

COMPRESSOR DEFINITION

| | |
|---------------------------|-----------------|
| Designation | F F7,5BKW |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number | 513200491 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | Blend | | |
| 3 Nominal voltage and frequency | 220-240 / 50 | [V / Hz] | |
| 4 Application type | Low-Medium-High Back Pressure | | |
| 4.1 Evaporating temperature range | -35°C to 15°C | (-31°F to 59°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 | 198 to 255 V | - |
| 8.2 LBP (43°C Ambient temperature) | Static | 198 to 255 V | - |
| 8.3 HBP (32°C Ambient temperature) | Fan | 198 to 255 V | - |
| 8.4 HBP (43°C Ambient temperature) | Fan | 198 to 255 V | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 14.5 | [kgf/cm ²] (206 psig) | / °C - °F |
| 9.2 Peak (gauge) | 18.2 | [kgf/cm ²] (259 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|-----------------|--|
| 1 Commercial designation | 1/5+ | [hp] |
| 2 Displacement | 6.92 | [cm ³] (0.422 cu.in) |
| 2.1 Bore [mm] | 21.000 | |
| 2.2 Stroke [mm] | 20.000 | |
| 3 Lubricant charge | 280 | [ml] (9.47 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO32 | |
| 4 Weight (with oil charge) | 10.84 | [kg] (23.90 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 | 213516116/213516337 | |
| 3 Start capacitor | 88-108(180) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | MRA58094-5590 | |
| 6 Start winding resistance | 39.14 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 12.41 | [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 | | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @220V50Hz | | | ASHRAEHBP32 Static | | Evaporating temperature (Condensing temperature) | | 7.2°C (44.96°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] |
| 2135 | 538 | 626 | 292 | 1.50 | 15.99 | 7.31 | 1.84 | 2.14 |

| | | | | | | | | |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--|-------|
| 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] |
| 627 | 158 | 184 | 158 | 0.97 | 4.59 | 3.97 | 1.00 | 1.16 |

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) | 367 | 92 | 108 | 111 | 1.03 | 2.67 | 3.32 | 0.84 | 0.97 |
| -30 (-22) | 495 | 125 | 145 | 127 | 0.82 | 3.62 | 3.88 | 0.98 | 1.14 |
| -25 (-13) | 644 | 162 | 189 | 145 | 0.79 | 4.72 | 4.44 | 1.12 | 1.30 |
| -20 (- 4) | 818 | 206 | 240 | 164 | 0.89 | 6.00 | 5.00 | 1.26 | 1.47 |
| -15 (+ 5) | 1022 | 258 | 299 | 183 | 1.07 | 7.51 | 5.60 | 1.41 | 1.64 |
| -10 (+14) | 1261 | 318 | 369 | 202 | 1.28 | 9.29 | 6.25 | 1.57 | 1.83 |
| -5 (+23) | 1540 | 388 | 451 | 221 | 1.49 | 11.39 | 6.96 | 1.75 | 2.04 |
| 0 (+32) | 1863 | 470 | 546 | 240 | 1.64 | 13.85 | 7.77 | 1.96 | 2.28 |
| +5 (+41) | 2237 | 564 | 655 | 258 | 1.70 | 16.71 | 8.68 | 2.19 | 2.54 |
| +10 (+50) | 2664 | 671 | 781 | 274 | 1.60 | 20.03 | 9.72 | 2.45 | 2.85 |
| +15 (+59) | 3152 | 794 | 924 | 289 | 1.32 | 23.83 | 10.90 | 2.75 | 3.20 |

| | | | | | | | | | |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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) | 336 | 85 | 99 | 112 | 1.08 | 2.45 | 2.98 | 0.75 | 0.87 |
| -30 (-22) | 460 | 116 | 135 | 130 | 0.95 | 3.36 | 3.51 | 0.88 | 1.03 |
| -25 (-13) | 600 | 151 | 176 | 149 | 0.95 | 4.40 | 3.99 | 1.01 | 1.17 |
| -20 (- 4) | 762 | 192 | 223 | 171 | 1.04 | 5.59 | 4.45 | 1.12 | 1.30 |
| -15 (+ 5) | 952 | 240 | 279 | 193 | 1.17 | 6.99 | 4.92 | 1.24 | 1.44 |
| -10 (+14) | 1173 | 296 | 344 | 217 | 1.30 | 8.64 | 5.40 | 1.36 | 1.58 |
| -5 (+23) | 1432 | 361 | 419 | 242 | 1.38 | 10.59 | 5.91 | 1.49 | 1.73 |
| 0 (+32) | 1732 | 436 | 507 | 266 | 1.36 | 12.87 | 6.48 | 1.63 | 1.90 |
| +5 (+41) | 2078 | 524 | 609 | 291 | 1.21 | 15.53 | 7.13 | 1.80 | 2.09 |
| +10 (+50) | 2476 | 624 | 726 | 315 | 0.87 | 18.61 | 7.87 | 1.98 | 2.31 |
| +15 (+59) | 2931 | 739 | 859 | 338 | 0.29 | 22.16 | 8.72 | 2.20 | 2.56 |

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) | 281 | 71 | 82 | 110 | 0.82 | 2.05 | 2.59 | 0.65 | 0.76 |
| -30 | (-22) | 409 | 103 | 120 | 129 | 0.87 | 2.99 | 3.14 | 0.79 | 0.92 |
| -25 | (-13) | 550 | 139 | 161 | 151 | 1.03 | 4.04 | 3.62 | 0.91 | 1.06 |
| -20 | (- 4) | 711 | 179 | 208 | 176 | 1.22 | 5.22 | 4.05 | 1.02 | 1.19 |
| -15 | (+ 5) | 895 | 226 | 262 | 203 | 1.42 | 6.58 | 4.45 | 1.12 | 1.30 |
| -10 | (+14) | 1109 | 279 | 325 | 231 | 1.58 | 8.17 | 4.82 | 1.22 | 1.41 |
| -5 | (+23) | 1356 | 342 | 397 | 261 | 1.65 | 10.03 | 5.21 | 1.31 | 1.53 |
| 0 | (+32) | 1642 | 414 | 481 | 292 | 1.58 | 12.20 | 5.61 | 1.41 | 1.64 |
| +5 | (+41) | 1971 | 497 | 578 | 324 | 1.33 | 14.73 | 6.06 | 1.53 | 1.78 |
| +10 | (+50) | 2349 | 592 | 688 | 356 | 0.85 | 17.66 | 6.56 | 1.65 | 1.92 |
| +15 | (+59) | 2780 | 701 | 815 | 388 | 0.10 | 21.03 | 7.15 | 1.80 | 2.09 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|---------------------------------------|------|--------------------------|
| 1 Base plate | European Standard 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 | 6.5 +0.12/-0.08 | [mm] | (0.256" +0.005"/-0.003") |
| 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) | 6.5 +0.09/-0.09 | [mm] | (0.256" +0.004"/-0.004") |
| 3.5 Connector sealing | Rubber Plugs | | |