

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG YS90HLP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513701235 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [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 | 160 to 260 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 160 to 260 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 / ISO10 | |
| 4 Weight (with oil charge) | 10.97 | [kg] (24.18 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 | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 7M220MD3/8EA17C3/8M220MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(350) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM319LFBYY-53 | |
| 6 Start winding resistance | 20.94 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 12.03 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 8.20 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | | |

D - PERFORMANCE - CHECK POINT DATA

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|-------------------------------|----------|-----|------------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS: @220V50Hz | | | 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] |
| 770 | 194 | 226 | 130 | 0.70 | 4.38 | 5.93 | 1.49 | 1.74 |

E - PERFORMANCE - CURVES

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|---------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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) | 405 | 102 | 119 | 86 | 0.47 | 2.29 | 4.69 | 1.18 | 1.38 |
| -30 (-22) | 572 | 144 | 167 | 102 | 0.55 | 3.24 | 5.57 | 1.40 | 1.63 |
| -25 (-13) | 758 | 191 | 222 | 120 | 0.64 | 4.30 | 6.34 | 1.60 | 1.86 |
| -20 (- 4) | 977 | 246 | 286 | 138 | 0.74 | 5.56 | 7.11 | 1.79 | 2.08 |
| -15 (+ 5) | 1245 | 314 | 365 | 156 | 0.84 | 7.10 | 7.97 | 2.01 | 2.33 |
| -10 (+14) | 1574 | 397 | 461 | 174 | 0.93 | 9.02 | 9.01 | 2.27 | 2.64 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|---------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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) | 334 | 84 | 98 | 82 | 0.46 | 1.89 | 4.08 | 1.03 | 1.20 |
| -30 (-22) | 507 | 128 | 149 | 102 | 0.55 | 2.88 | 4.95 | 1.25 | 1.45 |
| -25 (-13) | 696 | 176 | 204 | 123 | 0.66 | 3.95 | 5.66 | 1.43 | 1.66 |
| -20 (- 4) | 915 | 231 | 268 | 145 | 0.77 | 5.21 | 6.32 | 1.59 | 1.85 |
| -15 (+ 5) | 1178 | 297 | 345 | 168 | 0.89 | 6.73 | 7.01 | 1.77 | 2.05 |
| -10 (+14) | 1500 | 378 | 439 | 191 | 1.01 | 8.59 | 7.83 | 1.97 | 2.29 |

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|-------------------------------|----------------------------|----------|---------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | 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) | 256 | 64 | 75 | 73 | 0.41 | 1.45 | 3.49 | 0.88 | 1.02 |
| -30 (-22) | 432 | 109 | 127 | 97 | 0.52 | 2.45 | 4.38 | 1.10 | 1.28 |
| -25 (-13) | 620 | 156 | 182 | 122 | 0.65 | 3.52 | 5.06 | 1.28 | 1.48 |
| -20 (- 4) | 834 | 210 | 244 | 149 | 0.79 | 4.74 | 5.63 | 1.42 | 1.65 |
| -15 (+ 5) | 1088 | 274 | 319 | 176 | 0.94 | 6.21 | 6.18 | 1.56 | 1.81 |
| -10 (+14) | 1397 | 352 | 409 | 205 | 1.09 | 8.00 | 6.81 | 1.72 | 2.00 |

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) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |