

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2S60CLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513304609 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 3 Nominal voltage and frequency | 115-127 / 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 | RSIR | | |
| 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 | - | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | - | - | - |
| 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 | 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) | 7.06 | [kg] (15.56 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|--|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 115-127 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 8EA14C1/8EA14E63/8EA21C1/QPS2-A4R7MG1/QPS2-A4R7M | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 5TM427KFBYY-53 | |
| 6 Start winding resistance | 5.89 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.01 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 13.64 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 3.30 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 3.68 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - TUV - UKCA | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @127V60Hz | | | 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] |
| 607 | 153 | 178 | 114 | 1.57 | 1.91 | 5.31 | 1.34 | 1.56 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|---------------------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @127V60Hz | | 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) | 359 | 90 | 105 | 79 | 1.42 | 1.12 | 4.52 | 1.14 | 1.32 |
| -30 (-22) | 483 | 122 | 142 | 91 | 1.46 | 1.51 | 5.31 | 1.34 | 1.56 |
| -25 (-13) | 641 | 162 | 188 | 104 | 1.52 | 2.01 | 6.19 | 1.56 | 1.81 |
| -20 (- 4) | 834 | 210 | 244 | 117 | 1.58 | 2.62 | 7.14 | 1.80 | 2.09 |
| -15 (+ 5) | 1062 | 268 | 311 | 131 | 1.65 | 3.34 | 8.15 | 2.05 | 2.39 |
| -10 (+14) | 1327 | 334 | 389 | 144 | 1.73 | 4.19 | 9.22 | 2.32 | 2.70 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS: @127V60Hz | | 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) | 330 | 83 | 97 | 80 | 1.43 | 1.03 | 4.13 | 1.04 | 1.21 |
| -30 (-22) | 448 | 113 | 131 | 93 | 1.47 | 1.40 | 4.84 | 1.22 | 1.42 |
| -25 (-13) | 600 | 151 | 176 | 107 | 1.53 | 1.88 | 5.61 | 1.41 | 1.64 |
| -20 (- 4) | 787 | 198 | 231 | 122 | 1.61 | 2.47 | 6.43 | 1.62 | 1.89 |
| -15 (+ 5) | 1010 | 255 | 296 | 138 | 1.69 | 3.18 | 7.31 | 1.84 | 2.14 |
| -10 (+14) | 1270 | 320 | 372 | 155 | 1.78 | 4.01 | 8.23 | 2.07 | 2.41 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS: @127V60Hz | | 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) | 298 | 75 | 87 | 80 | 1.43 | 0.93 | 3.73 | 0.94 | 1.09 |
| -30 (-22) | 409 | 103 | 120 | 94 | 1.48 | 1.28 | 4.37 | 1.10 | 1.28 |
| -25 (-13) | 554 | 140 | 162 | 109 | 1.54 | 1.74 | 5.06 | 1.28 | 1.48 |
| -20 (- 4) | 734 | 185 | 215 | 126 | 1.63 | 2.31 | 5.79 | 1.46 | 1.70 |
| -15 (+ 5) | 951 | 240 | 279 | 145 | 1.73 | 2.99 | 6.56 | 1.65 | 1.92 |
| -10 (+14) | 1205 | 304 | 353 | 164 | 1.84 | 3.80 | 7.35 | 1.85 | 2.15 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @127V60Hz | | 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) | 265 | 67 | 78 | 80 | 1.43 | 0.83 | 3.29 | 0.83 | 0.97 |
| -30 | (-22) | 367 | 92 | 107 | 95 | 1.48 | 1.15 | 3.90 | 0.98 | 1.14 |
| -25 | (-13) | 503 | 127 | 147 | 111 | 1.55 | 1.58 | 4.53 | 1.14 | 1.33 |
| -20 | (- 4) | 676 | 170 | 198 | 130 | 1.64 | 2.12 | 5.20 | 1.31 | 1.52 |
| -15 | (+ 5) | 885 | 223 | 259 | 150 | 1.76 | 2.79 | 5.88 | 1.48 | 1.72 |
| -10 | (+14) | 1132 | 285 | 332 | 172 | 1.89 | 3.57 | 6.58 | 1.66 | 1.93 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate | European Standard EG/F/AMEM Version 2 | | |
| 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 | | |