

COMPRESSOR DEFINITION

| | |
|---------------------------|----------------------------------|
| Designation | NJ X6250GS |
| Nominal Voltage/Frequency | 400 V 50 Hz / 440 V 60 Hz |
| Engineering Number | 945BS21 |

A - APPLICATION / LIMIT WORKING CONDITIONS

| | | | |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type | Hermetic reciprocating compressor | | |
| 2 Refrigerant | R-404A | | |
| 3 Nominal voltage and frequency | 400 / 50 | [V / Hz] | |
| 4 Application type | Medium Back Pressure (Commercial Compressors) | | |
| 4.1 Evaporating temperature range | -20°C to 10°C | (-4°F to 50°F) | |
| 5 Motor type | 3PHASE | | |
| 6 Starting torque | HST - Hight 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 | 25.2 | [kgf/cm ²] (358 psig) | / °C - °F |
| 9.2 Peak | 28.3 | [kgf/cm ²] (402 psig) | / °C - °F |
| 10 Maximum winding temperature | 130 | [°C] | |

B - MECHANICAL DATA

| | | |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation | 2 | [hp] |
| 2 Displacement | 37.88 | [cm ³] (2.312 cu.in) |
| 2.1 Bore [mm] | 44.980 | |
| 2.2 Stroke [mm] | 23.850 | |
| 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) | 21.7 | [kg] (47.84 lb.) |
| 5 Nitrogen charge | - | [kgf/cm ²] |

C - ELETRICAL DATA

| | | |
|--|---|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 400 V 50 Hz / 440 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 | 34HM293-50 | |
| 6 Start winding resistance | 7.77 | [Ω at 25°C (77°F)] +/- 8% |
| 7 Run winding resistance | 7.77 | [Ω at 25°C (77°F)] +/- 8% |
| 8 LRA - Locked rotor amperage (50/60 Hz) | 23.00/23.00 | [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 | UL - VDE | |

D - PERFORMANCE - CHECK POINT DATA

| | | | | | | | | |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS: @400V50Hz | | | 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] |
| 20561 | 5181 | 6025 | 2547 | 4.46 | 169.27 | 8.07 | 2.03 | 2.36 |

E - PERFORMANCE - CURVES

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|------|-----------------------------|---------------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @400V50Hz | | 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) | 10089 | 2542 | 2956 | 1358 | 2.98 | 64.03 | 7.43 | 1.87 | 2.18 |
| -15 | (+ 5) | 12437 | 3134 | 3644 | 1493 | 3.13 | 79.42 | 8.34 | 2.10 | 2.44 |
| -10 | (+14) | 15207 | 3832 | 4456 | 1631 | 3.29 | 97.68 | 9.33 | 2.35 | 2.73 |
| -5 | (+23) | 18399 | 4637 | 5391 | 1770 | 3.46 | 119.03 | 10.39 | 2.62 | 3.05 |
| 0 | (+32) | 22014 | 5547 | 6451 | 1911 | 3.63 | 143.67 | 11.51 | 2.90 | 3.37 |
| +5 | (+41) | 26051 | 6565 | 7634 | 2054 | 3.81 | 171.80 | 12.68 | 3.20 | 3.72 |
| +10 | (+50) | 30510 | 7689 | 8940 | 2199 | 4.00 | 203.63 | 13.88 | 3.50 | 4.07 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @400V50Hz | | 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) | 8597 | 2166 | 2519 | 1459 | 3.04 | 60.20 | 5.89 | 1.48 | 1.73 |
| -15 | (+ 5) | 10682 | 2692 | 3130 | 1624 | 3.27 | 75.31 | 6.58 | 1.66 | 1.93 |
| -10 | (+14) | 13127 | 3308 | 3847 | 1787 | 3.49 | 93.17 | 7.35 | 1.85 | 2.15 |
| -5 | (+23) | 15931 | 4015 | 4668 | 1950 | 3.70 | 113.97 | 8.17 | 2.06 | 2.39 |
| 0 | (+32) | 19093 | 4811 | 5595 | 2111 | 3.91 | 137.94 | 9.05 | 2.28 | 2.65 |
| +5 | (+41) | 22614 | 5699 | 6627 | 2270 | 4.10 | 165.26 | 9.96 | 2.51 | 2.92 |
| +10 | (+50) | 26495 | 6677 | 7764 | 2428 | 4.29 | 196.16 | 10.91 | 2.75 | 3.20 |

| | | | | | | | | | | |
|-------------------------------|-------|----------------------------|----------|------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS: @400V50Hz | | 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) | 7019 | 1769 | 2057 | 1531 | 3.09 | 55.21 | 4.59 | 1.16 | 1.35 |
| -15 | (+ 5) | 8834 | 2226 | 2589 | 1739 | 3.43 | 69.95 | 5.08 | 1.28 | 1.49 |
| -10 | (+14) | 10944 | 2758 | 3207 | 1942 | 3.75 | 87.30 | 5.63 | 1.42 | 1.65 |
| -5 | (+23) | 13350 | 3364 | 3912 | 2141 | 4.03 | 107.48 | 6.23 | 1.57 | 1.83 |
| 0 | (+32) | 16052 | 4045 | 4704 | 2335 | 4.30 | 130.68 | 6.88 | 1.73 | 2.01 |
| +5 | (+41) | 19049 | 4800 | 5582 | 2525 | 4.54 | 157.11 | 7.55 | 1.90 | 2.21 |
| +10 | (+50) | 22341 | 5630 | 6546 | 2711 | 4.76 | 186.99 | 8.24 | 2.08 | 2.41 |

E - PERFORMANCE - CURVES

| TEST CONDITIONS: @400V60Hz | | 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) | 11644 | 2934 | 3412 | 1629 | 2.87 | 73.90 | 7.14 | 1.80 | 2.09 | |
| -15 (+ 5) | 14452 | 3642 | 4235 | 1814 | 3.12 | 92.28 | 7.97 | 2.01 | 2.34 | |
| -10 (+14) | 17685 | 4457 | 5182 | 2010 | 3.37 | 113.60 | 8.80 | 2.22 | 2.58 | |
| -5 (+23) | 21342 | 5378 | 6254 | 2216 | 3.63 | 138.06 | 9.63 | 2.43 | 2.82 | |
| 0 (+32) | 25423 | 6407 | 7449 | 2432 | 3.91 | 165.91 | 10.45 | 2.63 | 3.06 | |
| +5 (+41) | 29928 | 7542 | 8770 | 2660 | 4.19 | 197.37 | 11.25 | 2.84 | 3.30 | |
| +10 (+50) | 34858 | 8784 | 10214 | 2897 | 4.49 | 232.66 | 12.04 | 3.03 | 3.53 | |

| TEST CONDITIONS: @400V60Hz | | 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) | 9731 | 2452 | 2851 | 1719 | 2.97 | 68.14 | 5.66 | 1.43 | 1.66 | |
| -15 (+ 5) | 12282 | 3095 | 3599 | 1942 | 3.25 | 86.59 | 6.32 | 1.59 | 1.85 | |
| -10 (+14) | 15188 | 3827 | 4450 | 2170 | 3.55 | 107.80 | 7.00 | 1.76 | 2.05 | |
| -5 (+23) | 18447 | 4649 | 5405 | 2403 | 3.86 | 131.99 | 7.68 | 1.94 | 2.25 | |
| 0 (+32) | 22061 | 5559 | 6464 | 2641 | 4.18 | 159.38 | 8.36 | 2.11 | 2.45 | |
| +5 (+41) | 26029 | 6559 | 7627 | 2884 | 4.53 | 190.21 | 9.03 | 2.27 | 2.64 | |
| +10 (+50) | 30351 | 7648 | 8893 | 3132 | 4.91 | 224.70 | 9.69 | 2.44 | 2.84 | |

| TEST CONDITIONS: @400V60Hz | | 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) | 7794 | 1964 | 2284 | 1746 | 3.10 | 61.32 | 4.47 | 1.13 | 1.31 | |
| -15 (+ 5) | 10036 | 2529 | 2941 | 2028 | 3.40 | 79.47 | 4.95 | 1.25 | 1.45 | |
| -10 (+14) | 12562 | 3166 | 3681 | 2310 | 3.72 | 100.20 | 5.43 | 1.37 | 1.59 | |
| -5 (+23) | 15371 | 3873 | 4504 | 2590 | 4.07 | 123.74 | 5.93 | 1.49 | 1.74 | |
| 0 (+32) | 18464 | 4653 | 5410 | 2870 | 4.44 | 150.31 | 6.43 | 1.62 | 1.89 | |
| +5 (+41) | 21841 | 5504 | 6400 | 3149 | 4.84 | 180.14 | 6.94 | 1.75 | 2.03 | |
| +10 (+50) | 25501 | 6426 | 7472 | 3427 | 5.27 | 213.45 | 7.44 | 1.88 | 2.18 | |

F - EXTERNAL CHARACTERISTICS

| | | | |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate | American Standard | | |
| 2 Tray holder | No | | |
| 3 Connectors | | | |
| 3.1 SUCTION | 12.81 +0.04/-0.04 | [mm] | (0.504" +0.002"/-0.002") |
| 3.1.1 Material | Copper | | |
| 3.1.2 Shape | Vertical | | |
| 3.2 DISCHARGE | 8.04 +0.04/-0.04 | [mm] | (0.317" +0.002"/-0.002") |
| 3.2.1 Material | Copper | | |
| 3.2.2 Shape | Slanted J | | |
| 3.3 PROCESS | 6.45 +0.10/+0.00 | [mm] | (0.254" +0.004"/+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 | | |