

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG Y70HLP |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513700236 |

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 | 85 to 110 V | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | 85 to 110 V | 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 | 1/4 | [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 | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO7 | |
| 4 Weight (with oil charge) | 11.3 | [kg] (24.91 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 | Combo | |
| 2.1 Starting device | 3ARR51M4F/3ARR55M4F | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 20(180) | [µF(VAC minimum)] |
| 5 Motor protection | 3ARR51/55M4F | |
| 6 Start winding resistance | 6.25 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 4.40 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 10.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.60 | [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] |
| 685 | 173 | 201 | 123 | 1.23 | 3.89 | 5.58 | 1.41 | 1.64 |

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) | 368 | 93 | 108 | 86 | 0.99 | 2.08 | 4.26 | 1.07 | 1.25 |
| -30 (-22) | 508 | 128 | 149 | 100 | 1.08 | 2.88 | 5.08 | 1.28 | 1.49 |
| -25 (-13) | 683 | 172 | 200 | 115 | 1.17 | 3.88 | 5.96 | 1.50 | 1.75 |
| -20 (- 4) | 900 | 227 | 264 | 130 | 1.27 | 5.12 | 6.91 | 1.74 | 2.02 |
| -15 (+ 5) | 1166 | 294 | 342 | 147 | 1.38 | 6.66 | 7.93 | 2.00 | 2.32 |
| -10 (+14) | 1487 | 375 | 436 | 164 | 1.51 | 8.52 | 9.03 | 2.28 | 2.65 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 300 | 76 | 88 | 85 | 0.98 | 1.70 | 3.55 | 0.89 | 1.04 |
| -30 (-22) | 443 | 112 | 130 | 101 | 1.08 | 2.51 | 4.38 | 1.10 | 1.28 |
| -25 (-13) | 618 | 156 | 181 | 118 | 1.18 | 3.51 | 5.24 | 1.32 | 1.53 |
| -20 (- 4) | 831 | 209 | 243 | 136 | 1.30 | 4.73 | 6.12 | 1.54 | 1.79 |
| -15 (+ 5) | 1088 | 274 | 319 | 154 | 1.43 | 6.21 | 7.04 | 1.77 | 2.06 |
| -10 (+14) | 1397 | 352 | 409 | 174 | 1.58 | 8.00 | 7.99 | 2.01 | 2.34 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 239 | 60 | 70 | 79 | 0.96 | 1.35 | 3.01 | 0.76 | 0.88 |
| -30 (-22) | 380 | 96 | 111 | 98 | 1.06 | 2.15 | 3.84 | 0.97 | 1.13 |
| -25 (-13) | 549 | 138 | 161 | 118 | 1.18 | 3.12 | 4.66 | 1.17 | 1.36 |
| -20 (- 4) | 752 | 190 | 220 | 138 | 1.32 | 4.28 | 5.46 | 1.38 | 1.60 |
| -15 (+ 5) | 997 | 251 | 292 | 160 | 1.47 | 5.69 | 6.25 | 1.58 | 1.83 |
| -10 (+14) | 1288 | 325 | 378 | 183 | 1.66 | 7.38 | 7.04 | 1.77 | 2.06 |

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