

COMPRESSOR DEFINITION

| | |
|---------------------------|--|
| Designation | NJ 9232GS |
| Nominal Voltage/Frequency | 380-420 V 50 Hz / 440-480 V 60 Hz |
| Engineering Number | 947NM11 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|----------------|-------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 380-420 / 50 | [V / Hz] | |
| 4 Application type | Medium Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -20°C to 0°C | (-4°F to 32°F) | |
| 5 Motor type | 3PHASE | | |
| 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 temperature | | | |
| 9.1 Operating (gauge) | [55] | [°C] | |
| 9.2 Peak (gauge) | [60] | [°C] | |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|--|
| 1 Commercial designation | 1 1/4 | [hp] |
| 2 Displacement | 26.11 | [cm ³] (1.593 cu.in) |
| 2.1 Bore [mm] | 41.770 | |
| 2.2 Stroke [mm] | 19.066 | |
| 3 Lubricant charge | 750 | [ml] (25.36 fl.oz.) |
| 3.1 Lubricants approved | | |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 | |
| 4 Weight (with oil charge) | 20.4 | [kg] (44.97 lb.) |
| 5 Nitrogen charge | 0.2 to 0.3 | [kgf/cm ²] (2.84 to 4.27 psig) |

C - ELECTRICAL DATA

| | | |
|--|---|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 380-420 V 50 Hz / 440-480 V 60 Hz 3 ~ (Three phase) | |
| 2 Starting device type | 3PHASE | |
| 2.1 Starting device | | |
| 3 Start capacitor | - | [µF(VAC minimum)] |
| 4 Run capacitor | - | [µF(VAC minimum)] |
| 5 Motor protection | 31HM129-36 | |
| 6 Start winding resistance | 7.55 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 7.55 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz) | - | [A] - Measured according to UL 984 |
| 11 Approval boards certification | CCC - IMQ | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-----------------------------------|----------|------|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS: @V50Hz | | | ASHRAEHBP46 Fan | | 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] |
| 13754 | 3466 | 4030 | 1615 | 2.90 | 113.23 | 8.52 | 2.15 | 2.50 |

| | | | | | | | | |
|-----------------------------------|----------|------|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS: @V60Hz | | | ASHRAEHBP46 Fan | | 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] |
| 16093 | 4055 | 4716 | 1887 | 2.96 | 132.49 | 8.53 | 2.15 | 2.50 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-----------------------------------|-------|----------------------------|-------------------------|------|---|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @V50Hz | | | ASHRAE46 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] |
| -20 | (- 4) | 5822 | 1467 | 1706 | 850 | 1.66 | 36.97 | 6.84 | 1.72 | 2.01 |
| -15 | (+ 5) | 7429 | 1872 | 2177 | 951 | 1.81 | 47.42 | 7.82 | 1.97 | 2.29 |
| -10 | (+14) | 9413 | 2372 | 2758 | 1044 | 1.99 | 60.45 | 9.02 | 2.27 | 2.64 |
| -5 | (+23) | 11774 | 2967 | 3450 | 1129 | 2.15 | 76.18 | 10.43 | 2.63 | 3.06 |
| 0 | (+32) | 14512 | 3657 | 4252 | 1206 | 2.29 | 94.73 | 12.03 | 3.03 | 3.52 |
| +5 | (+41) | 17629 | 4442 | 5166 | 1275 | 2.38 | 116.21 | 13.79 | 3.48 | 4.04 |
| +10 | (+50) | 21122 | 5323 | 6189 | 1335 | 2.41 | 140.75 | 15.70 | 3.96 | 4.60 |

| | | | | | | | | | | |
|-----------------------------------|-------|----------------------------|-------------------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @V50Hz | | | ASHRAE46 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] |
| -20 | (- 4) | 4859 | 1224 | 1424 | 868 | 1.69 | 34.03 | 5.61 | 1.41 | 1.64 |
| -15 | (+ 5) | 6300 | 1587 | 1846 | 982 | 1.87 | 44.40 | 6.41 | 1.62 | 1.88 |
| -10 | (+14) | 8054 | 2030 | 2360 | 1094 | 2.06 | 57.17 | 7.35 | 1.85 | 2.15 |
| -5 | (+23) | 10122 | 2551 | 2966 | 1203 | 2.26 | 72.43 | 8.41 | 2.12 | 2.46 |
| 0 | (+32) | 12504 | 3151 | 3664 | 1309 | 2.43 | 90.32 | 9.56 | 2.41 | 2.80 |
| +5 | (+41) | 15200 | 3830 | 4454 | 1412 | 2.56 | 110.95 | 10.79 | 2.72 | 3.16 |
| +10 | (+50) | 18210 | 4589 | 5336 | 1512 | 2.63 | 134.44 | 12.08 | 3.04 | 3.54 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: | | ASHRAE46 | | | (Condensing temperature 55°C (+131°F)) | | | | | |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @V50Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 3859 | 972 | 1131 | 886 | 1.72 | 30.35 | 4.35 | 1.10 | 1.27 |
| -15 | (+ 5) | 5123 | 1291 | 1501 | 1015 | 1.92 | 40.55 | 5.05 | 1.27 | 1.48 |
| -10 | (+14) | 6637 | 1672 | 1945 | 1146 | 2.14 | 52.95 | 5.79 | 1.46 | 1.70 |
| -5 | (+23) | 8401 | 2117 | 2462 | 1280 | 2.36 | 67.65 | 6.57 | 1.66 | 1.92 |
| 0 | (+32) | 10415 | 2625 | 3052 | 1416 | 2.57 | 84.79 | 7.35 | 1.85 | 2.15 |
| +5 | (+41) | 12680 | 3195 | 3716 | 1554 | 2.74 | 104.47 | 8.11 | 2.04 | 2.38 |
| +10 | (+50) | 15195 | 3829 | 4452 | 1694 | 2.85 | 126.82 | 8.84 | 2.23 | 2.59 |

| TEST CONDITIONS: | | ASHRAE46 | | | (Condensing temperature 35°C (+95°F)) | | | | | |
|-------------------------|-------|------------------|----------|------|---------------------------------------|---------------------|---------------|-----------------|-----------|-------|
| @V60Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 6812 | 1717 | 1996 | 1027 | 1.94 | 43.25 | 6.63 | 1.67 | 1.94 |
| -15 | (+ 5) | 8691 | 2190 | 2547 | 1138 | 2.13 | 55.48 | 7.64 | 1.93 | 2.24 |
| -10 | (+14) | 11013 | 2775 | 3227 | 1240 | 2.33 | 70.72 | 8.88 | 2.24 | 2.60 |
| -5 | (+23) | 13775 | 3471 | 4036 | 1334 | 2.52 | 89.13 | 10.33 | 2.60 | 3.03 |
| 0 | (+32) | 16979 | 4279 | 4975 | 1419 | 2.68 | 110.83 | 11.96 | 3.01 | 3.50 |
| +5 | (+41) | 20625 | 5198 | 6044 | 1495 | 2.80 | 135.97 | 13.76 | 3.47 | 4.03 |
| +10 | (+50) | 24713 | 6228 | 7242 | 1561 | 2.84 | 164.67 | 15.70 | 3.96 | 4.60 |

| TEST CONDITIONS: | | ASHRAE46 | | | (Condensing temperature 45°C (+113°F)) | | | | | |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @V60Hz | | Fan | | | | | | | | |
| Evaporating temperature | | Cooling capacity | | | Power consumption | Current consumption | Gas flow rate | EFFICIENCY RATE | | |
| | | +/- 5% | | | +/- 5% | +/- 5% | +/- 5% | +/- 7% | | |
| °C | (°F) | [Btu/h] | [kcal/h] | [W] | [W] | [A] | [kg/h] | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 | (- 4) | 5685 | 1433 | 1666 | 1051 | 1.98 | 39.82 | 5.42 | 1.37 | 1.59 |
| -15 | (+ 5) | 7371 | 1857 | 2160 | 1178 | 2.19 | 51.95 | 6.25 | 1.58 | 1.83 |
| -10 | (+14) | 9423 | 2375 | 2761 | 1302 | 2.41 | 66.88 | 7.23 | 1.82 | 2.12 |
| -5 | (+23) | 11843 | 2984 | 3470 | 1422 | 2.64 | 84.75 | 8.32 | 2.10 | 2.44 |
| 0 | (+32) | 14630 | 3687 | 4287 | 1539 | 2.84 | 105.68 | 9.52 | 2.40 | 2.79 |
| +5 | (+41) | 17785 | 4482 | 5211 | 1653 | 3.00 | 129.82 | 10.79 | 2.72 | 3.16 |
| +10 | (+50) | 21308 | 5370 | 6244 | 1763 | 3.10 | 157.31 | 12.12 | 3.05 | 3.55 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @V60Hz | | ASHRAE46 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] |
| -20 | (- 4) | 4514 | 1138 | 1323 | 1076 | 2.01 | 35.51 | 4.19 | 1.06 | 1.23 |
| -15 | (+ 5) | 5993 | 1510 | 1756 | 1219 | 2.25 | 47.44 | 4.91 | 1.24 | 1.44 |
| -10 | (+14) | 7764 | 1957 | 2275 | 1366 | 2.50 | 61.95 | 5.69 | 1.43 | 1.67 |
| -5 | (+23) | 9829 | 2477 | 2880 | 1514 | 2.76 | 79.15 | 6.50 | 1.64 | 1.90 |
| 0 | (+32) | 12186 | 3071 | 3571 | 1665 | 3.01 | 99.21 | 7.31 | 1.84 | 2.14 |
| +5 | (+41) | 14837 | 3739 | 4348 | 1818 | 3.22 | 122.24 | 8.13 | 2.05 | 2.38 |
| +10 | (+50) | 17782 | 4481 | 5211 | 1972 | 3.38 | 148.40 | 8.91 | 2.25 | 2.61 |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | American Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 12.77 +0.08/+0.00 | [mm] | (0.503" +0.003"/+0.000") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Vertical | | |
| 3.2 DISCHARGE | 8 +0.07/+0.00 | [mm] | (0.315" +0.003"/+0.000") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted J | | |
| 3.3 PROCESS | 6.42 +0.08/+0.00 | [mm] | (0.253" +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 | | |