

COMPRESSOR DEFINITION

| | |
|---------------------------|-------------|
| Designation | EG U90HLCW |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number | 513700242 |

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 | 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 | 7.95 | [cm ³] (0.485 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 20.000 | |
| 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) | 11.19 | [kg] (24.67 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 | 7M4R7MD3/8EA14C3/8EA1B3/8EA21C3/8EA3B3/8EA4B3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 12(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM762MFBYY-53 | |
| 6 Start winding resistance | 4.35 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.40 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 17.70 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 2.90 | [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] |
| 950 | 239 | 278 | 172 | 1.67 | 5.40 | 5.52 | 1.39 | 1.62 |

| | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| 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] |
| 950 | 239 | 278 | 172 | 1.67 | 5.40 | 5.52 | 1.39 | 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) | 507 | 128 | 149 | 114 | 1.23 | 2.87 | 4.44 | 1.12 | 1.30 |
| -30 (-22) | 700 | 176 | 205 | 137 | 1.40 | 3.97 | 5.12 | 1.29 | 1.50 |
| -25 (-13) | 934 | 235 | 274 | 160 | 1.59 | 5.30 | 5.86 | 1.48 | 1.72 |
| -20 (- 4) | 1221 | 308 | 358 | 183 | 1.78 | 6.95 | 6.68 | 1.68 | 1.96 |
| -15 (+ 5) | 1572 | 396 | 461 | 208 | 1.99 | 8.97 | 7.56 | 1.91 | 2.22 |
| -10 (+14) | 1999 | 504 | 586 | 234 | 2.22 | 11.46 | 8.54 | 2.15 | 2.50 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 439 | 111 | 129 | 112 | 1.20 | 2.48 | 3.93 | 0.99 | 1.15 |
| -30 (-22) | 626 | 158 | 184 | 137 | 1.39 | 3.55 | 4.57 | 1.15 | 1.34 |
| -25 (-13) | 854 | 215 | 250 | 162 | 1.60 | 4.85 | 5.25 | 1.32 | 1.54 |
| -20 (- 4) | 1134 | 286 | 332 | 190 | 1.83 | 6.45 | 5.97 | 1.50 | 1.75 |
| -15 (+ 5) | 1477 | 372 | 433 | 219 | 2.08 | 8.43 | 6.73 | 1.70 | 1.97 |
| -10 (+14) | 1896 | 478 | 556 | 251 | 2.37 | 10.86 | 7.55 | 1.90 | 2.21 |

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) | 368 | 93 | 108 | 107 | 1.17 | 2.08 | 3.43 | 0.87 | 1.01 |
| -30 | (-22) | 543 | 137 | 159 | 133 | 1.37 | 3.08 | 4.08 | 1.03 | 1.20 |
| -25 | (-13) | 758 | 191 | 222 | 160 | 1.59 | 4.30 | 4.73 | 1.19 | 1.39 |
| -20 | (- 4) | 1024 | 258 | 300 | 191 | 1.83 | 5.83 | 5.39 | 1.36 | 1.58 |
| -15 | (+ 5) | 1354 | 341 | 397 | 224 | 2.12 | 7.73 | 6.06 | 1.53 | 1.78 |
| -10 | (+14) | 1759 | 443 | 515 | 260 | 2.44 | 10.07 | 6.76 | 1.70 | 1.98 |

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 | 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) | 4.9 +0.02/-0.05 | [mm] | (0.193" +0.001"/-0.002") |
| 3.5 Connector sealing | Rubber Plugs | | |