

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | EG AS100HLP |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513701292 |

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 | 189 to 264 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 264 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating (gauge) | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak (gauge) | 15.9 | [kgf/cm ²] (226 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1/3 | [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 | 230 | [ml] (7.78 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 10.99 | [kg] (24.23 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/QPS2-A22MD3/QPS2-A22MD3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 4(350)/5(350) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM283NFBYY-53 | |
| 6 Start winding resistance | 29.00 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 15.40 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 8.50 | [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

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| 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] |
| 823 | 207 | 241 | 153 | 0.87 | 4.68 | 5.38 | 1.36 | 1.58 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAE32 Static | | (Condensing temperature 35°C (+95°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) | 526 | 133 | 154 | 102 | 5.09 | 2.98 | 5.10 | 1.28 | 1.49 |
| -30 | (-22) | 662 | 167 | 194 | 116 | 5.76 | 3.75 | 5.76 | 1.45 | 1.69 |
| -25 | (-13) | 853 | 215 | 250 | 129 | 6.69 | 4.84 | 6.69 | 1.69 | 1.96 |
| -20 | (- 4) | 1096 | 276 | 321 | 142 | 7.81 | 6.24 | 7.81 | 1.97 | 2.29 |
| -15 | (+ 5) | 1389 | 350 | 407 | 155 | 9.04 | 7.93 | 9.04 | 2.28 | 2.65 |
| -10 | (+14) | 1729 | 436 | 507 | 168 | 10.30 | 9.91 | 10.30 | 2.60 | 3.02 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 422 | 106 | 124 | 106 | 4.05 | 2.39 | 4.05 | 1.02 | 1.19 |
| -30 | (-22) | 593 | 149 | 174 | 124 | 4.79 | 3.36 | 4.78 | 1.21 | 1.40 |
| -25 | (-13) | 821 | 207 | 241 | 141 | 5.76 | 4.66 | 5.76 | 1.45 | 1.69 |
| -20 | (- 4) | 1102 | 278 | 323 | 158 | 6.90 | 6.28 | 6.89 | 1.74 | 2.02 |
| -15 | (+ 5) | 1435 | 362 | 421 | 175 | 8.12 | 8.19 | 8.12 | 2.05 | 2.38 |
| -10 | (+14) | 1816 | 458 | 532 | 194 | 9.34 | 10.41 | 9.34 | 2.35 | 2.74 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| 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) | 366 | 92 | 107 | 105 | 3.57 | 2.07 | 3.57 | 0.90 | 1.04 |
| -30 | (-22) | 531 | 134 | 156 | 125 | 4.22 | 3.01 | 4.22 | 1.06 | 1.24 |
| -25 | (-13) | 754 | 190 | 221 | 146 | 5.08 | 4.28 | 5.08 | 1.28 | 1.49 |
| -20 | (- 4) | 1033 | 260 | 303 | 167 | 6.08 | 5.88 | 6.08 | 1.53 | 1.78 |
| -15 | (+ 5) | 1364 | 344 | 400 | 189 | 7.14 | 7.79 | 7.14 | 1.80 | 2.09 |
| -10 | (+14) | 1745 | 440 | 511 | 214 | 8.18 | 10.00 | 8.18 | 2.06 | 2.40 |

E - PERFORMANCE - CURVES

| 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) | 358 | 90 | 105 | 98 | 3.57 | 2.03 | 3.57 | 0.90 | 1.05 |
| -30 | (-22) | 476 | 120 | 139 | 121 | 3.99 | 2.70 | 3.99 | 1.00 | 1.17 |
| -25 | (-13) | 653 | 165 | 191 | 145 | 4.59 | 3.71 | 4.59 | 1.16 | 1.34 |
| -20 | (- 4) | 887 | 224 | 260 | 170 | 5.30 | 5.05 | 5.30 | 1.34 | 1.55 |
| -15 | (+ 5) | 1175 | 296 | 344 | 196 | 6.05 | 6.71 | 6.05 | 1.52 | 1.77 |
| -10 | (+14) | 1515 | 382 | 444 | 226 | 6.74 | 8.68 | 6.74 | 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) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |