

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F GV110HAW |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513200241 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-134a | | |
| 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 | 14.2 | [kgf/cm ²] (202 psig) | / °C - °F |
| 9.2 Peak | 15.9 | [kgf/cm ²] (226 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 | 335 | [ml] (11.33 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 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 | 220-240 V 50 Hz 1 ~ (Single phase) | |
| 2 Starting device type | PTC | |
| 2.1 Starting device | 8EA17C1/8EA5B1/QPS2-A22MG1 | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM189RHBYY-53 | |
| 6 Start winding resistance | 19.45 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 9.30 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 9.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.65 | [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] |
| 850 | 214 | 249 | 185 | 1.21 | 4.83 | 4.59 | 1.16 | 1.34 |

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) | 450 | 114 | 132 | 127 | 1.06 | 2.55 | 3.55 | 0.89 | 1.04 |
| -30 (-22) | 636 | 160 | 186 | 147 | 1.12 | 3.61 | 4.32 | 1.09 | 1.27 |
| -25 (-13) | 846 | 213 | 248 | 171 | 1.18 | 4.80 | 4.96 | 1.25 | 1.45 |
| -20 (- 4) | 1094 | 276 | 321 | 196 | 1.26 | 6.23 | 5.58 | 1.41 | 1.64 |
| -15 (+ 5) | 1399 | 352 | 410 | 223 | 1.35 | 7.98 | 6.27 | 1.58 | 1.84 |
| -10 (+14) | 1775 | 447 | 520 | 248 | 1.46 | 10.17 | 7.13 | 1.80 | 2.09 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|---------------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 358 | 90 | 105 | 126 | 1.04 | 2.03 | 2.85 | 0.72 | 0.84 |
| -30 (-22) | 553 | 139 | 162 | 149 | 1.11 | 3.14 | 3.69 | 0.93 | 1.08 |
| -25 (-13) | 766 | 193 | 225 | 176 | 1.19 | 4.35 | 4.36 | 1.10 | 1.28 |
| -20 (- 4) | 1014 | 256 | 297 | 206 | 1.28 | 5.77 | 4.94 | 1.24 | 1.45 |
| -15 (+ 5) | 1313 | 331 | 385 | 237 | 1.39 | 7.49 | 5.54 | 1.40 | 1.62 |
| -10 (+14) | 1678 | 423 | 492 | 268 | 1.53 | 9.61 | 6.25 | 1.57 | 1.83 |

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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) | 266 | 67 | 78 | 116 | 1.03 | 1.51 | 2.30 | 0.58 | 0.67 |
| -30 (-22) | 468 | 118 | 137 | 144 | 1.10 | 2.65 | 3.20 | 0.81 | 0.94 |
| -25 (-13) | 684 | 172 | 200 | 176 | 1.19 | 3.88 | 3.87 | 0.98 | 1.13 |
| -20 (- 4) | 928 | 234 | 272 | 212 | 1.30 | 5.28 | 4.40 | 1.11 | 1.29 |
| -15 (+ 5) | 1219 | 307 | 357 | 250 | 1.43 | 6.96 | 4.90 | 1.23 | 1.43 |
| -10 (+14) | 1571 | 396 | 460 | 288 | 1.59 | 9.00 | 5.45 | 1.37 | 1.60 |

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 plated steel | | |
| 3.1.2 Shape | Straight | | |
| 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 | 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) | 5.1 +0.10/+0.00 | [mm] | (0.201" +0.004"/+0.000") |
| 3.5 Connector sealing | Rubber Plugs | | |