

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EM U40CLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513306173 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 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 | - | 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 | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation | 1/8 | [hp] |
| 2 Displacement | 5.96 | [cm ³] (0.364 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 15.000 | |
| 3 Lubricant charge | 180 | [ml] (6.09 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 | |
| 4 Weight (with oil charge) | 6.55 | [kg] (14.44 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

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 | 8EA14C1/QPS2-A4R7MG1 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283RFBYY-53 | |
| 6 Start winding resistance | 6.90 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 9.24 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 7.33 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.47 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 1.53 | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - TUV - UKCA | |

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] |
| 393 | 99 | 115 | 92 | 1.33 | 1.23 | 4.28 | 1.08 | 1.25 |

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) | 238 | 60 | 70 | 60 | 1.12 | 0.75 | 3.92 | 0.99 | 1.15 |
| -30 | (-22) | 316 | 80 | 93 | 71 | 1.18 | 0.99 | 4.45 | 1.12 | 1.30 |
| -25 | (-13) | 418 | 105 | 122 | 81 | 1.22 | 1.31 | 5.21 | 1.31 | 1.53 |
| -20 | (- 4) | 544 | 137 | 159 | 89 | 1.24 | 1.71 | 6.15 | 1.55 | 1.80 |
| -15 | (+ 5) | 694 | 175 | 203 | 96 | 1.27 | 2.18 | 7.20 | 1.82 | 2.11 |
| -10 | (+14) | 868 | 219 | 254 | 104 | 1.31 | 2.74 | 8.32 | 2.10 | 2.44 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 218 | 55 | 64 | 65 | 1.16 | 0.68 | 3.35 | 0.84 | 0.98 |
| -30 | (-22) | 292 | 73 | 85 | 76 | 1.22 | 0.91 | 3.87 | 0.97 | 1.13 |
| -25 | (-13) | 389 | 98 | 114 | 85 | 1.26 | 1.22 | 4.58 | 1.15 | 1.34 |
| -20 | (- 4) | 510 | 129 | 150 | 94 | 1.29 | 1.60 | 5.42 | 1.37 | 1.59 |
| -15 | (+ 5) | 655 | 165 | 192 | 103 | 1.33 | 2.06 | 6.33 | 1.60 | 1.85 |
| -10 | (+14) | 824 | 208 | 241 | 113 | 1.38 | 2.60 | 7.26 | 1.83 | 2.13 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|-----|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 196 | 49 | 57 | 66 | 1.16 | 0.61 | 2.99 | 0.75 | 0.88 |
| -30 | (-22) | 266 | 67 | 78 | 76 | 1.23 | 0.83 | 3.50 | 0.88 | 1.03 |
| -25 | (-13) | 359 | 90 | 105 | 86 | 1.27 | 1.13 | 4.15 | 1.05 | 1.22 |
| -20 | (- 4) | 475 | 120 | 139 | 97 | 1.31 | 1.49 | 4.89 | 1.23 | 1.43 |
| -15 | (+ 5) | 614 | 155 | 180 | 108 | 1.36 | 1.93 | 5.65 | 1.42 | 1.66 |
| -10 | (+14) | 776 | 196 | 227 | 122 | 1.43 | 2.45 | 6.38 | 1.61 | 1.87 |

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) | 173 | 44 | 51 | 62 | 1.12 | 0.54 | 2.79 | 0.70 | 0.82 |
| -30 | (-22) | 238 | 60 | 70 | 73 | 1.20 | 0.75 | 3.27 | 0.83 | 0.96 |
| -25 | (-13) | 326 | 82 | 96 | 85 | 1.26 | 1.02 | 3.86 | 0.97 | 1.13 |
| -20 | (- 4) | 437 | 110 | 128 | 97 | 1.31 | 1.37 | 4.49 | 1.13 | 1.32 |
| -15 | (+ 5) | 570 | 144 | 167 | 112 | 1.38 | 1.79 | 5.10 | 1.29 | 1.49 |
| -10 | (+14) | 726 | 183 | 213 | 129 | 1.47 | 2.29 | 5.63 | 1.42 | 1.65 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate | European Standard EG/F/AMEM Version 2 | | |
| 2 Tray holder | Yes | | |
| 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Slanted 45° up + 45° to Back | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |