

COMPRESSOR DEFINITION

| | |
|---------------------------|-------------|
| Designation | EM I60HER |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number | 513303630 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 115 / 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/Fan | - | 103 to 127 V |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan | - | 103 to 127 V |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 16.2 | [kgf/cm ²] (230 psig) | / °C - °F |
| 9.2 Peak (gauge) | 20.6 | [kgf/cm ²] (293 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/6 | [hp] |
| 2 Displacement | 5.54 | [cm ³] (0.338 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 200 | [ml] (6.76 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 7.6 | [kg] (16.75 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 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | 213514083 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM757NFBYY-53 | |
| 6 Start winding resistance | 9.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.44 | [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) | 2.50 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IRAM - 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] |
| 585 | 147 | 171 | 140 | 1.97 | 3.32 | 4.18 | 1.05 | 1.22 |

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 | 95 | 1.65 | 1.99 | 3.70 | 0.93 | 1.09 |
| -30 (-22) | 446 | 112 | 131 | 112 | 1.79 | 2.53 | 3.99 | 1.01 | 1.17 |
| -25 (-13) | 587 | 148 | 172 | 131 | 1.91 | 3.33 | 4.49 | 1.13 | 1.32 |
| -20 (- 4) | 773 | 195 | 226 | 150 | 2.01 | 4.40 | 5.14 | 1.30 | 1.51 |
| -15 (+ 5) | 998 | 252 | 293 | 170 | 2.12 | 5.70 | 5.89 | 1.48 | 1.73 |
| -10 (+14) | 1261 | 318 | 369 | 190 | 2.24 | 7.22 | 6.68 | 1.68 | 1.96 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 302 | 76 | 89 | 91 | 1.65 | 1.71 | 3.32 | 0.84 | 0.97 |
| -30 (-22) | 389 | 98 | 114 | 110 | 1.78 | 2.20 | 3.58 | 0.90 | 1.05 |
| -25 (-13) | 524 | 132 | 154 | 130 | 1.91 | 2.97 | 4.02 | 1.01 | 1.18 |
| -20 (- 4) | 703 | 177 | 206 | 153 | 2.03 | 4.00 | 4.59 | 1.16 | 1.35 |
| -15 (+ 5) | 924 | 233 | 271 | 176 | 2.16 | 5.27 | 5.23 | 1.32 | 1.53 |
| -10 (+14) | 1182 | 298 | 346 | 201 | 2.32 | 6.77 | 5.89 | 1.48 | 1.73 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 241 | 61 | 71 | 88 | 1.65 | 1.36 | 2.74 | 0.69 | 0.80 |
| -30 (-22) | 320 | 81 | 94 | 107 | 1.78 | 1.81 | 3.03 | 0.76 | 0.89 |
| -25 (-13) | 447 | 113 | 131 | 129 | 1.91 | 2.54 | 3.47 | 0.88 | 1.02 |
| -20 (- 4) | 619 | 156 | 181 | 153 | 2.04 | 3.52 | 4.03 | 1.01 | 1.18 |
| -15 (+ 5) | 833 | 210 | 244 | 180 | 2.19 | 4.75 | 4.62 | 1.16 | 1.35 |
| -10 (+14) | 1085 | 273 | 318 | 209 | 2.38 | 6.21 | 5.21 | 1.31 | 1.53 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------|------|--------------------------|
| 1 Base plate | Universal AMEM | | |
| 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 plated steel | | |
| 3.1.2 Shape | Straight | | |
| 3.2 DISCHARGE | 5 +0.18/-0.06 | [mm] | (0.197" +0.007"/-0.002") |
| 3.2.1 Material | Copper plated steel | | |
| 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 plated steel | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |