

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG U70HLC |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513700062 |

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/Fan | - | 94 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan | - | 94 to 140 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 | 1/4 | [hp] |
| 2 Displacement | 6.36 | [cm ³] (0.388 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 11.14 | [kg] (24.56 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 | 7M4R7MD3/8EA21C3/8EA3B3/8M4R7MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM427NFBYY-53 | |
| 6 Start winding resistance | 3.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.80 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 11.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.00 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | 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] |
| 700 | 176 | 205 | 126 | 1.19 | 3.98 | 5.54 | 1.40 | 1.62 |

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) | 366 | 92 | 107 | 83 | 0.84 | 2.07 | 4.42 | 1.11 | 1.30 |
| -30 (-22) | 530 | 133 | 155 | 102 | 1.00 | 3.00 | 5.19 | 1.31 | 1.52 |
| -25 (-13) | 722 | 182 | 212 | 121 | 1.14 | 4.10 | 5.99 | 1.51 | 1.75 |
| -20 (- 4) | 954 | 240 | 280 | 139 | 1.29 | 5.43 | 6.84 | 1.72 | 2.00 |
| -15 (+ 5) | 1238 | 312 | 363 | 158 | 1.45 | 7.07 | 7.77 | 1.96 | 2.28 |
| -10 (+14) | 1585 | 399 | 464 | 179 | 1.63 | 9.08 | 8.81 | 2.22 | 2.58 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 286 | 72 | 84 | 76 | 0.79 | 1.62 | 3.77 | 0.95 | 1.10 |
| -30 (-22) | 446 | 112 | 131 | 99 | 0.98 | 2.53 | 4.53 | 1.14 | 1.33 |
| -25 (-13) | 628 | 158 | 184 | 120 | 1.15 | 3.56 | 5.25 | 1.32 | 1.54 |
| -20 (- 4) | 844 | 213 | 247 | 142 | 1.33 | 4.80 | 5.97 | 1.50 | 1.75 |
| -15 (+ 5) | 1105 | 279 | 324 | 165 | 1.51 | 6.31 | 6.70 | 1.69 | 1.96 |
| -10 (+14) | 1424 | 359 | 417 | 190 | 1.72 | 8.16 | 7.46 | 1.88 | 2.19 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 185 | 47 | 54 | 71 | 0.73 | 1.05 | 2.61 | 0.66 | 0.76 |
| -30 (-22) | 349 | 88 | 102 | 96 | 0.93 | 1.98 | 3.54 | 0.89 | 1.04 |
| -25 (-13) | 529 | 133 | 155 | 120 | 1.14 | 3.01 | 4.37 | 1.10 | 1.28 |
| -20 (- 4) | 738 | 186 | 216 | 145 | 1.34 | 4.20 | 5.12 | 1.29 | 1.50 |
| -15 (+ 5) | 987 | 249 | 289 | 170 | 1.56 | 5.63 | 5.83 | 1.47 | 1.71 |
| -10 (+14) | 1287 | 324 | 377 | 199 | 1.80 | 7.37 | 6.50 | 1.64 | 1.91 |

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 | Straight | | |
| 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 | Straight | | |
| 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 | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |