

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F GS70CA |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513208154 |

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 | 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 | 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 pressures/temperature | | | |
| 9.1 Operating (gauge) | 7.7 | [kgf/cm ²] (109 psig) | / °C - °F |
| 9.2 Peak (gauge) | 9.8 | [kgf/cm ²] (139 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|----------------------------------|
| 1 Commercial designation | 1/5+ | [hp] |
| 2 Displacement | 11.14 | [cm ³] (0.680 cu.in) |
| 2.1 Bore [mm] | 26.000 | |
| 2.2 Stroke [mm] | 21.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | MINERAL / ISO32 | |
| 4 Weight (with oil charge) | 10.65 | [kg] (23.48 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 | 8EA5B3 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 5(330) | [µF(VAC minimum)] |
| 5 Motor protection | MRA58154-5590 | |
| 6 Start winding resistance | 16.75 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 20.60 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 6.90 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 0.83 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | IRAM | |

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] |
| 600 | 151 | 176 | 120 | 0.57 | 1.88 | 5.00 | 1.26 | 1.47 |

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) | 329 | 83 | 96 | 89 | 0.39 | 1.03 | 3.69 | 0.93 | 1.08 |
| -30 (-22) | 443 | 112 | 130 | 102 | 0.47 | 1.39 | 4.37 | 1.10 | 1.28 |
| -25 (-13) | 590 | 149 | 173 | 115 | 0.54 | 1.85 | 5.16 | 1.30 | 1.51 |
| -20 (- 4) | 775 | 195 | 227 | 128 | 0.61 | 2.44 | 6.04 | 1.52 | 1.77 |
| -15 (+ 5) | 1003 | 253 | 294 | 143 | 0.67 | 3.16 | 7.00 | 1.76 | 2.05 |
| -10 (+14) | 1278 | 322 | 374 | 159 | 0.74 | 4.03 | 8.04 | 2.03 | 2.36 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 290 | 73 | 85 | 87 | 0.41 | 0.91 | 3.33 | 0.84 | 0.98 |
| -30 (-22) | 400 | 101 | 117 | 100 | 0.49 | 1.25 | 3.99 | 1.01 | 1.17 |
| -25 (-13) | 541 | 136 | 159 | 115 | 0.56 | 1.70 | 4.72 | 1.19 | 1.38 |
| -20 (- 4) | 718 | 181 | 210 | 131 | 0.62 | 2.26 | 5.49 | 1.38 | 1.61 |
| -15 (+ 5) | 936 | 236 | 274 | 148 | 0.70 | 2.95 | 6.31 | 1.59 | 1.85 |
| -10 (+14) | 1199 | 302 | 351 | 167 | 0.78 | 3.78 | 7.15 | 1.80 | 2.10 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 247 | 62 | 72 | 85 | 0.40 | 0.77 | 2.91 | 0.73 | 0.85 |
| -30 (-22) | 357 | 90 | 105 | 99 | 0.48 | 1.12 | 3.61 | 0.91 | 1.06 |
| -25 (-13) | 496 | 125 | 145 | 114 | 0.55 | 1.56 | 4.34 | 1.09 | 1.27 |
| -20 (- 4) | 669 | 169 | 196 | 132 | 0.63 | 2.10 | 5.07 | 1.28 | 1.49 |
| -15 (+ 5) | 881 | 222 | 258 | 152 | 0.71 | 2.77 | 5.81 | 1.46 | 1.70 |
| -10 (+14) | 1135 | 286 | 333 | 174 | 0.81 | 3.58 | 6.53 | 1.65 | 1.91 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------|------|--------------------------|
| 1 Base plate | European Standard | | |
| 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 | | |