

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F GS70HAW |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513200231 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|--------------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 3 Nominal voltage and frequency | 115-127 / 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 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static | - | 103 to 140 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 | 1/5+ | [hp] |
| 2 Displacement | 6.36 | [cm ³] (0.388 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 16.000 | |
| 3 Lubricant charge | 335 | [ml] (11.33 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 | |
| 4 Weight (with oil charge) | 11.25 | [kg] (24.80 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 | 115-127 V 60 Hz 1 ~ (Single phase) | |
| 2 Starting device type | Combo | |
| 2.1 Starting device | 5SP14X427N | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 20(180) | [µF(VAC minimum)] |
| 5 Motor protection | 5SP14X427NFX | |
| 6 Start winding resistance | 2.68 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.69 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 12.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.91 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | 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] |
| 710 | 179 | 208 | 137 | 1.20 | 4.03 | 5.19 | 1.31 | 1.52 |

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) | 348 | 88 | 102 | 91 | 0.85 | 1.97 | 3.82 | 0.96 | 1.12 |
| -30 (-22) | 527 | 133 | 154 | 110 | 0.99 | 2.99 | 4.76 | 1.20 | 1.39 |
| -25 (-13) | 732 | 184 | 215 | 130 | 1.15 | 4.16 | 5.63 | 1.42 | 1.65 |
| -20 (- 4) | 971 | 245 | 284 | 150 | 1.31 | 5.52 | 6.47 | 1.63 | 1.89 |
| -15 (+ 5) | 1250 | 315 | 366 | 170 | 1.49 | 7.14 | 7.33 | 1.85 | 2.15 |
| -10 (+14) | 1576 | 397 | 462 | 190 | 1.67 | 9.03 | 8.27 | 2.08 | 2.42 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 273 | 69 | 80 | 88 | 0.83 | 1.54 | 3.10 | 0.78 | 0.91 |
| -30 (-22) | 439 | 111 | 129 | 109 | 0.98 | 2.49 | 4.04 | 1.02 | 1.18 |
| -25 (-13) | 634 | 160 | 186 | 131 | 1.15 | 3.60 | 4.87 | 1.23 | 1.43 |
| -20 (- 4) | 865 | 218 | 254 | 154 | 1.35 | 4.92 | 5.64 | 1.42 | 1.65 |
| -15 (+ 5) | 1139 | 287 | 334 | 178 | 1.56 | 6.50 | 6.40 | 1.61 | 1.87 |
| -10 (+14) | 1463 | 369 | 429 | 203 | 1.78 | 8.38 | 7.20 | 1.81 | 2.11 |

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|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 187 | 47 | 55 | 78 | 0.76 | 1.06 | 2.37 | 0.60 | 0.70 |
| -30 (-22) | 346 | 87 | 101 | 102 | 0.92 | 1.96 | 3.37 | 0.85 | 0.99 |
| -25 (-13) | 536 | 135 | 157 | 127 | 1.12 | 3.04 | 4.21 | 1.06 | 1.23 |
| -20 (- 4) | 764 | 192 | 224 | 154 | 1.35 | 4.35 | 4.97 | 1.25 | 1.46 |
| -15 (+ 5) | 1037 | 261 | 304 | 183 | 1.60 | 5.92 | 5.68 | 1.43 | 1.66 |
| -10 (+14) | 1363 | 344 | 399 | 213 | 1.87 | 7.81 | 6.39 | 1.61 | 1.87 |

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 | 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) | 4.9 +0.02/-0.05 | [mm] | (0.193" +0.001"/-0.002") |
| 3.5 Connector sealing | Rubber Plugs | | |