

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | EM X40CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 875DA72 |

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 | 7.23 | [cm ³] (0.441 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 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) | 7.61 | [kg] (16.78 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 | |
| 3 Start capacitor | - | [μF(VAC minimum)] |
| 4 Run capacitor | 4(440) | [μF(VAC minimum)] |
| 5 Motor protection | 4TM 166LFBYY-73 | |
| 6 Start winding resistance | 23.00 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 33.00 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 3.26 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [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] |
| 411 | 104 | 120 | 70 | 0.33 | 1.29 | 5.85 | 1.47 | 1.71 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 231 | 58 | 68 | 50 | 0.24 | 0.72 | 4.57 | 1.15 | 1.34 |
| -30 | (-22) | 308 | 78 | 90 | 57 | 0.27 | 0.96 | 5.43 | 1.37 | 1.59 |
| -25 | (-13) | 407 | 103 | 119 | 65 | 0.31 | 1.28 | 6.23 | 1.57 | 1.83 |
| -20 | (- 4) | 529 | 133 | 155 | 75 | 0.35 | 1.66 | 7.04 | 1.77 | 2.06 |
| -15 | (+ 5) | 674 | 170 | 198 | 86 | 0.39 | 2.12 | 7.89 | 1.99 | 2.31 |
| -10 | (+14) | 842 | 212 | 247 | 96 | 0.43 | 2.66 | 8.84 | 2.23 | 2.59 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 202 | 51 | 59 | 51 | 0.24 | 0.63 | 4.01 | 1.01 | 1.17 |
| -30 | (-22) | 277 | 70 | 81 | 58 | 0.28 | 0.87 | 4.82 | 1.21 | 1.41 |
| -25 | (-13) | 374 | 94 | 110 | 67 | 0.32 | 1.17 | 5.54 | 1.40 | 1.62 |
| -20 | (- 4) | 493 | 124 | 145 | 79 | 0.37 | 1.55 | 6.23 | 1.57 | 1.83 |
| -15 | (+ 5) | 636 | 160 | 186 | 91 | 0.42 | 2.00 | 6.94 | 1.75 | 2.03 |
| -10 | (+14) | 802 | 202 | 235 | 104 | 0.47 | 2.53 | 7.72 | 1.94 | 2.26 |

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|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 180 | 45 | 53 | 49 | 0.24 | 0.56 | 3.67 | 0.93 | 1.08 |
| -30 | (-22) | 251 | 63 | 73 | 57 | 0.28 | 0.79 | 4.42 | 1.11 | 1.30 |
| -25 | (-13) | 343 | 86 | 101 | 68 | 0.32 | 1.08 | 5.06 | 1.27 | 1.48 |
| -20 | (- 4) | 459 | 116 | 134 | 82 | 0.38 | 1.44 | 5.62 | 1.42 | 1.65 |
| -15 | (+ 5) | 597 | 150 | 175 | 97 | 0.44 | 1.88 | 6.17 | 1.55 | 1.81 |
| -10 | (+14) | 759 | 191 | 222 | 112 | 0.51 | 2.39 | 6.75 | 1.70 | 1.98 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 2 Tray holder | No | | |
| 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 | 4.94 +0.08/-0.08 | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Straight | | |
| 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 42° | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |