

COMPRESSOR DEFINITION

| | |
|---------------------------|----------------|
| Designation | EM B66CLC |
| Nominal Voltage/Frequency | 100 V 50-60 Hz |
| Engineering Number | 513304518 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 100 / 50-60 | [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 | 85 to 110 V | 85 to 110 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 85 to 110 V | 85 to 110 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 | 10.61 | [cm ³] (0.647 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 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) | 8.04 | [kg] (17.72 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 100 V 50-60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 8M4R7MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM762KFBYY-53 | |
| 6 Start winding resistance | 3.65 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.45 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 18.50/17.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | 3.10/2.90 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @100V50Hz | | | 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] |
| 634 | 160 | 186 | 120 | 2.04 | 1.99 | 5.30 | 1.34 | 1.55 |

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @100V60Hz | | | 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] |
| 733 | 185 | 215 | 127 | 1.64 | 2.30 | 5.78 | 1.46 | 1.69 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @100V50Hz | | | 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) | 358 | 90 | 105 | 85 | 0.38 | 1.12 | 4.22 | 1.06 | 1.24 |
| -30 (-22) | 497 | 125 | 146 | 96 | 4.17 | 1.56 | 5.14 | 1.30 | 1.51 |
| -25 (-13) | 653 | 165 | 191 | 108 | 4.36 | 2.05 | 6.07 | 1.53 | 1.78 |
| -20 (- 4) | 834 | 210 | 244 | 119 | 2.64 | 2.62 | 7.03 | 1.77 | 2.06 |
| -15 (+ 5) | 1048 | 264 | 307 | 130 | 0.70 | 3.30 | 8.08 | 2.04 | 2.37 |
| -10 (+14) | 1302 | 328 | 382 | 141 | 0.21 | 4.11 | 9.27 | 2.34 | 2.72 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @100V50Hz | | | 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) | 331 | 83 | 97 | 86 | 1.56 | 1.04 | 3.84 | 0.97 | 1.13 |
| -30 (-22) | 467 | 118 | 137 | 99 | 5.37 | 1.46 | 4.70 | 1.18 | 1.38 |
| -25 (-13) | 620 | 156 | 182 | 112 | 5.36 | 1.94 | 5.53 | 1.39 | 1.62 |
| -20 (- 4) | 798 | 201 | 234 | 125 | 3.23 | 2.51 | 6.37 | 1.61 | 1.87 |
| -15 (+ 5) | 1010 | 255 | 296 | 139 | 0.65 | 3.18 | 7.27 | 1.83 | 2.13 |
| -10 (+14) | 1263 | 318 | 370 | 153 | - 0.68 | 3.99 | 8.28 | 2.09 | 2.43 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @100V50Hz | | 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) | 295 | 74 | 86 | 86 | 5.90 | 0.92 | 3.42 | 0.86 | 1.00 | |
| -30 (-22) | 426 | 107 | 125 | 100 | 10.18 | 1.34 | 4.25 | 1.07 | 1.25 | |
| -25 (-13) | 576 | 145 | 169 | 115 | 10.42 | 1.81 | 5.02 | 1.27 | 1.47 | |
| -20 (- 4) | 751 | 189 | 220 | 130 | 8.32 | 2.36 | 5.78 | 1.46 | 1.69 | |
| -15 (+ 5) | 961 | 242 | 282 | 146 | 5.57 | 3.03 | 6.57 | 1.65 | 1.92 | |
| -10 (+14) | 1213 | 306 | 355 | 163 | 3.84 | 3.83 | 7.43 | 1.87 | 2.18 | |

| TEST CONDITIONS: @100V50Hz | | 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) | 250 | 63 | 73 | 85 | 0.18 | 0.78 | 2.93 | 0.74 | 0.86 | |
| -30 (-22) | 376 | 95 | 110 | 100 | 5.02 | 1.18 | 3.76 | 0.95 | 1.10 | |
| -25 (-13) | 521 | 131 | 153 | 116 | 5.97 | 1.64 | 4.51 | 1.14 | 1.32 | |
| -20 (- 4) | 694 | 175 | 203 | 133 | 4.36 | 2.18 | 5.22 | 1.32 | 1.53 | |
| -15 (+ 5) | 901 | 227 | 264 | 152 | 1.87 | 2.84 | 5.93 | 1.50 | 1.74 | |
| -10 (+14) | 1151 | 290 | 337 | 171 | 0.19 | 3.63 | 6.69 | 1.69 | 1.96 | |

| TEST CONDITIONS: @100V60Hz | | 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) | 430 | 108 | 126 | 87 | 1.33 | 1.35 | 4.91 | 1.24 | 1.44 | |
| -30 (-22) | 575 | 145 | 169 | 100 | 1.42 | 1.80 | 5.78 | 1.46 | 1.69 | |
| -25 (-13) | 744 | 187 | 218 | 112 | 1.51 | 2.33 | 6.66 | 1.68 | 1.95 | |
| -20 (- 4) | 946 | 238 | 277 | 125 | 1.62 | 2.97 | 7.58 | 1.91 | 2.22 | |
| -15 (+ 5) | 1190 | 300 | 349 | 139 | 1.74 | 3.75 | 8.54 | 2.15 | 2.50 | |
| -10 (+14) | 1487 | 375 | 436 | 155 | 1.88 | 4.69 | 9.57 | 2.41 | 2.80 | |

| TEST CONDITIONS: @100V60Hz | | 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) | 404 | 102 | 118 | 90 | 1.35 | 1.26 | 4.48 | 1.13 | 1.31 | |
| -30 (-22) | 547 | 138 | 160 | 104 | 1.45 | 1.72 | 5.27 | 1.33 | 1.54 | |
| -25 (-13) | 712 | 179 | 209 | 118 | 1.56 | 2.23 | 6.06 | 1.53 | 1.78 | |
| -20 (- 4) | 908 | 229 | 266 | 132 | 1.68 | 2.85 | 6.86 | 1.73 | 2.01 | |
| -15 (+ 5) | 1145 | 288 | 335 | 148 | 1.82 | 3.60 | 7.70 | 1.94 | 2.26 | |
| -10 (+14) | 1432 | 361 | 420 | 166 | 1.98 | 4.52 | 8.59 | 2.17 | 2.52 | |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @100V60Hz | | 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) | 369 | 93 | 108 | 91 | 1.36 | 1.16 | 4.04 | 1.02 | 1.19 |
| -30 | (-22) | 510 | 129 | 149 | 106 | 1.47 | 1.60 | 4.78 | 1.21 | 1.40 |
| -25 | (-13) | 670 | 169 | 196 | 122 | 1.60 | 2.10 | 5.50 | 1.39 | 1.61 |
| -20 | (- 4) | 859 | 217 | 252 | 138 | 1.73 | 2.70 | 6.22 | 1.57 | 1.82 |
| -15 | (+ 5) | 1087 | 274 | 319 | 156 | 1.89 | 3.42 | 6.96 | 1.75 | 2.04 |
| -10 | (+14) | 1363 | 343 | 399 | 176 | 2.07 | 4.30 | 7.73 | 1.95 | 2.27 |

| TEST CONDITIONS: @100V60Hz | | 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) | 324 | 82 | 95 | 91 | 1.35 | 1.02 | 3.58 | 0.90 | 1.05 |
| -30 | (-22) | 462 | 116 | 135 | 107 | 1.48 | 1.45 | 4.29 | 1.08 | 1.26 |
| -25 | (-13) | 617 | 155 | 181 | 124 | 1.62 | 1.94 | 4.96 | 1.25 | 1.45 |
| -20 | (- 4) | 798 | 201 | 234 | 142 | 1.78 | 2.51 | 5.62 | 1.42 | 1.65 |
| -15 | (+ 5) | 1016 | 256 | 298 | 162 | 1.95 | 3.20 | 6.28 | 1.58 | 1.84 |
| -10 | (+14) | 1280 | 323 | 375 | 184 | 2.15 | 4.04 | 6.96 | 1.75 | 2.04 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | Universal EUEM | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Slanted 42° up + 45° to Back | | |
| 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 | Slanted parallel BP+24°to Back | | |
| 3.3 PROCESS | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted parallel BP+45°to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |