

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F G75HAK |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513200334 |

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 | CSIR | | |
| 6 Starting torque | LST/HST - Low/High starting torque | | |
| 7 Expansion device | Capillary tube or Expansion valve | | |
| 8 Compressor cooling | Operating voltage range | | |
| | | 50 Hz | 60 Hz |
| 8.1 LBP (32°C Ambient temperature) | Static/Fan | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan | 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 | 1/4 | [hp] |
| 2 Displacement | 7.95 | [cm ³] (0.485 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 10.6 | [kg] (23.37 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 | Current Relay | |
| 2.1 Starting device | 213516299 | |
| 3 Start capacitor | 64-77(250) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MRA58103-5590 | |
| 6 Start winding resistance | 22.40 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 10.80 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50 Hz) | 10.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz) | 1.60 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - IRAM - UKCA | |

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] | |
| 660 | 166 | 193 | 165 | 1.07 | 3.75 | 4.00 | 1.01 | 1.17 | |

| | | | | | | | | | |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|--|
| TEST CONDITIONS: @220V50Hz | | | ASHRAELBP32 Fan | | 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] | |
| 660 | 166 | 193 | 165 | 1.07 | 3.75 | 4.00 | 1.01 | 1.17 | |

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) | 360 | 91 | 106 | 152 | 0.94 | 2.04 | 2.35 | 0.59 | 0.69 | |
| -30 (-22) | 472 | 119 | 138 | 151 | 0.99 | 2.67 | 3.24 | 0.82 | 0.95 | |
| -25 (-13) | 632 | 159 | 185 | 158 | 1.05 | 3.59 | 4.08 | 1.03 | 1.19 | |
| -20 (- 4) | 838 | 211 | 246 | 173 | 1.11 | 4.77 | 4.87 | 1.23 | 1.43 | |
| -15 (+ 5) | 1089 | 274 | 319 | 192 | 1.19 | 6.22 | 5.64 | 1.42 | 1.65 | |
| -10 (+14) | 1382 | 348 | 405 | 216 | 1.28 | 7.92 | 6.38 | 1.61 | 1.87 | |

| | | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|--|
| 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 | 117 | 0.93 | 1.64 | 2.53 | 0.64 | 0.74 | |
| -30 (-22) | 423 | 107 | 124 | 130 | 0.99 | 2.40 | 3.25 | 0.82 | 0.95 | |
| -25 (-13) | 594 | 150 | 174 | 150 | 1.05 | 3.37 | 3.90 | 0.98 | 1.14 | |
| -20 (- 4) | 801 | 202 | 235 | 176 | 1.14 | 4.56 | 4.51 | 1.14 | 1.32 | |
| -15 (+ 5) | 1041 | 262 | 305 | 204 | 1.23 | 5.94 | 5.07 | 1.28 | 1.49 | |
| -10 (+14) | 1313 | 331 | 385 | 234 | 1.34 | 7.52 | 5.62 | 1.42 | 1.65 | |

E - PERFORMANCE - CURVES

| 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) | 249 | 63 | 73 | 108 | 0.92 | 1.41 | 2.31 | 0.58 | 0.68 |
| -30 | (-22) | 381 | 96 | 112 | 129 | 0.98 | 2.16 | 2.91 | 0.73 | 0.85 |
| -25 | (-13) | 540 | 136 | 158 | 156 | 1.06 | 3.07 | 3.45 | 0.87 | 1.01 |
| -20 | (- 4) | 725 | 183 | 212 | 185 | 1.15 | 4.12 | 3.92 | 0.99 | 1.15 |
| -15 | (+ 5) | 933 | 235 | 273 | 216 | 1.26 | 5.32 | 4.36 | 1.10 | 1.28 |
| -10 | (+14) | 1162 | 293 | 340 | 246 | 1.39 | 6.65 | 4.76 | 1.20 | 1.39 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------------|------|--------------------------|
| 1 Base plate | European Standard 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) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |