

COMPRESSOR DEFINITION

| | |
|---------------------------|-------------|
| Designation | EG U80HLC |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number | 513700050 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 115 / 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 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 | 7.15 | [cm ³] (0.436 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 18.000 | |
| 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) | 11.18 | [kg] (24.65 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 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 490C814R7/7M4R7MC1/8EA14C1/8EA1B1/8EA21C1/8EA3B1/4 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM427NFBYY-53 | |
| 6 Start winding resistance | 3.15 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.05 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 14.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.70 | [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] | |
| 820 | 207 | 240 | 154 | 1.89 | 4.66 | 5.32 | 1.34 | 1.56 | |

| | | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| TEST CONDITIONS: @115V60Hz | | | ASHRAELBP32 Fan | | 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] | |
| 820 | 207 | 240 | 154 | 1.89 | 4.66 | 5.32 | 1.34 | 1.56 | |

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) | 439 | 111 | 129 | 99 | 1.56 | 2.48 | 4.42 | 1.11 | 1.29 |
| -30 (-22) | 609 | 154 | 178 | 121 | 1.69 | 3.45 | 5.07 | 1.28 | 1.48 |
| -25 (-13) | 816 | 206 | 239 | 142 | 1.83 | 4.63 | 5.76 | 1.45 | 1.69 |
| -20 (- 4) | 1072 | 270 | 314 | 165 | 1.98 | 6.10 | 6.51 | 1.64 | 1.91 |
| -15 (+ 5) | 1391 | 351 | 408 | 189 | 2.15 | 7.94 | 7.35 | 1.85 | 2.15 |
| -10 (+14) | 1785 | 450 | 523 | 215 | 2.36 | 10.23 | 8.28 | 2.09 | 2.43 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 359 | 90 | 105 | 95 | 1.55 | 2.03 | 3.76 | 0.95 | 1.10 |
| -30 (-22) | 534 | 134 | 156 | 120 | 1.69 | 3.02 | 4.42 | 1.11 | 1.30 |
| -25 (-13) | 738 | 186 | 216 | 146 | 1.85 | 4.19 | 5.07 | 1.28 | 1.49 |
| -20 (- 4) | 986 | 248 | 289 | 172 | 2.02 | 5.61 | 5.74 | 1.45 | 1.68 |
| -15 (+ 5) | 1289 | 325 | 378 | 200 | 2.22 | 7.36 | 6.43 | 1.62 | 1.88 |
| -10 (+14) | 1661 | 418 | 487 | 231 | 2.46 | 9.51 | 7.17 | 1.81 | 2.10 |

E - PERFORMANCE - CURVES

| 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) | 266 | 67 | 78 | 85 | 1.50 | 1.51 | 3.14 | 0.79 | 0.92 |
| -30 | (-22) | 447 | 113 | 131 | 114 | 1.66 | 2.53 | 3.85 | 0.97 | 1.13 |
| -25 | (-13) | 651 | 164 | 191 | 144 | 1.85 | 3.70 | 4.50 | 1.14 | 1.32 |
| -20 | (- 4) | 891 | 225 | 261 | 175 | 2.05 | 5.07 | 5.11 | 1.29 | 1.50 |
| -15 | (+ 5) | 1180 | 297 | 346 | 208 | 2.29 | 6.74 | 5.70 | 1.44 | 1.67 |
| -10 | (+14) | 1531 | 386 | 449 | 244 | 2.58 | 8.77 | 6.29 | 1.59 | 1.84 |

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 | | |