

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y20CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 897AA83 |

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 | 3.97 | [cm ³] (0.242 cu.in) |
| 2.1 Bore [mm] | 19.000 | |
| 2.2 Stroke [mm] | 14.000 | |
| 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) | 7.7 | [kg] (16.98 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 | 2.5(440) | [μF(VAC minimum)] |
| 5 Motor protection | T0285/07 | |
| 6 Start winding resistance | 27.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 40.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 2.35 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.20 | [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] |
| 213 | 54 | 62 | 43 | 0.20 | 0.67 | 4.95 | 1.25 | 1.45 |

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) | 111 | 28 | 33 | 32 | 0.17 | 0.35 | 3.51 | 0.88 | 1.03 |
| -30 | (-22) | 150 | 38 | 44 | 35 | 0.18 | 0.47 | 4.28 | 1.08 | 1.26 |
| -25 | (-13) | 206 | 52 | 60 | 39 | 0.19 | 0.65 | 5.21 | 1.31 | 1.53 |
| -20 | (- 4) | 276 | 70 | 81 | 44 | 0.21 | 0.87 | 6.24 | 1.57 | 1.83 |
| -15 | (+ 5) | 361 | 91 | 106 | 49 | 0.23 | 1.14 | 7.37 | 1.86 | 2.16 |
| -10 | (+14) | 457 | 115 | 134 | 54 | 0.25 | 1.44 | 8.55 | 2.16 | 2.51 |

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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) | 99 | 25 | 29 | 31 | 0.17 | 0.31 | 3.20 | 0.81 | 0.94 |
| -30 | (-22) | 134 | 34 | 39 | 35 | 0.18 | 0.42 | 3.84 | 0.97 | 1.12 |
| -25 | (-13) | 186 | 47 | 54 | 40 | 0.19 | 0.58 | 4.59 | 1.16 | 1.35 |
| -20 | (- 4) | 254 | 64 | 74 | 46 | 0.21 | 0.80 | 5.45 | 1.37 | 1.60 |
| -15 | (+ 5) | 335 | 85 | 98 | 53 | 0.24 | 1.06 | 6.37 | 1.61 | 1.87 |
| -10 | (+14) | 430 | 108 | 126 | 59 | 0.26 | 1.36 | 7.33 | 1.85 | 2.15 |

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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) | 82 | 21 | 24 | 30 | 0.17 | 0.26 | 2.77 | 0.70 | 0.81 |
| -30 | (-22) | 114 | 29 | 33 | 35 | 0.18 | 0.36 | 3.33 | 0.84 | 0.98 |
| -25 | (-13) | 164 | 41 | 48 | 41 | 0.20 | 0.51 | 4.00 | 1.01 | 1.17 |
| -20 | (- 4) | 229 | 58 | 67 | 48 | 0.22 | 0.72 | 4.75 | 1.20 | 1.39 |
| -15 | (+ 5) | 310 | 78 | 91 | 56 | 0.25 | 0.98 | 5.55 | 1.40 | 1.63 |
| -10 | (+14) | 403 | 102 | 118 | 63 | 0.28 | 1.27 | 6.37 | 1.61 | 1.87 |

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 | 4.95 +0.05/+0.05 | [mm] | (0.195" +0.002"/+0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Vertical | | |
| 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 | | |