

COMPRESSOR DEFINITION

| | |
|---------------------------|------------------------|
| Designation | F F18,5HAK |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number | 513200433 |

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-Medium Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to -5°C | (-31°F to 23°F) | |
| 5 Motor type | RSIR/CSIR | | |
| 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/Fan | - | 98 to 135 V |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan | - | 98 to 135 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 | 7.15 | [cm ³] (0.436 cu.in) |
| 2.1 Bore [mm] | 22.500 | |
| 2.2 Stroke [mm] | 18.000 | |
| 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) | 11.38 | [kg] (25.09 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 | Current Relay | |
| 2.1 Starting device | 213516094/213516132 | |
| 3 Start capacitor | 243-292(100) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 4TM762NFBZZ-53 | |
| 6 Start winding resistance | 8.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 2.35 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 27.50 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 3.30 | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CE - IRAM - TUV - UKCA - 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] |
| 830 | 209 | 243 | 177 | 2.31 | 4.72 | 4.70 | 1.18 | 1.38 |

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) | 450 | 113 | 132 | 118 | 2.00 | 2.55 | 3.79 | 0.96 | 1.11 |
| -30 (-22) | 615 | 155 | 180 | 141 | 2.11 | 3.49 | 4.39 | 1.11 | 1.29 |
| -25 (-13) | 834 | 210 | 245 | 164 | 2.24 | 4.74 | 5.09 | 1.28 | 1.49 |
| -20 (- 4) | 1106 | 279 | 324 | 189 | 2.40 | 6.29 | 5.87 | 1.48 | 1.72 |
| -15 (+ 5) | 1426 | 359 | 418 | 214 | 2.57 | 8.14 | 6.68 | 1.68 | 1.96 |
| -10 (+14) | 1792 | 452 | 525 | 240 | 2.76 | 10.27 | 7.49 | 1.89 | 2.19 |
| -5 (+23) | 2201 | 555 | 645 | 266 | 2.95 | 12.66 | 8.26 | 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) | 357 | 90 | 105 | 115 | 1.98 | 2.02 | 3.13 | 0.79 | 0.92 |
| -30 (-22) | 517 | 130 | 152 | 140 | 2.10 | 2.93 | 3.71 | 0.94 | 1.09 |
| -25 (-13) | 731 | 184 | 214 | 167 | 2.25 | 4.15 | 4.38 | 1.10 | 1.28 |
| -20 (- 4) | 997 | 251 | 292 | 196 | 2.43 | 5.68 | 5.09 | 1.28 | 1.49 |
| -15 (+ 5) | 1312 | 331 | 384 | 226 | 2.64 | 7.49 | 5.81 | 1.46 | 1.70 |
| -10 (+14) | 1672 | 421 | 490 | 257 | 2.87 | 9.58 | 6.50 | 1.64 | 1.91 |
| -5 (+23) | 2075 | 523 | 608 | 291 | 3.12 | 11.94 | 7.13 | 1.80 | 2.09 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| 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) | 262 | 66 | 77 | 108 | 1.96 | 1.48 | 2.44 | 0.61 | 0.71 |
| -30 (-22) | 413 | 104 | 121 | 135 | 2.08 | 2.34 | 3.06 | 0.77 | 0.90 |
| -25 (-13) | 618 | 156 | 181 | 165 | 2.25 | 3.51 | 3.73 | 0.94 | 1.09 |
| -20 (- 4) | 875 | 220 | 256 | 197 | 2.46 | 4.98 | 4.42 | 1.11 | 1.30 |
| -15 (+ 5) | 1180 | 297 | 346 | 232 | 2.70 | 6.74 | 5.09 | 1.28 | 1.49 |
| -10 (+14) | 1531 | 386 | 449 | 269 | 2.98 | 8.77 | 5.71 | 1.44 | 1.67 |
| -5 (+23) | 1924 | 485 | 564 | 309 | 3.28 | 11.07 | 6.23 | 1.57 | 1.83 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate | Universal EG/F/AMEM version 2 | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 8.2 +0.12/-0.08 | [mm] | (0.323" +0.005"/-0.003") |
| 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 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 | | |