

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | EM U46CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 896GA77 |

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 | RSIR-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 | 7.96 | [cm ³] (0.486 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 17.600 | |
| 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) | 7.5 | [kg] (16.53 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 | V230 | |
| 3 Start capacitor | - | [μF(VAC minimum)] |
| 4 Run capacitor | 4(440) | [μF(VAC minimum)] |
| 5 Motor protection | T0225/07 | |
| 6 Start winding resistance | 22.00 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 24.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 4.60 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.45 | [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] |
| 461 | 116 | 135 | 93 | 0.46 | 1.45 | 4.97 | 1.25 | 1.46 |

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) | 228 | 57 | 67 | 67 | 0.43 | 0.71 | 3.37 | 0.85 | 0.99 |
| -30 | (-22) | 323 | 82 | 95 | 75 | 0.43 | 1.01 | 4.28 | 1.08 | 1.26 |
| -25 | (-13) | 439 | 111 | 129 | 87 | 0.44 | 1.38 | 5.05 | 1.27 | 1.48 |
| -20 | (- 4) | 575 | 145 | 169 | 100 | 0.46 | 1.81 | 5.76 | 1.45 | 1.69 |
| -15 | (+ 5) | 736 | 185 | 216 | 113 | 0.49 | 2.32 | 6.51 | 1.64 | 1.91 |
| -10 | (+14) | 922 | 232 | 270 | 125 | 0.52 | 2.91 | 7.42 | 1.87 | 2.17 |

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|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 212 | 53 | 62 | 67 | 0.43 | 0.66 | 3.17 | 0.80 | 0.93 |
| -30 | (-22) | 304 | 77 | 89 | 76 | 0.43 | 0.95 | 4.01 | 1.01 | 1.17 |
| -25 | (-13) | 416 | 105 | 122 | 89 | 0.45 | 1.30 | 4.67 | 1.18 | 1.37 |
| -20 | (- 4) | 547 | 138 | 160 | 104 | 0.47 | 1.72 | 5.26 | 1.32 | 1.54 |
| -15 | (+ 5) | 702 | 177 | 206 | 120 | 0.50 | 2.21 | 5.87 | 1.48 | 1.72 |
| -10 | (+14) | 882 | 222 | 258 | 134 | 0.53 | 2.78 | 6.59 | 1.66 | 1.93 |

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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) | 188 | 48 | 55 | 67 | 0.43 | 0.59 | 2.84 | 0.72 | 0.83 |
| -30 | (-22) | 283 | 71 | 83 | 77 | 0.44 | 0.89 | 3.68 | 0.93 | 1.08 |
| -25 | (-13) | 395 | 99 | 116 | 91 | 0.46 | 1.24 | 4.32 | 1.09 | 1.27 |
| -20 | (- 4) | 526 | 133 | 154 | 108 | 0.49 | 1.66 | 4.86 | 1.22 | 1.42 |
| -15 | (+ 5) | 680 | 171 | 199 | 126 | 0.52 | 2.14 | 5.39 | 1.36 | 1.58 |
| -10 | (+14) | 857 | 216 | 251 | 142 | 0.56 | 2.70 | 6.02 | 1.52 | 1.76 |

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 | 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 | | |