

### COMPRESSOR DEFINITION

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

### 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 - 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                      | 25.2  | [kgf/cm <sup>2</sup> ] (358 psig) | / °C - °F |
| 9.2 Peak                           | 28.3  | [kgf/cm <sup>2</sup> ] (402 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130   | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |                                  |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation      | 2             | [hp]                             |
| 2 Displacement                | 37.88         | [cm <sup>3</sup> ] (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 <sup>2</sup> ]           |

### 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:<br>@400V50Hz |          |      | EN12900MBP<br>Fan              |                                  | Evaporating temperature<br>(Condensing temperature |                           | -10°C (14°F)<br>45°C (113°F) |       |
|-------------------------------|----------|------|--------------------------------|----------------------------------|--|---------------------------|------------------------------|-------|
| Cooling capacity<br>+/- 5%    |          |      | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5%                         | EFFICIENCY RATE<br>+/- 7% |                              |       |
| [Btu/h]                       | [kcal/h] | [W]  | [W]                            | [A]                              | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                    | [W/W] |
| 11114                         | 2801     | 3257 | 1773                           | 3.44                             | 97.83  | 6.27                      | 1.58                         | 1.84  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@400V50Hz |       |                            | EN12900<br>Fan |      | (Condensing temperature 35°C (+95°F)) |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------------|------|---------------------------------------|----------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |                |      | Power<br>consumption<br>+/- 5%        | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]       | [W]  | [W]                                   | [A]                              | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -20                           | (- 4) | 8911                       | 2246           | 2611 | 1356                                  | 2.91                             | 67.65                      | 6.56                      | 1.65      | 1.92  |
| -15                           | (+ 5) | 10990                      | 2770           | 3220 | 1493                                  | 3.11                             | 84.24                      | 7.37                      | 1.86      | 2.16  |
| -10                           | (+14) | 13426                      | 3383           | 3934 | 1631                                  | 3.31                             | 103.76                     | 8.24                      | 2.08      | 2.41  |
| -5                            | (+23) | 16219                      | 4087           | 4753 | 1770                                  | 3.50                             | 126.58                     | 9.16                      | 2.31      | 2.68  |
| 0                             | (+32) | 19369                      | 4881           | 5676 | 1910                                  | 3.67                             | 153.07                     | 10.14                     | 2.55      | 2.97  |
| +5                            | (+41) | 22876                      | 5765           | 6703 | 2051                                  | 3.84                             | 183.60                     | 11.15                     | 2.81      | 3.27  |
| +10                           | (+50) | 26739                      | 6738           | 7835 | 2194                                  | 3.99                             | 218.55                     | 12.20                     | 3.07      | 3.57  |

| TEST CONDITIONS:<br>@400V50Hz |       |                            | EN12900<br>Fan |      | (Condensing temperature 45°C (+113°F)) |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |                |      | Power<br>consumption<br>+/- 5%         | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]       | [W]  | [W]                                    | [A]                              | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -20                           | (- 4) | 7321                       | 1845           | 2145 | 1452                                   | 3.06                             | 63.22                      | 5.04                      | 1.27      | 1.48  |
| -15                           | (+ 5) | 9132                       | 2301           | 2676 | 1618                                   | 3.26                             | 79.63                      | 5.64                      | 1.42      | 1.65  |
| -10                           | (+14) | 11236                      | 2831           | 3292 | 1782                                   | 3.47                             | 98.89                      | 6.31                      | 1.59      | 1.85  |
| -5                            | (+23) | 13631                      | 3435           | 3994 | 1943                                   | 3.68                             | 121.37                     | 7.02                      | 1.77      | 2.06  |
| 0                             | (+32) | 16319                      | 4112           | 4782 | 2102                                   | 3.89                             | 147.45                     | 7.77                      | 1.96      | 2.28  |
| +5                            | (+41) | 19299                      | 4863           | 5655 | 2258                                   | 4.10                             | 177.49                     | 8.55                      | 2.15      | 2.51  |
| +10                           | (+50) | 22570                      | 5688           | 6614 | 2412                                   | 4.31                             | 211.87                     | 9.35                      | 2.36      | 2.74  |

| TEST CONDITIONS:<br>@400V50Hz |       |                            | EN12900<br>Fan |      | (Condensing temperature 55°C (+131°F)) |                                  |                            |                           |           |       |
|-------------------------------|-------|----------------------------|----------------|------|--|----------------------------------|----------------------------|---------------------------|-----------|-------|
| Evaporating<br>temperature    |       | Cooling capacity<br>+/- 5% |                |      | Power<br>consumption<br>+/- 5%         | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]       | [W]  | [W]                                    | [A]                              | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -20                           | (- 4) | 5714                       | 1440           | 1674 | 1510                                   | 3.13                             | 58.08                      | 3.79                      | 0.95      | 1.11  |
| -15                           | (+ 5) | 7197                       | 1814           | 2109 | 1718                                   | 3.33                             | 73.89                      | 4.19                      | 1.06      | 1.23  |
| -10                           | (+14) | 8906                       | 2244           | 2610 | 1920                                   | 3.55                             | 92.48                      | 4.63                      | 1.17      | 1.36  |
| -5                            | (+23) | 10843                      | 2733           | 3177 | 2116                                   | 3.78                             | 114.21                     | 5.12                      | 1.29      | 1.50  |
| 0                             | (+32) | 13008                      | 3278           | 3812 | 2305                                   | 4.03                             | 139.45                     | 5.65                      | 1.42      | 1.65  |
| +5                            | (+41) | 15399                      | 3881           | 4512 | 2489                                   | 4.29                             | 168.58                     | 6.19                      | 1.56      | 1.81  |
| +10                           | (+50) | 18017                      | 4540           | 5279 | 2667                                   | 4.56                             | 201.97                     | 6.75                      | 1.70      | 1.98  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@400V60Hz |                            | EN12900<br>Fan |          |                             | (Condensing temperature 35°C (+95°F) ) |                         |                           |          |           |       |
|-------------------------------|----------------------------|----------------|----------|-----------------------------|--|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature       | Cooling capacity<br>+/- 5% |                |          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%          | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |          |           |       |
|                               | °C (°F)                    | [Btu/h]        | [kcal/h] | [W]                         | [W]                                    | [A]                     | [kg/h]                    | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 (- 4)                     | 10233                      | 2579           | 2999     | 1614                        | 2.86                                   | 77.73                   | 6.33                      | 1.60     | 1.86      |       |
| -15 (+ 5)                     | 12696                      | 3199           | 3720     | 1792                        | 3.09                                   | 97.31                   | 7.09                      | 1.79     | 2.08      |       |
| -10 (+14)                     | 15535                      | 3915           | 4552     | 1985                        | 3.33                                   | 120.03                  | 7.83                      | 1.97     | 2.29      |       |
| -5 (+23)                      | 18749                      | 4725           | 5494     | 2192                        | 3.59                                   | 146.30                  | 8.55                      | 2.16     | 2.51      |       |
| 0 (+32)                       | 22338                      | 5629           | 6546     | 2413                        | 3.89                                   | 176.52                  | 9.25                      | 2.33     | 2.71      |       |
| +5 (+41)                      | 26302                      | 6628           | 7707     | 2648                        | 4.22                                   | 211.11                  | 9.93                      | 2.50     | 2.91      |       |
| +10 (+50)                     | 30642                      | 7722           | 8979     | 2897                        | 4.59                                   | 250.47                  | 10.58                     | 2.67     | 3.10      |       |

| TEST CONDITIONS:<br>@400V60Hz |                            | EN12900<br>Fan |          |                             | (Condensing temperature 45°C (+113°F) ) |                         |                           |          |           |       |
|-------------------------------|----------------------------|----------------|----------|-----------------------------|---|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature       | Cooling capacity<br>+/- 5% |                |          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%           | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |          |           |       |
|                               | °C (°F)                    | [Btu/h]        | [kcal/h] | [W]                         | [W]                                     | [A]                     | [kg/h]                    | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 (- 4)                     | 8201                       | 2067           | 2403     | 1692                        | 2.95                                    | 70.77                   | 4.84                      | 1.22     | 1.42      |       |
| -15 (+ 5)                     | 10402                      | 2621           | 3048     | 1915                        | 3.22                                    | 90.69                   | 5.43                      | 1.37     | 1.59      |       |
| -10 (+14)                     | 12892                      | 3249           | 3778     | 2143                        | 3.50                                    | 113.50                  | 6.02                      | 1.52     | 1.76      |       |
| -5 (+23)                      | 15673                      | 3949           | 4592     | 2375                        | 3.79                                    | 139.59                  | 6.60                      | 1.66     | 1.94      |       |
| 0 (+32)                       | 18742                      | 4723           | 5492     | 2613                        | 4.10                                    | 169.38                  | 7.18                      | 1.81     | 2.10      |       |
| +5 (+41)                      | 22101                      | 5569           | 6476     | 2856                        | 4.43                                    | 203.27                  | 7.74                      | 1.95     | 2.27      |       |
| +10 (+50)                     | 25749                      | 6489           | 7545     | 3104                        | 4.80                                    | 241.67                  | 8.28                      | 2.09     | 2.43      |       |

| TEST CONDITIONS:<br>@400V60Hz |                            | EN12900<br>Fan |          |                             | (Condensing temperature 55°C (+131°F) ) |                         |                           |          |           |       |
|-------------------------------|----------------------------|----------------|----------|-----------------------------|---|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature       | Cooling capacity<br>+/- 5% |                |          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%           | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |          |           |       |
|                               | °C (°F)                    | [Btu/h]        | [kcal/h] | [W]                         | [W]                                     | [A]                     | [kg/h]                    | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -20 (- 4)                     | 6233                       | 1571           | 1827     | 1708                        | 3.02                                    | 63.36                   | 3.66                      | 0.92     | 1.07      |       |
| -15 (+ 5)                     | 8100                       | 2041           | 2373     | 1996                        | 3.36                                    | 83.17                   | 4.05                      | 1.02     | 1.19      |       |
| -10 (+14)                     | 10170                      | 2563           | 2980     | 2280                        | 3.71                                    | 105.60                  | 4.45                      | 1.12     | 1.30      |       |
| -5 (+23)                      | 12443                      | 3136           | 3646     | 2559                        | 4.06                                    | 131.05                  | 4.86                      | 1.22     | 1.42      |       |
| 0 (+32)                       | 14920                      | 3760           | 4372     | 2835                        | 4.42                                    | 159.94                  | 5.26                      | 1.33     | 1.54      |       |
| +5 (+41)                      | 17600                      | 4435           | 5157     | 3106                        | 4.79                                    | 192.66                  | 5.67                      | 1.43     | 1.66      |       |
| +10 (+50)                     | 20483                      | 5162           | 6002     | 3374                        | 5.18                                    | 229.63                  | 6.07                      | 1.53     | 1.78      |       |

### 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      |      |                          |