

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F GS50CA |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513200229 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-600a | | |
| 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 | RSIR | | |
| 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 | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing temperature | | | |
| 9.1 Operating | 6.9 | [kgf/cm ²] (98 psig) | / °C - °F |
| 9.2 Peak | 7.8 | [kgf/cm ²] (111 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|----------------------------------|
| 1 Commercial designation | 1/6 | [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 | 350 | [ml] (11.84 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO10 | |
| 4 Weight (with oil charge) | 10.35 | [kg] (22.82 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

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 | 8EA5B1 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MRA58155-5590 | |
| 6 Start winding resistance | 15.60 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 38.00 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 3.40 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.53 | [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] |
| 390 | 98 | 114 | 83 | 0.54 | 1.22 | 4.70 | 1.18 | 1.38 |

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) | 195 | 49 | 57 | 64 | 0.44 | 0.61 | 3.05 | 0.77 | 0.90 |
| -30 (-22) | 270 | 68 | 79 | 70 | 0.49 | 0.85 | 3.87 | 0.98 | 1.13 |
| -25 (-13) | 366 | 92 | 107 | 78 | 0.52 | 1.15 | 4.68 | 1.18 | 1.37 |
| -20 (- 4) | 483 | 122 | 141 | 87 | 0.54 | 1.52 | 5.52 | 1.39 | 1.62 |
| -15 (+ 5) | 622 | 157 | 182 | 96 | 0.57 | 1.96 | 6.41 | 1.62 | 1.88 |
| -10 (+14) | 783 | 197 | 229 | 106 | 0.60 | 2.47 | 7.40 | 1.86 | 2.17 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 183 | 46 | 54 | 64 | 0.46 | 0.57 | 2.85 | 0.72 | 0.83 |
| -30 (-22) | 260 | 65 | 76 | 71 | 0.50 | 0.81 | 3.67 | 0.92 | 1.07 |
| -25 (-13) | 354 | 89 | 104 | 81 | 0.53 | 1.11 | 4.42 | 1.11 | 1.30 |
| -20 (- 4) | 467 | 118 | 137 | 91 | 0.56 | 1.47 | 5.15 | 1.30 | 1.51 |
| -15 (+ 5) | 598 | 151 | 175 | 102 | 0.59 | 1.88 | 5.89 | 1.48 | 1.72 |
| -10 (+14) | 750 | 189 | 220 | 113 | 0.63 | 2.37 | 6.65 | 1.68 | 1.95 |

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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) | 122 | 31 | 36 | 57 | 0.42 | 0.38 | 2.15 | 0.54 | 0.63 |
| -30 (-22) | 212 | 53 | 62 | 68 | 0.47 | 0.66 | 3.09 | 0.78 | 0.91 |
| -25 (-13) | 316 | 80 | 93 | 80 | 0.51 | 0.99 | 3.92 | 0.99 | 1.15 |
| -20 (- 4) | 437 | 110 | 128 | 93 | 0.55 | 1.37 | 4.67 | 1.18 | 1.37 |
| -15 (+ 5) | 574 | 145 | 168 | 107 | 0.60 | 1.81 | 5.37 | 1.35 | 1.57 |
| -10 (+14) | 728 | 183 | 213 | 121 | 0.65 | 2.30 | 6.05 | 1.52 | 1.77 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------|------|--------------------------|
| 1 Base plate | European Standard EG/F | | |
| 2 Tray holder | Yes | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material | Copper plated steel | | |
| 3.1.2 Shape | Slanted | | |
| 3.2 DISCHARGE | 5 +0.18/-0.06 | [mm] | (0.197" +0.007"/-0.002") |
| 3.2.1 Material | Copper plated steel | | |
| 3.2.2 Shape | Slanted | | |
| 3.3 PROCESS | 6.1 +0.10/+0.00 | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material | Copper plated steel | | |
| 3.3.2 Shape | Slanted | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |