

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM X70CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 898ZA98 |

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 | 11.36 | [cm ³] (0.693 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 21.400 | |
| 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) | 8.1 | [kg] (17.86 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 | 5(330) | [μF(VAC minimum)] |
| 5 Motor protection | AE37FQ | |
| 6 Start winding resistance | 15.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 20.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 4.90 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.85 | [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] |
| 660 | 166 | 193 | 114 | 0.51 | 2.07 | 5.77 | 1.45 | 1.69 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 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) | 384 | 97 | 112 | 76 | 0.35 | 1.20 | 5.06 | 1.27 | 1.48 |
| -30 (-22) | 514 | 129 | 150 | 87 | 0.40 | 1.61 | 5.91 | 1.49 | 1.73 |
| -25 (-13) | 673 | 170 | 197 | 100 | 0.45 | 2.11 | 6.78 | 1.71 | 1.99 |
| -20 (- 4) | 865 | 218 | 253 | 113 | 0.51 | 2.72 | 7.70 | 1.94 | 2.26 |
| -15 (+ 5) | 1090 | 275 | 319 | 126 | 0.57 | 3.43 | 8.66 | 2.18 | 2.54 |
| -10 (+14) | 1351 | 340 | 396 | 140 | 0.62 | 4.26 | 9.66 | 2.43 | 2.83 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 354 | 89 | 104 | 78 | 0.36 | 1.11 | 4.54 | 1.14 | 1.33 |
| -30 (-22) | 481 | 121 | 141 | 91 | 0.41 | 1.51 | 5.31 | 1.34 | 1.56 |
| -25 (-13) | 638 | 161 | 187 | 104 | 0.47 | 2.00 | 6.09 | 1.54 | 1.79 |
| -20 (- 4) | 827 | 208 | 242 | 120 | 0.53 | 2.60 | 6.89 | 1.74 | 2.02 |
| -15 (+ 5) | 1049 | 264 | 307 | 136 | 0.60 | 3.30 | 7.71 | 1.94 | 2.26 |
| -10 (+14) | 1307 | 329 | 383 | 153 | 0.67 | 4.12 | 8.55 | 2.15 | 2.50 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 322 | 81 | 94 | 79 | 0.36 | 1.01 | 4.08 | 1.03 | 1.20 |
| -30 (-22) | 443 | 112 | 130 | 93 | 0.42 | 1.39 | 4.79 | 1.21 | 1.40 |
| -25 (-13) | 595 | 150 | 174 | 108 | 0.48 | 1.87 | 5.49 | 1.38 | 1.61 |
| -20 (- 4) | 778 | 196 | 228 | 125 | 0.55 | 2.45 | 6.18 | 1.56 | 1.81 |
| -15 (+ 5) | 996 | 251 | 292 | 144 | 0.64 | 3.14 | 6.87 | 1.73 | 2.01 |
| -10 (+14) | 1249 | 315 | 366 | 165 | 0.73 | 3.94 | 7.57 | 1.91 | 2.22 |

E - PERFORMANCE - CURVES

| 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) | 288 | 73 | 84 | 80 | 0.37 | 0.90 | 3.60 | 0.91 | 1.05 |
| -30 | (-22) | 403 | 101 | 118 | 95 | 0.42 | 1.26 | 4.26 | 1.07 | 1.25 |
| -25 | (-13) | 547 | 138 | 160 | 112 | 0.50 | 1.72 | 4.90 | 1.23 | 1.43 |
| -20 | (- 4) | 723 | 182 | 212 | 131 | 0.58 | 2.27 | 5.50 | 1.39 | 1.61 |
| -15 | (+ 5) | 933 | 235 | 273 | 153 | 0.68 | 2.94 | 6.09 | 1.53 | 1.78 |
| -10 | (+14) | 1179 | 297 | 346 | 177 | 0.78 | 3.72 | 6.66 | 1.68 | 1.95 |

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 | | |