

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2Y60CLC |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513301519 |

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 | 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 | - | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 103 to 140 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 | 1/5 | [hp] |
| 2 Displacement | 8.41 | [cm ³] (0.513 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 18.600 | |
| 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) | 5.53 | [kg] (12.19 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 | 8EA14C3/8EA14E63/8EA14E64/QPS2-A4R7MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(172) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM427KFBYY-53 | |
| 6 Start winding resistance | 6.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.90 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 11.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.03 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 1.40 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - IMTRO - TUV - UKCA | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @115V60Hz | | | 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] |
| 570 | 144 | 167 | 97 | 0.88 | 1.79 | 5.90 | 1.49 | 1.73 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|---------------------------------------|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 357 | 90 | 105 | 67 | 0.62 | 1.12 | 5.31 | 1.34 | 1.56 |
| -30 (-22) | 462 | 116 | 135 | 77 | 0.71 | 1.45 | 6.03 | 1.52 | 1.77 |
| -25 (-13) | 603 | 152 | 177 | 88 | 0.80 | 1.89 | 6.89 | 1.74 | 2.02 |
| -20 (- 4) | 780 | 197 | 229 | 99 | 0.90 | 2.45 | 7.87 | 1.98 | 2.30 |
| -15 (+ 5) | 994 | 251 | 291 | 111 | 1.00 | 3.13 | 8.96 | 2.26 | 2.62 |
| -10 (+14) | 1244 | 314 | 365 | 123 | 1.11 | 3.92 | 10.15 | 2.56 | 2.97 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 310 | 78 | 91 | 66 | 0.63 | 0.97 | 4.70 | 1.18 | 1.38 |
| -30 (-22) | 417 | 105 | 122 | 77 | 0.72 | 1.31 | 5.39 | 1.36 | 1.58 |
| -25 (-13) | 560 | 141 | 164 | 90 | 0.83 | 1.76 | 6.19 | 1.56 | 1.81 |
| -20 (- 4) | 738 | 186 | 216 | 104 | 0.95 | 2.32 | 7.07 | 1.78 | 2.07 |
| -15 (+ 5) | 952 | 240 | 279 | 118 | 1.07 | 3.00 | 8.03 | 2.02 | 2.35 |
| -10 (+14) | 1201 | 303 | 352 | 133 | 1.20 | 3.79 | 9.05 | 2.28 | 2.65 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @115V60Hz | | | 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) | 271 | 68 | 79 | 66 | 0.63 | 0.85 | 4.14 | 1.04 | 1.21 |
| -30 (-22) | 375 | 95 | 110 | 78 | 0.73 | 1.18 | 4.83 | 1.22 | 1.42 |
| -25 (-13) | 514 | 130 | 151 | 92 | 0.85 | 1.61 | 5.58 | 1.41 | 1.64 |
| -20 (- 4) | 688 | 173 | 201 | 107 | 0.98 | 2.16 | 6.38 | 1.61 | 1.87 |
| -15 (+ 5) | 896 | 226 | 263 | 124 | 1.13 | 2.82 | 7.21 | 1.82 | 2.11 |
| -10 (+14) | 1139 | 287 | 334 | 141 | 1.28 | 3.59 | 8.06 | 2.03 | 2.36 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @115V60Hz | | 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 | 66 | 0.62 | 0.75 | 3.62 | 0.91 | 1.06 |
| -30 | (-22) | 335 | 84 | 98 | 78 | 0.73 | 1.05 | 4.31 | 1.09 | 1.26 |
| -25 | (-13) | 465 | 117 | 136 | 93 | 0.86 | 1.46 | 5.02 | 1.27 | 1.47 |
| -20 | (- 4) | 629 | 158 | 184 | 110 | 1.00 | 1.98 | 5.74 | 1.45 | 1.68 |
| -15 | (+ 5) | 826 | 208 | 242 | 128 | 1.16 | 2.60 | 6.45 | 1.63 | 1.89 |
| -10 | (+14) | 1058 | 267 | 310 | 148 | 1.34 | 3.34 | 7.15 | 1.80 | 2.09 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | Yes | | |
| 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 | Straight | | |
| 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |