

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM B40CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513300180 |

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 | 187 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 187 to 255 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 | 1/6 | [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 | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 8 | [kg] (17.64 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 | TSD-220V0.6 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 3(330) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189KFBYY-53 | |
| 6 Start winding resistance | | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | | [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] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - 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] |
| 437 | 110 | 128 | 67 | 0.32 | 1.37 | 6.48 | 1.63 | 1.90 |

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) | 251 | 63 | 74 | 46 | 0.24 | 0.79 | 5.41 | 1.36 | 1.58 |
| -30 (-22) | 328 | 83 | 96 | 54 | 0.27 | 1.03 | 6.10 | 1.54 | 1.79 |
| -25 (-13) | 422 | 106 | 124 | 61 | 0.30 | 1.32 | 6.88 | 1.73 | 2.02 |
| -20 (- 4) | 535 | 135 | 157 | 69 | 0.33 | 1.68 | 7.74 | 1.95 | 2.27 |
| -15 (+ 5) | 669 | 169 | 196 | 77 | 0.37 | 2.11 | 8.70 | 2.19 | 2.55 |
| -10 (+14) | 827 | 208 | 242 | 85 | 0.41 | 2.61 | 9.76 | 2.46 | 2.86 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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 | 48 | 0.25 | 0.72 | 4.76 | 1.20 | 1.40 |
| -30 (-22) | 307 | 77 | 90 | 56 | 0.28 | 0.96 | 5.44 | 1.37 | 1.59 |
| -25 (-13) | 400 | 101 | 117 | 65 | 0.31 | 1.26 | 6.17 | 1.55 | 1.81 |
| -20 (- 4) | 513 | 129 | 150 | 74 | 0.35 | 1.61 | 6.95 | 1.75 | 2.04 |
| -15 (+ 5) | 646 | 163 | 189 | 83 | 0.40 | 2.03 | 7.79 | 1.96 | 2.28 |
| -10 (+14) | 802 | 202 | 235 | 92 | 0.44 | 2.53 | 8.69 | 2.19 | 2.55 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 205 | 52 | 60 | 48 | 0.24 | 0.64 | 4.30 | 1.08 | 1.26 |
| -30 (-22) | 279 | 70 | 82 | 56 | 0.28 | 0.88 | 4.94 | 1.25 | 1.45 |
| -25 (-13) | 370 | 93 | 108 | 66 | 0.32 | 1.16 | 5.60 | 1.41 | 1.64 |
| -20 (- 4) | 478 | 120 | 140 | 76 | 0.37 | 1.50 | 6.28 | 1.58 | 1.84 |
| -15 (+ 5) | 606 | 153 | 178 | 87 | 0.42 | 1.91 | 6.98 | 1.76 | 2.04 |
| -10 (+14) | 758 | 191 | 222 | 98 | 0.47 | 2.39 | 7.70 | 1.94 | 2.26 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | European Standard EUEM | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 25° up + 45° to Back | | |
| 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 0° up + 24° to Back | | |
| 3.3 PROCESS | 6.2 +0.05/+0.05 | [mm] | (0.244" +0.002"/+0.002") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 40° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |