

COMPRESSOR DEFINITION

| | |
|---------------------------|--------------------|
| Designation | F GS100HA |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number | 513200062 |

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 | - | 103 to 135 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 103 to 135 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 | 1/3 | [hp] |
| 2 Displacement | 9.04 | [cm ³] (0.552 cu.in) |
| 2.1 Bore [mm] | 24.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 350 | [ml] (11.84 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 11.4 | [kg] (25.13 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 | 8EA14C3/8EA1B3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 20(180) | [µF(VAC minimum)] |
| 5 Motor protection | 4TM427RFBYY-53 | |
| 6 Start winding resistance | 3.30 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.04 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 18.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 3.10 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IRAM - 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] |
| 1065 | 268 | 312 | 200 | 1.80 | 6.05 | 5.33 | 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) | 534 | 135 | 157 | 129 | 1.17 | 3.02 | 4.12 | 1.04 | 1.21 |
| -30 (-22) | 759 | 191 | 222 | 159 | 1.44 | 4.30 | 4.80 | 1.21 | 1.41 |
| -25 (-13) | 1027 | 259 | 301 | 186 | 1.67 | 5.83 | 5.54 | 1.40 | 1.62 |
| -20 (- 4) | 1350 | 340 | 395 | 213 | 1.88 | 7.68 | 6.34 | 1.60 | 1.86 |
| -15 (+ 5) | 1739 | 438 | 510 | 240 | 2.09 | 9.93 | 7.21 | 1.82 | 2.11 |
| -10 (+14) | 2206 | 556 | 646 | 270 | 2.36 | 12.64 | 8.15 | 2.05 | 2.39 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 455 | 115 | 133 | 123 | 1.10 | 2.58 | 3.68 | 0.93 | 1.08 |
| -30 (-22) | 684 | 172 | 200 | 157 | 1.42 | 3.88 | 4.35 | 1.10 | 1.28 |
| -25 (-13) | 951 | 240 | 279 | 189 | 1.70 | 5.40 | 5.04 | 1.27 | 1.48 |
| -20 (- 4) | 1267 | 319 | 371 | 221 | 1.96 | 7.21 | 5.76 | 1.45 | 1.69 |
| -15 (+ 5) | 1644 | 414 | 482 | 253 | 2.22 | 9.39 | 6.50 | 1.64 | 1.90 |
| -10 (+14) | 2094 | 528 | 614 | 288 | 2.53 | 12.00 | 7.26 | 1.83 | 2.13 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 347 | 87 | 102 | 114 | 1.05 | 1.96 | 3.07 | 0.77 | 0.90 |
| -30 (-22) | 584 | 147 | 171 | 152 | 1.41 | 3.31 | 3.78 | 0.95 | 1.11 |
| -25 (-13) | 852 | 215 | 250 | 189 | 1.73 | 4.84 | 4.48 | 1.13 | 1.31 |
| -20 (- 4) | 1165 | 294 | 341 | 226 | 2.03 | 6.63 | 5.16 | 1.30 | 1.51 |
| -15 (+ 5) | 1534 | 386 | 449 | 264 | 2.34 | 8.75 | 5.82 | 1.47 | 1.70 |
| -10 (+14) | 1969 | 496 | 577 | 305 | 2.69 | 11.28 | 6.46 | 1.63 | 1.89 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-----------------|------|--------------------------|
| 1 Base plate | Universal EG/F | | |
| 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-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 | | |