

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y46CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 894MA76 |

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-Medium Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -5°C | (-31°F to 23°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 pressures/temperature | | | |
| 9.1 Operating (gauge) | 7.7 | [kgf/cm ²] (109 psig) | / °C - °F |
| 9.2 Peak (gauge) | 9.8 | [kgf/cm ²] (139 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 | MINERAL / ISO7 | |
| 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 | MSDA3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(450) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM142NFBYY-53 | |
| 6 Start winding resistance | 22.47 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 26.85 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | - | [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] |
| 462 | 116 | 135 | 87 | 0.41 | 1.45 | 5.32 | 1.34 | 1.56 |

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) | 275 | 69 | 81 | 60 | 0.27 | 0.86 | 4.61 | 1.16 | 1.35 |
| -30 | (-22) | 365 | 92 | 107 | 67 | 0.31 | 1.14 | 5.44 | 1.37 | 1.59 |
| -25 | (-13) | 474 | 120 | 139 | 75 | 0.34 | 1.49 | 6.33 | 1.59 | 1.85 |
| -20 | (- 4) | 605 | 152 | 177 | 83 | 0.38 | 1.90 | 7.28 | 1.84 | 2.13 |
| -15 | (+ 5) | 760 | 191 | 223 | 91 | 0.42 | 2.39 | 8.30 | 2.09 | 2.43 |
| -10 | (+14) | 942 | 237 | 276 | 100 | 0.46 | 2.97 | 9.37 | 2.36 | 2.75 |
| -5 | (+23) | 1154 | 291 | 338 | 110 | 0.50 | 3.65 | 10.50 | 2.65 | 3.08 |

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|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 256 | 65 | 75 | 61 | 0.28 | 0.80 | 4.19 | 1.06 | 1.23 |
| -30 | (-22) | 345 | 87 | 101 | 70 | 0.32 | 1.08 | 4.91 | 1.24 | 1.44 |
| -25 | (-13) | 451 | 114 | 132 | 79 | 0.36 | 1.42 | 5.69 | 1.43 | 1.67 |
| -20 | (- 4) | 578 | 146 | 169 | 89 | 0.40 | 1.82 | 6.51 | 1.64 | 1.91 |
| -15 | (+ 5) | 729 | 184 | 214 | 99 | 0.45 | 2.30 | 7.37 | 1.86 | 2.16 |
| -10 | (+14) | 906 | 228 | 266 | 110 | 0.50 | 2.86 | 8.26 | 2.08 | 2.42 |
| -5 | (+23) | 1112 | 280 | 326 | 121 | 0.55 | 3.52 | 9.19 | 2.32 | 2.69 |

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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) | 229 | 58 | 67 | 62 | 0.28 | 0.72 | 3.72 | 0.94 | 1.09 |
| -30 | (-22) | 316 | 80 | 93 | 72 | 0.33 | 0.99 | 4.38 | 1.10 | 1.28 |
| -25 | (-13) | 420 | 106 | 123 | 83 | 0.38 | 1.32 | 5.06 | 1.28 | 1.48 |
| -20 | (- 4) | 543 | 137 | 159 | 94 | 0.43 | 1.71 | 5.77 | 1.45 | 1.69 |
| -15 | (+ 5) | 689 | 174 | 202 | 106 | 0.48 | 2.17 | 6.50 | 1.64 | 1.90 |
| -10 | (+14) | 861 | 217 | 252 | 119 | 0.54 | 2.72 | 7.25 | 1.83 | 2.12 |
| -5 | (+23) | 1062 | 267 | 311 | 133 | 0.60 | 3.36 | 8.01 | 2.02 | 2.35 |

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) | 202 | 51 | 59 | 61 | 0.28 | 0.63 | 3.29 | 0.83 | 0.97 |
| -30 | (-22) | 286 | 72 | 84 | 73 | 0.33 | 0.90 | 3.91 | 0.99 | 1.15 |
| -25 | (-13) | 387 | 97 | 113 | 85 | 0.38 | 1.21 | 4.53 | 1.14 | 1.33 |
| -20 | (- 4) | 506 | 128 | 148 | 98 | 0.44 | 1.59 | 5.16 | 1.30 | 1.51 |
| -15 | (+ 5) | 648 | 163 | 190 | 112 | 0.50 | 2.04 | 5.79 | 1.46 | 1.70 |
| -10 | (+14) | 814 | 205 | 239 | 127 | 0.57 | 2.57 | 6.41 | 1.62 | 1.88 |
| -5 | (+23) | 1008 | 254 | 295 | 143 | 0.65 | 3.19 | 7.03 | 1.77 | 2.06 |

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 +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 | | |