

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM Y60HSC |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513308509 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 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 | 85 to 110 V | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 85 to 110 V | 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 | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/6 | [hp] |
| 2 Displacement | 4.99 | [cm ³] (0.305 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 14.400 | |
| 3 Lubricant charge | 160 | [ml] (5.41 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 8.28 | [kg] (18.25 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

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 | 8EA14C3/8EA1B3/8EA21C3/8EA3B3/8EA4B3/QPS2-A4R7MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM319NFBYY-53 | |
| 6 Start winding resistance | 6.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.10 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 9.10 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.40 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - NOM - UKCA - UL | |

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] |
| 610 | 154 | 179 | 115 | 1.02 | 3.47 | 5.31 | 1.34 | 1.56 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 338 | 85 | 99 | 79 | 0.71 | 1.91 | 4.26 | 1.07 | 1.25 |
| -30 (-22) | 455 | 115 | 133 | 92 | 0.83 | 2.58 | 4.95 | 1.25 | 1.45 |
| -25 (-13) | 597 | 151 | 175 | 106 | 0.95 | 3.39 | 5.66 | 1.43 | 1.66 |
| -20 (- 4) | 772 | 195 | 226 | 120 | 1.07 | 4.39 | 6.42 | 1.62 | 1.88 |
| -15 (+ 5) | 984 | 248 | 288 | 135 | 1.20 | 5.62 | 7.26 | 1.83 | 2.13 |
| -10 (+14) | 1240 | 312 | 363 | 151 | 1.34 | 7.10 | 8.19 | 2.06 | 2.40 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 284 | 72 | 83 | 77 | 0.68 | 1.61 | 3.71 | 0.93 | 1.09 |
| -30 (-22) | 405 | 102 | 119 | 92 | 0.82 | 2.30 | 4.39 | 1.11 | 1.29 |
| -25 (-13) | 549 | 138 | 161 | 109 | 0.97 | 3.12 | 5.05 | 1.27 | 1.48 |
| -20 (- 4) | 722 | 182 | 212 | 126 | 1.13 | 4.11 | 5.71 | 1.44 | 1.67 |
| -15 (+ 5) | 930 | 234 | 272 | 145 | 1.29 | 5.31 | 6.39 | 1.61 | 1.87 |
| -10 (+14) | 1177 | 297 | 345 | 165 | 1.47 | 6.74 | 7.12 | 1.79 | 2.09 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 231 | 58 | 68 | 74 | 0.65 | 1.31 | 3.13 | 0.79 | 0.92 |
| -30 (-22) | 355 | 90 | 104 | 91 | 0.81 | 2.01 | 3.86 | 0.97 | 1.13 |
| -25 (-13) | 499 | 126 | 146 | 110 | 0.98 | 2.83 | 4.51 | 1.14 | 1.32 |
| -20 (- 4) | 669 | 169 | 196 | 131 | 1.16 | 3.80 | 5.11 | 1.29 | 1.50 |
| -15 (+ 5) | 869 | 219 | 255 | 154 | 1.36 | 4.96 | 5.68 | 1.43 | 1.66 |
| -10 (+14) | 1107 | 279 | 324 | 178 | 1.57 | 6.34 | 6.24 | 1.57 | 1.83 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate | Universal 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 parallel to Base Plate | | |
| 3.2 DISCHARGE | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted | | |
| 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 to Base Plate | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |