

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X32CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513301889 |

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 | 5.96 | [cm ³] (0.364 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 15.000 | |
| 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) | 7.3 | [kg] (16.09 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELECTRICAL 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 | MI.E-START 2021 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 2.5(300)/2(300)/4(300) | [µF(VAC minimum)] |
| 5 Motor protection | AX24BNXX | |
| 6 Start winding resistance | 22.72 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 42.27 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 3.30 | [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 (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| 315 | 79 | 92 | 54 | 0.28 | 0.99 | 5.88 | 1.48 | 1.72 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN Static | | | | (Condensing temperature 35°C (+95°F)) | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|---------------------------------------|-----------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 221 | 56 | 65 | 33 | 0.20 | 0.69 | 6.63 | 1.67 | 1.94 |
| -30 | (-22) | 289 | 73 | 85 | 42 | 0.23 | 0.90 | 6.93 | 1.75 | 2.03 |
| -25 | (-13) | 368 | 93 | 108 | 49 | 0.25 | 1.15 | 7.64 | 1.92 | 2.24 |
| -20 | (- 4) | 464 | 117 | 136 | 54 | 0.28 | 1.46 | 8.67 | 2.18 | 2.54 |
| -15 | (+ 5) | 581 | 146 | 170 | 58 | 0.30 | 1.83 | 9.93 | 2.50 | 2.91 |
| -10 | (+14) | 723 | 182 | 212 | 63 | 0.32 | 2.28 | 11.34 | 2.86 | 3.32 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN Static | | | | (Condensing temperature 45°C (+113°F)) | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|--|-----------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 172 | 43 | 50 | 33 | 0.19 | 0.54 | 5.25 | 1.32 | 1.54 |
| -30 | (-22) | 244 | 61 | 71 | 43 | 0.23 | 0.76 | 5.67 | 1.43 | 1.66 |
| -25 | (-13) | 325 | 82 | 95 | 51 | 0.26 | 1.02 | 6.40 | 1.61 | 1.87 |
| -20 | (- 4) | 422 | 106 | 124 | 57 | 0.29 | 1.32 | 7.36 | 1.85 | 2.16 |
| -15 | (+ 5) | 537 | 135 | 157 | 63 | 0.32 | 1.69 | 8.46 | 2.13 | 2.48 |
| -10 | (+14) | 676 | 170 | 198 | 70 | 0.35 | 2.13 | 9.62 | 2.43 | 2.82 |

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN Static | | | | (Condensing temperature 55°C (+131°F)) | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|-------------------------------|--|-----------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 131 | 33 | 39 | 32 | 0.19 | 0.41 | 4.20 | 1.06 | 1.23 |
| -30 | (-22) | 205 | 52 | 60 | 43 | 0.23 | 0.64 | 4.75 | 1.20 | 1.39 |
| -25 | (-13) | 286 | 72 | 84 | 51 | 0.26 | 0.90 | 5.52 | 1.39 | 1.62 |
| -20 | (- 4) | 381 | 96 | 112 | 59 | 0.30 | 1.20 | 6.43 | 1.62 | 1.88 |
| -15 | (+ 5) | 493 | 124 | 144 | 67 | 0.34 | 1.55 | 7.39 | 1.86 | 2.17 |
| -10 | (+14) | 627 | 158 | 184 | 75 | 0.38 | 1.98 | 8.32 | 2.10 | 2.44 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @220V50Hz | | ASHRAE32-NOFAN Static | | | (Condensing temperature 65°C (+149°F)) | | | | | |
|-------------------------------|-------|---------------------------------|----------|-----|--|----------------------------|--------------------------|--------------------------------|-----------|-------|
| Evaporating temperature | | Cooling capacity (Qe) +/- 5% | | | Input power (We) +/- 5% | Electric current +/- 5% | Mass flow rate +/- 5% | Efficiency EER & COP +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 | (-31) | 101 | 26 | 30 | 29 | 0.18 | 0.32 | 3.47 | 0.87 | 1.02 |
| -30 | (-22) | 174 | 44 | 51 | 41 | 0.22 | 0.55 | 4.16 | 1.05 | 1.22 |
| -25 | (-13) | 254 | 64 | 74 | 50 | 0.26 | 0.80 | 4.99 | 1.26 | 1.46 |
| -20 | (- 4) | 344 | 87 | 101 | 59 | 0.30 | 1.08 | 5.87 | 1.48 | 1.72 |
| -15 | (+ 5) | 451 | 114 | 132 | 68 | 0.34 | 1.42 | 6.71 | 1.69 | 1.97 |
| -10 | (+14) | 579 | 146 | 170 | 79 | 0.39 | 1.83 | 7.42 | 1.87 | 2.17 |

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 + 24° 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 | | |