

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM B55CLC |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513300284 |

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 | 1/4 | [hp] |
| 2 Displacement | 9.04 | [cm ³] (0.552 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 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) | 8.55 | [kg] (18.85 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 | 5(300)/4(300) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM232KFBYY-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] |
| 552 | 139 | 162 | 86 | 0.40 | 1.73 | 6.42 | 1.62 | 1.88 |

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) | 330 | 83 | 97 | 59 | 0.29 | 1.03 | 5.56 | 1.40 | 1.63 |
| -30 (-22) | 437 | 110 | 128 | 66 | 0.32 | 1.37 | 6.57 | 1.65 | 1.92 |
| -25 (-13) | 562 | 142 | 165 | 75 | 0.35 | 1.76 | 7.55 | 1.90 | 2.21 |
| -20 (- 4) | 712 | 179 | 208 | 83 | 0.39 | 2.24 | 8.55 | 2.15 | 2.50 |
| -15 (+ 5) | 890 | 224 | 261 | 93 | 0.43 | 2.80 | 9.59 | 2.42 | 2.81 |
| -10 (+14) | 1102 | 278 | 323 | 103 | 0.48 | 3.48 | 10.72 | 2.70 | 3.14 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|---|---------------------------|-----------|-------|
| 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) | 305 | 77 | 89 | 59 | 0.29 | 0.95 | 5.16 | 1.30 | 1.51 |
| -30 (-22) | 411 | 104 | 121 | 68 | 0.33 | 1.29 | 6.00 | 1.51 | 1.76 |
| -25 (-13) | 536 | 135 | 157 | 79 | 0.37 | 1.68 | 6.81 | 1.72 | 2.00 |
| -20 (- 4) | 683 | 172 | 200 | 90 | 0.42 | 2.15 | 7.62 | 1.92 | 2.23 |
| -15 (+ 5) | 859 | 216 | 252 | 101 | 0.47 | 2.70 | 8.47 | 2.13 | 2.48 |
| -10 (+14) | 1068 | 269 | 313 | 114 | 0.53 | 3.37 | 9.38 | 2.36 | 2.75 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|---|---------------------------|-----------|-------|
| 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) | 280 | 70 | 82 | 59 | 0.29 | 0.88 | 4.75 | 1.20 | 1.39 |
| -30 (-22) | 386 | 97 | 113 | 70 | 0.34 | 1.21 | 5.49 | 1.38 | 1.61 |
| -25 (-13) | 509 | 128 | 149 | 82 | 0.39 | 1.60 | 6.19 | 1.56 | 1.81 |
| -20 (- 4) | 655 | 165 | 192 | 96 | 0.45 | 2.06 | 6.87 | 1.73 | 2.01 |
| -15 (+ 5) | 828 | 209 | 243 | 110 | 0.51 | 2.61 | 7.57 | 1.91 | 2.22 |
| -10 (+14) | 1035 | 261 | 303 | 124 | 0.58 | 3.27 | 8.32 | 2.10 | 2.44 |

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) | 239 | 60 | 70 | 57 | 0.29 | 0.75 | 4.18 | 1.05 | 1.22 |
| -30 | (-22) | 345 | 87 | 101 | 70 | 0.34 | 1.08 | 4.88 | 1.23 | 1.43 |
| -25 | (-13) | 468 | 118 | 137 | 85 | 0.40 | 1.47 | 5.52 | 1.39 | 1.62 |
| -20 | (- 4) | 612 | 154 | 179 | 100 | 0.47 | 1.92 | 6.13 | 1.54 | 1.80 |
| -15 | (+ 5) | 783 | 197 | 229 | 116 | 0.54 | 2.47 | 6.75 | 1.70 | 1.98 |
| -10 | (+14) | 987 | 249 | 289 | 133 | 0.62 | 3.11 | 7.40 | 1.87 | 2.17 |

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 40° up + 45° to Back | | |
| 3.2 DISCHARGE | 4.2 +0.10/-0.05 | [mm] | (0.165" +0.004"/-0.002") |
| 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 | | |