

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM E60HER |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513308596 |

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 | 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 | 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) | 8.24 | [kg] (18.17 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 | Current Relay | |
| 2.1 Starting device | 213514002/213514003/213514105 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM757NFBYY-53 | |
| 6 Start winding resistance | 10.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.45 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 21.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.30 | [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 - IMTRO - TUV - UKCA - UL | |

D - PERFORMANCE - CHECK POINT DATA

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|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| 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] |
| 616 | 155 | 181 | 122 | 1.62 | 3.50 | 5.04 | 1.27 | 1.48 |

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) | 352 | 89 | 103 | 84 | 1.43 | 1.99 | 4.17 | 1.05 | 1.22 |
| -30 (-22) | 497 | 125 | 146 | 99 | 1.51 | 2.82 | 4.99 | 1.26 | 1.46 |
| -25 (-13) | 642 | 162 | 188 | 113 | 1.59 | 3.65 | 5.69 | 1.43 | 1.67 |
| -20 (- 4) | 805 | 203 | 236 | 127 | 1.67 | 4.58 | 6.34 | 1.60 | 1.86 |
| -15 (+ 5) | 1002 | 252 | 294 | 142 | 1.77 | 5.72 | 7.02 | 1.77 | 2.06 |
| -10 (+14) | 1251 | 315 | 367 | 159 | 1.89 | 7.17 | 7.81 | 1.97 | 2.29 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 309 | 78 | 90 | 84 | 1.44 | 1.74 | 3.66 | 0.92 | 1.07 |
| -30 (-22) | 453 | 114 | 133 | 102 | 1.53 | 2.57 | 4.43 | 1.12 | 1.30 |
| -25 (-13) | 595 | 150 | 174 | 118 | 1.62 | 3.38 | 5.05 | 1.27 | 1.48 |
| -20 (- 4) | 752 | 190 | 220 | 135 | 1.72 | 4.28 | 5.60 | 1.41 | 1.64 |
| -15 (+ 5) | 942 | 237 | 276 | 153 | 1.84 | 5.38 | 6.16 | 1.55 | 1.81 |
| -10 (+14) | 1181 | 298 | 346 | 173 | 1.99 | 6.77 | 6.80 | 1.71 | 1.99 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 248 | 63 | 73 | 81 | 1.43 | 1.41 | 3.08 | 0.78 | 0.90 |
| -30 (-22) | 395 | 100 | 116 | 101 | 1.53 | 2.24 | 3.85 | 0.97 | 1.13 |
| -25 (-13) | 537 | 135 | 157 | 120 | 1.63 | 3.05 | 4.46 | 1.12 | 1.31 |
| -20 (- 4) | 691 | 174 | 202 | 140 | 1.75 | 3.93 | 4.96 | 1.25 | 1.45 |
| -15 (+ 5) | 875 | 221 | 256 | 161 | 1.90 | 5.00 | 5.44 | 1.37 | 1.60 |
| -10 (+14) | 1107 | 279 | 324 | 185 | 2.08 | 6.34 | 5.98 | 1.51 | 1.75 |

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 parallel to Base Plate | | |
| 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 | | |