

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F GS70HA |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513208405 |

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 | 350 | [ml] (11.84 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 | 5SP14X283U | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | 20(180) | [µF(VAC minimum)] |
| 5 Motor protection | 5SP14X283ULX | |
| 6 Start winding resistance | 3.50 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 3.42 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 10.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 1.90 | [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] |
| 705 | 178 | 207 | 136 | 1.20 | 4.01 | 5.20 | 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) | 381 | 96 | 112 | 95 | 0.83 | 2.16 | 4.04 | 1.02 | 1.18 |
| -30 (-22) | 544 | 137 | 159 | 111 | 0.99 | 3.08 | 4.89 | 1.23 | 1.43 |
| -25 (-13) | 739 | 186 | 217 | 129 | 1.14 | 4.20 | 5.74 | 1.45 | 1.68 |
| -20 (- 4) | 976 | 246 | 286 | 147 | 1.29 | 5.55 | 6.61 | 1.67 | 1.94 |
| -15 (+ 5) | 1260 | 318 | 369 | 167 | 1.45 | 7.19 | 7.53 | 1.90 | 2.21 |
| -10 (+14) | 1601 | 403 | 469 | 188 | 1.63 | 9.17 | 8.51 | 2.14 | 2.49 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 320 | 81 | 94 | 91 | 0.81 | 1.81 | 3.49 | 0.88 | 1.02 |
| -30 (-22) | 474 | 119 | 139 | 110 | 0.99 | 2.68 | 4.29 | 1.08 | 1.26 |
| -25 (-13) | 658 | 166 | 193 | 131 | 1.16 | 3.74 | 5.06 | 1.27 | 1.48 |
| -20 (- 4) | 883 | 222 | 259 | 153 | 1.34 | 5.02 | 5.81 | 1.46 | 1.70 |
| -15 (+ 5) | 1154 | 291 | 338 | 176 | 1.53 | 6.59 | 6.56 | 1.65 | 1.92 |
| -10 (+14) | 1479 | 373 | 433 | 202 | 1.75 | 8.47 | 7.32 | 1.85 | 2.15 |

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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) | 218 | 55 | 64 | 84 | 0.75 | 1.24 | 2.61 | 0.66 | 0.77 |
| -30 (-22) | 373 | 94 | 109 | 105 | 0.94 | 2.11 | 3.51 | 0.89 | 1.03 |
| -25 (-13) | 557 | 140 | 163 | 128 | 1.14 | 3.16 | 4.33 | 1.09 | 1.27 |
| -20 (- 4) | 780 | 197 | 229 | 153 | 1.35 | 4.44 | 5.10 | 1.28 | 1.49 |
| -15 (+ 5) | 1048 | 264 | 307 | 181 | 1.58 | 5.98 | 5.82 | 1.47 | 1.71 |
| -10 (+14) | 1369 | 345 | 401 | 210 | 1.83 | 7.84 | 6.51 | 1.64 | 1.91 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 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 plated steel | | |
| 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 plated steel | | |
| 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 plated steel | | |
| 3.3.2 Shape | Straight | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |