

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM 2U60HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513305545 |

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 | 1/5 | [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 | 150 | [ml] (5.07 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 7.23 | [kg] (15.94 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 | 7M4R7MD3/8EA14C3/8EA14E61/8EA14E62/8EA14E63/8M4R7 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | DRB44K61A* | |
| 6 Start winding resistance | 6.93 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 5.08 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 13.10 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.96 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 2.60 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IMTRO - TUV | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @127V60Hz | | | 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] |
| 631 | 159 | 185 | 120 | 1.10 | 3.59 | 5.25 | 1.32 | 1.54 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|---------------------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @127V60Hz | | ASHRAE32 Static | | | | (Condensing temperature 35°C (+95°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) | 373 | 94 | 109 | 76 | 0.94 | 2.11 | 4.86 | 1.22 | 1.42 |
| -30 (-22) | 494 | 125 | 145 | 90 | 0.98 | 2.80 | 5.52 | 1.39 | 1.62 |
| -25 (-13) | 660 | 166 | 193 | 105 | 1.02 | 3.75 | 6.35 | 1.60 | 1.86 |
| -20 (- 4) | 871 | 220 | 255 | 119 | 1.07 | 4.96 | 7.31 | 1.84 | 2.14 |
| -15 (+ 5) | 1129 | 285 | 331 | 134 | 1.12 | 6.45 | 8.41 | 2.12 | 2.46 |
| -10 (+14) | 1435 | 362 | 421 | 149 | 1.19 | 8.22 | 9.62 | 2.42 | 2.82 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS: @127V60Hz | | 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) | 312 | 79 | 91 | 78 | 0.94 | 1.77 | 4.02 | 1.01 | 1.18 |
| -30 (-22) | 444 | 112 | 130 | 93 | 0.99 | 2.52 | 4.80 | 1.21 | 1.41 |
| -25 (-13) | 614 | 155 | 180 | 108 | 1.04 | 3.49 | 5.66 | 1.43 | 1.66 |
| -20 (- 4) | 823 | 207 | 241 | 125 | 1.09 | 4.68 | 6.58 | 1.66 | 1.93 |
| -15 (+ 5) | 1072 | 270 | 314 | 142 | 1.16 | 6.12 | 7.54 | 1.90 | 2.21 |
| -10 (+14) | 1362 | 343 | 399 | 159 | 1.24 | 7.81 | 8.54 | 2.15 | 2.50 |

| | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|-----|--------------------------------|----------------------------------|--|---------------------------|-----------|-------|
| TEST CONDITIONS: @127V60Hz | | 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) | 244 | 61 | 71 | 78 | 0.93 | 1.38 | 3.14 | 0.79 | 0.92 |
| -30 (-22) | 386 | 97 | 113 | 94 | 0.98 | 2.19 | 4.07 | 1.03 | 1.19 |
| -25 (-13) | 560 | 141 | 164 | 112 | 1.05 | 3.18 | 5.00 | 1.26 | 1.46 |
| -20 (- 4) | 766 | 193 | 225 | 130 | 1.12 | 4.36 | 5.90 | 1.49 | 1.73 |
| -15 (+ 5) | 1006 | 254 | 295 | 149 | 1.20 | 5.74 | 6.76 | 1.70 | 1.98 |
| -10 (+14) | 1282 | 323 | 376 | 170 | 1.29 | 7.34 | 7.56 | 1.91 | 2.22 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @127V60Hz | | 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) | 167 | 42 | 49 | 79 | 0.88 | 0.95 | 2.13 | 0.54 | 0.62 |
| -30 | (-22) | 320 | 81 | 94 | 96 | 0.96 | 1.82 | 3.24 | 0.82 | 0.95 |
| -25 | (-13) | 498 | 125 | 146 | 115 | 1.04 | 2.83 | 4.26 | 1.07 | 1.25 |
| -20 | (- 4) | 702 | 177 | 206 | 136 | 1.12 | 3.99 | 5.17 | 1.30 | 1.51 |
| -15 | (+ 5) | 933 | 235 | 273 | 159 | 1.22 | 5.32 | 5.95 | 1.50 | 1.74 |
| -10 | (+14) | 1193 | 301 | 350 | 183 | 1.33 | 6.83 | 6.60 | 1.66 | 1.93 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate | New Base Plate EUEM | | |
| 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 42° up + 45° to Back | | |
| 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 | Slanted 30° up + 24° to Back | | |
| 3.3 PROCESS | 6.35 +0.08/-0.08 | [mm] | (0.250" +0.003"/-0.003") |
| 3.3.1 Material | Copper(OD) | | |
| 3.3.2 Shape | Slanted 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |