

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG US70HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513701197 |

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 | 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 | - | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 98 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 | 1/5+ | [hp] |
| 2 Displacement | 5.56 | [cm ³] (0.339 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 14.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 | |
| 4 Weight (with oil charge) | 10.33 | [kg] (22.77 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 | 4SP14U427LF/4SP14W427LF/4SP21U427LF/4SP21W427LF | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4SP14/21(U/W)427LFX | |
| 6 Start winding resistance | 9.14 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.17 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 13.40 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.30 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | 2.70 | [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] |
| 684 | 172 | 200 | 125 | 1.57 | 3.89 | 5.45 | 1.37 | 1.60 |

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) | 335 | 85 | 98 | 80 | 1.01 | 1.90 | 4.20 | 1.06 | 1.23 |
| -30 (-22) | 497 | 125 | 146 | 98 | 1.23 | 2.82 | 5.02 | 1.27 | 1.47 |
| -25 (-13) | 700 | 176 | 205 | 118 | 1.48 | 3.97 | 5.90 | 1.49 | 1.73 |
| -20 (- 4) | 938 | 236 | 275 | 138 | 1.73 | 5.34 | 6.82 | 1.72 | 2.00 |
| -15 (+ 5) | 1207 | 304 | 354 | 156 | 1.97 | 6.89 | 7.79 | 1.96 | 2.28 |
| -10 (+14) | 1501 | 378 | 440 | 172 | 2.19 | 8.60 | 8.79 | 2.21 | 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 | 71 | 0.92 | 1.62 | 4.05 | 1.02 | 1.19 |
| -30 (-22) | 426 | 107 | 125 | 92 | 1.17 | 2.42 | 4.66 | 1.17 | 1.37 |
| -25 (-13) | 616 | 155 | 180 | 115 | 1.46 | 3.50 | 5.32 | 1.34 | 1.56 |
| -20 (- 4) | 848 | 214 | 249 | 140 | 1.77 | 4.83 | 6.03 | 1.52 | 1.77 |
| -15 (+ 5) | 1119 | 282 | 328 | 165 | 2.09 | 6.39 | 6.78 | 1.71 | 1.99 |
| -10 (+14) | 1422 | 358 | 417 | 188 | 2.40 | 8.15 | 7.56 | 1.91 | 2.22 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 224 | 56 | 66 | 64 | 0.83 | 1.27 | 3.52 | 0.89 | 1.03 |
| -30 (-22) | 340 | 86 | 100 | 86 | 1.09 | 1.93 | 4.05 | 1.02 | 1.19 |
| -25 (-13) | 512 | 129 | 150 | 111 | 1.41 | 2.91 | 4.62 | 1.16 | 1.35 |
| -20 (- 4) | 735 | 185 | 215 | 140 | 1.77 | 4.18 | 5.24 | 1.32 | 1.53 |
| -15 (+ 5) | 1004 | 253 | 294 | 169 | 2.16 | 5.73 | 5.90 | 1.49 | 1.73 |
| -10 (+14) | 1313 | 331 | 385 | 199 | 2.55 | 7.52 | 6.59 | 1.66 | 1.93 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Straight | | |
| 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 | 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 | | |