

COMPRESSOR DEFINITION

| | |
|---------------------------|--------------------|
| Designation | T 2168GK- |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number | 936DG68 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|--|-----------------------------------|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 115 / 60 | [V / Hz] | |
| 4 Application type | Low Back Pressure R404A | | |
| 4.1 Evaporating temperature range | -40°C to -10°C | (-40°F to 14°F) | |
| 5 Motor type | CSIR | | |
| 6 Starting torque | HST - 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) | - | - | - |
| 8.2 LBP (43°C Ambient temperature) | - | - | - |
| 8.3 HBP (32°C Ambient temperature) | - | - | - |
| 8.4 HBP (43°C Ambient temperature) | - | - | - |
| 9 Maximum condensing pressures/temperature | | | |
| 9.1 Operating (gauge) | 25.7 | [kgf/cm ²] (365 psig) | / °C - °F |
| 9.2 Peak (gauge) | 28.7 | [kgf/cm ²] (408 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 3/4 | [hp] |
| 2 Displacement | 17.39 | [cm ³] (1.061 cu.in) |
| 2.1 Bore [mm] | 34.120 | |
| 2.2 Stroke [mm] | 19.030 | |
| 3 Lubricant charge | 550 | [ml] (18.60 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 17 | [kg] (37.48 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 V 60 Hz 1~ (Single phase) | |
| 2 Starting device type | Current Relay | |
| 2.1 Starting device | 3ARR2KCP188S | |
| 3 Start capacitor | 145-175(165) | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | CST00HK-3031 | |
| 6 Start winding resistance | 4.10 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 0.54 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (60 Hz) | 55.00 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz) | 9.20 | [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: @100V50Hz | | | 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] |
| 2571 | 648 | 753 | 652 | 8.90 | 17.43 | 3.94 | 0.99 | 1.15 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @100V50Hz | | | ASHRAE32 Fan | | (Condensing temperature 35°C (+95°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] |
| -40 | (-40) | 1151 | 290 | 337 | 374 | 6.74 | 7.74 | 3.06 | 0.77 | 0.90 |
| -35 | (-31) | 1618 | 408 | 474 | 449 | 7.27 | 10.91 | 3.62 | 0.91 | 1.06 |
| -30 | (-22) | 2178 | 549 | 638 | 528 | 7.87 | 14.73 | 4.15 | 1.05 | 1.22 |
| -25 | (-13) | 2855 | 720 | 837 | 610 | 8.58 | 19.40 | 4.69 | 1.18 | 1.37 |
| -20 | (- 4) | 3672 | 925 | 1076 | 695 | 9.41 | 25.08 | 5.26 | 1.33 | 1.54 |
| -15 | (+ 5) | 4653 | 1173 | 1363 | 784 | 10.39 | 31.97 | 5.91 | 1.49 | 1.73 |
| -10 | (+14) | 5820 | 1467 | 1705 | 878 | 11.54 | 40.26 | 6.66 | 1.68 | 1.95 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @100V50Hz | | | ASHRAE32 Fan | | (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] |
| -40 | (-40) | 873 | 220 | 256 | 314 | 6.58 | 5.86 | 2.77 | 0.70 | 0.81 |
| -35 | (-31) | 1360 | 343 | 398 | 412 | 7.17 | 9.15 | 3.30 | 0.83 | 0.97 |
| -30 | (-22) | 1924 | 485 | 564 | 511 | 7.84 | 12.99 | 3.78 | 0.95 | 1.11 |
| -25 | (-13) | 2588 | 652 | 758 | 611 | 8.59 | 17.55 | 4.25 | 1.07 | 1.25 |
| -20 | (- 4) | 3376 | 851 | 989 | 711 | 9.47 | 23.01 | 4.74 | 1.20 | 1.39 |
| -15 | (+ 5) | 4312 | 1087 | 1263 | 813 | 10.48 | 29.57 | 5.29 | 1.33 | 1.55 |
| -10 | (+14) | 5417 | 1365 | 1587 | 915 | 11.66 | 37.40 | 5.92 | 1.49 | 1.74 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @100V50Hz | | | ASHRAE32 Fan | | (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] |
| -40 | (-40) | 604 | 152 | 177 | 255 | 6.42 | 4.04 | 2.39 | 0.60 | 0.70 |
| -35 | (-31) | 1112 | 280 | 326 | 377 | 7.08 | 7.47 | 2.92 | 0.74 | 0.86 |
| -30 | (-22) | 1680 | 423 | 492 | 496 | 7.80 | 11.32 | 3.39 | 0.85 | 0.99 |
| -25 | (-13) | 2332 | 588 | 683 | 612 | 8.61 | 15.78 | 3.82 | 0.96 | 1.12 |
| -20 | (- 4) | 3092 | 779 | 906 | 727 | 9.52 | 21.03 | 4.26 | 1.07 | 1.25 |
| -15 | (+ 5) | 3983 | 1004 | 1167 | 840 | 10.56 | 27.26 | 4.74 | 1.19 | 1.39 |
| -10 | (+14) | 5029 | 1267 | 1473 | 951 | 11.76 | 34.65 | 5.29 | 1.33 | 1.55 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @100V60Hz | | ASHRAE32 Fan | | | (Condensing temperature 35°C (+95°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] |
| -40 | (-40) | 1347 | 339 | 395 | 438 | 6.88 | 9.05 | 3.06 | 0.77 | 0.90 |
| -35 | (-31) | 1893 | 477 | 555 | 526 | 7.42 | 12.76 | 3.62 | 0.91 | 1.06 |
| -30 | (-22) | 2548 | 642 | 747 | 618 | 8.03 | 17.24 | 4.15 | 1.05 | 1.22 |
| -25 | (-13) | 3341 | 842 | 979 | 714 | 8.75 | 22.69 | 4.68 | 1.18 | 1.37 |
| -20 | (- 4) | 4297 | 1083 | 1259 | 814 | 9.60 | 29.35 | 5.26 | 1.33 | 1.54 |
| -15 | (+ 5) | 5444 | 1372 | 1595 | 918 | 10.60 | 37.41 | 5.91 | 1.49 | 1.73 |
| -10 | (+14) | 6810 | 1716 | 1995 | 1027 | 11.78 | 47.11 | 6.66 | 1.68 | 1.95 |

| TEST CONDITIONS: @100V60Hz | | ASHRAE32 Fan | | | (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] |
| -40 | (-40) | 1021 | 257 | 299 | 367 | 6.72 | 6.85 | 2.76 | 0.70 | 0.81 |
| -35 | (-31) | 1591 | 401 | 466 | 483 | 7.32 | 10.71 | 3.29 | 0.83 | 0.97 |
| -30 | (-22) | 2250 | 567 | 659 | 598 | 8.00 | 15.19 | 3.78 | 0.95 | 1.11 |
| -25 | (-13) | 3028 | 763 | 887 | 715 | 8.77 | 20.53 | 4.25 | 1.07 | 1.25 |
| -20 | (- 4) | 3950 | 995 | 1157 | 832 | 9.66 | 26.92 | 4.74 | 1.20 | 1.39 |
| -15 | (+ 5) | 5044 | 1271 | 1478 | 951 | 10.69 | 34.59 | 5.29 | 1.33 | 1.55 |
| -10 | (+14) | 6338 | 1597 | 1857 | 1070 | 11.89 | 43.76 | 5.93 | 1.49 | 1.74 |

| TEST CONDITIONS: @100V60Hz | | ASHRAE32 Fan | | | (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] |
| -40 | (-40) | 707 | 178 | 207 | 299 | 6.56 | 4.73 | 2.39 | 0.60 | 0.70 |
| -35 | (-31) | 1301 | 328 | 381 | 441 | 7.23 | 8.74 | 2.92 | 0.73 | 0.85 |
| -30 | (-22) | 1965 | 495 | 576 | 580 | 7.96 | 13.25 | 3.38 | 0.85 | 0.99 |
| -25 | (-13) | 2729 | 688 | 800 | 717 | 8.78 | 18.46 | 3.82 | 0.96 | 1.12 |
| -20 | (- 4) | 3618 | 912 | 1060 | 851 | 9.71 | 24.61 | 4.26 | 1.07 | 1.25 |
| -15 | (+ 5) | 4661 | 1175 | 1366 | 983 | 10.78 | 31.89 | 4.74 | 1.19 | 1.39 |
| -10 | (+14) | 5884 | 1483 | 1724 | 1112 | 12.00 | 40.54 | 5.29 | 1.33 | 1.55 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|------------------|------|--------------------------|
| 1 Base plate | Universal | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 9.6 +0.07/+0.00 | [mm] | (0.378" +0.003"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Vertical | | |
| 3.2 DISCHARGE | 6.42 +0.08/+0.00 | [mm] | (0.253" +0.003"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Vertical | | |
| 3.3 PROCESS | 9.6 +0.07/+0.00 | [mm] | (0.378" +0.003"/+0.000") |
| 3.3.1 Material | Copper | | |
| 3.3.2 Shape | Vertical | | |
| 3.4 Oil cooler (Copper) | No | [mm] | |
| 3.5 Connector sealing | Rubber Plugs | | |