

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM U60HSC |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513308003 |

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 | - | 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 | 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 | 1/4 | [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 | 170 | [ml] (5.75 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 7.76 | [kg] (17.11 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 | Combo | |
| 2.1 Starting device | 3ARR51P4F | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(160) | [µF(VAC minimum)] |
| 5 Motor protection | 3ARR51/55P4F | |
| 6 Start winding resistance | 5.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.25 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | - | [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

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| 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] |
| 590 | 149 | 173 | 119 | 1.14 | 3.35 | 4.98 | 1.25 | 1.46 |

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) | 319 | 81 | 94 | 82 | 0.86 | 1.81 | 3.89 | 0.98 | 1.14 |
| -30 (-22) | 440 | 111 | 129 | 94 | 0.95 | 2.49 | 4.68 | 1.18 | 1.37 |
| -25 (-13) | 591 | 149 | 173 | 108 | 1.06 | 3.36 | 5.46 | 1.38 | 1.60 |
| -20 (- 4) | 775 | 195 | 227 | 124 | 1.18 | 4.41 | 6.25 | 1.57 | 1.83 |
| -15 (+ 5) | 992 | 250 | 291 | 141 | 1.31 | 5.66 | 7.06 | 1.78 | 2.07 |
| -10 (+14) | 1244 | 313 | 364 | 157 | 1.46 | 7.12 | 7.92 | 2.00 | 2.32 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 268 | 68 | 79 | 80 | 0.83 | 1.52 | 3.37 | 0.85 | 0.99 |
| -30 (-22) | 383 | 96 | 112 | 95 | 0.95 | 2.17 | 4.06 | 1.02 | 1.19 |
| -25 (-13) | 527 | 133 | 155 | 112 | 1.08 | 2.99 | 4.73 | 1.19 | 1.39 |
| -20 (- 4) | 704 | 177 | 206 | 130 | 1.23 | 4.00 | 5.40 | 1.36 | 1.58 |
| -15 (+ 5) | 912 | 230 | 267 | 150 | 1.39 | 5.21 | 6.10 | 1.54 | 1.79 |
| -10 (+14) | 1155 | 291 | 338 | 169 | 1.56 | 6.62 | 6.83 | 1.72 | 2.00 |

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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) | 217 | 55 | 64 | 75 | 0.81 | 1.23 | 2.90 | 0.73 | 0.85 |
| -30 (-22) | 332 | 84 | 97 | 93 | 0.94 | 1.88 | 3.54 | 0.89 | 1.04 |
| -25 (-13) | 476 | 120 | 139 | 114 | 1.10 | 2.70 | 4.16 | 1.05 | 1.22 |
| -20 (- 4) | 650 | 164 | 191 | 136 | 1.28 | 3.70 | 4.77 | 1.20 | 1.40 |
| -15 (+ 5) | 857 | 216 | 251 | 159 | 1.47 | 4.89 | 5.40 | 1.36 | 1.58 |
| -10 (+14) | 1096 | 276 | 321 | 181 | 1.66 | 6.28 | 6.06 | 1.53 | 1.78 |

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 | | |