 | 3.96 | 1.00 | 1.16 |
| -30 | (-22) | 333 | 84 | 97 | 73 | 0.36 | 1.04 | 4.58 | 1.16 | 1.34 |
| -25 | (-13) | 450 | 113 | 132 | 86 | 0.42 | 1.41 | 5.23 | 1.32 | 1.53 |
| -20 | (- 4) | 594 | 150 | 174 | 101 | 0.48 | 1.87 | 5.89 | 1.48 | 1.72 |
| -15 | (+ 5) | 767 | 193 | 225 | 117 | 0.56 | 2.41 | 6.55 | 1.65 | 1.92 |
| -10 | (+14) | 968 | 244 | 284 | 134 | 0.63 | 3.06 | 7.22 | 1.82 | 2.12 |

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 | 5.1 +0.10/+0.00 [mm] (0.201" +0.004"/+0.000") |
| 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 |