

COMPRESSOR DEFINITION

| | |
|---------------------------|-------------|
| Designation | EM I45HER |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number | 513303660 |

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 | - | 103 to 135 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 103 to 135 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 | 1/8 | [hp] |
| 2 Displacement | 4.08 | [cm ³] (0.249 cu.in) |
| 2.1 Bore [mm] | 19.000 | |
| 2.2 Stroke [mm] | 14.400 | |
| 3 Lubricant charge | 170 | [ml] (5.75 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 7.55 | [kg] (16.64 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 | 213514091 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM743KFBYY-53 | |
| 6 Start winding resistance | 13.35 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.65 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 12.00 | [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 - 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] |
| 435 | 110 | 127 | 100 | 1.24 | 2.47 | 4.35 | 1.10 | 1.27 |

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) | 166 | 42 | 49 | 68 | 1.07 | 0.94 | 2.43 | 0.61 | 0.71 |
| -30 (-22) | 297 | 75 | 87 | 80 | 1.15 | 1.68 | 3.75 | 0.95 | 1.10 |
| -25 (-13) | 436 | 110 | 128 | 92 | 1.22 | 2.47 | 4.77 | 1.20 | 1.40 |
| -20 (- 4) | 587 | 148 | 172 | 106 | 1.31 | 3.34 | 5.58 | 1.41 | 1.64 |
| -15 (+ 5) | 757 | 191 | 222 | 119 | 1.40 | 4.32 | 6.31 | 1.59 | 1.85 |
| -10 (+14) | 949 | 239 | 278 | 134 | 1.50 | 5.44 | 7.05 | 1.78 | 2.07 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 102 | 26 | 30 | 65 | 1.05 | 0.58 | 1.57 | 0.39 | 0.46 |
| -30 (-22) | 239 | 60 | 70 | 78 | 1.13 | 1.35 | 3.04 | 0.76 | 0.89 |
| -25 (-13) | 380 | 96 | 111 | 92 | 1.22 | 2.16 | 4.11 | 1.04 | 1.21 |
| -20 (- 4) | 531 | 134 | 156 | 108 | 1.32 | 3.02 | 4.91 | 1.24 | 1.44 |
| -15 (+ 5) | 697 | 176 | 204 | 125 | 1.45 | 3.98 | 5.54 | 1.40 | 1.62 |
| -10 (+14) | 882 | 222 | 259 | 144 | 1.59 | 5.05 | 6.10 | 1.54 | 1.79 |

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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) | 48 | 12 | 14 | 59 | 1.03 | 0.27 | 0.82 | 0.21 | 0.24 |
| -30 (-22) | 186 | 47 | 55 | 73 | 1.11 | 1.06 | 2.44 | 0.62 | 0.72 |
| -25 (-13) | 325 | 82 | 95 | 90 | 1.20 | 1.85 | 3.60 | 0.91 | 1.05 |
| -20 (- 4) | 470 | 119 | 138 | 108 | 1.32 | 2.68 | 4.38 | 1.10 | 1.28 |
| -15 (+ 5) | 627 | 158 | 184 | 129 | 1.47 | 3.58 | 4.92 | 1.24 | 1.44 |
| -10 (+14) | 800 | 202 | 234 | 151 | 1.64 | 4.58 | 5.31 | 1.34 | 1.55 |

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 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 | | |