

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | NJ 6220Z        |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 144HA11         |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                            |                                             |                         |           |
|--------------------------------------------|---------------------------------------------|-------------------------|-----------|
| 1 Type                                     | Hermetic reciprocating compressor           |                         |           |
| 2 Refrigerant                              | R-134a                                      |                         |           |
| 3 Nominal voltage and frequency            | 220-240 / 50                                | [ V / Hz ]              |           |
| 4 Application type                         | High Back Pressure (Commercial Compressors) |                         |           |
| 4.1 Evaporating temperature range          | -15°C to 10°C                               | (5°F to 50°F)           |           |
| 5 Motor type                               | CSIR                                        |                         |           |
| 6 Starting torque                          | HST - Hight starting torque                 |                         |           |
| 7 Expantion 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)                      | 16.2                                        | [kgf/cm²] (230 psig)    | / °C - °F |
| 9.2 Peak (gauge)                           | 20.6                                        | [kgf/cm²] (293 psig)    | / °C - °F |
| 10 Maximum winding temperature             | 130                                         | [ °C ]                  |           |

### B - MECHANICAL DATA

|                               |               |                                            |
|-------------------------------|---------------|--------------------------------------------|
| 1 Commercial designation      | 1             | [hp]                                       |
| 2 Displacement                | 26.11         | [cm <sup>3</sup> ] (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)    | 20.5          | [kg] (45.19 lb.)                           |
| 5 Nitrogen charge             | 0.2 to 0.3    | [kgf/cm <sup>2</sup> ] (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                          | 3ARR2KCP177S                       |                                    |
| 3 Start capacitor                            | 88-108(330)                        | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | T0825/C9                           |                                    |
| 6 Start winding resistance                   | 13.62                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 2.11                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | -                                  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CCC - IMQ                          |                                    |

### D - PERFORMANCE - CHECK POINT DATA

| TEST CONDITIONS:<br>@220V50Hz  |          |      | EN12900HBP<br>Fan                  |                                      | Evaporating temperature<br>(Condensing temperature |                               | 5°C (41°F)<br>50°C (122°F)) |       |
|--------------------------------|----------|------|------------------------------------|--------------------------------------|----------------------------------------------------|-------------------------------|-----------------------------|-------|
| Cooling capacity<br><br>+/- 5% |          |      | Power<br>consumption<br><br>+/- 5% | Current<br>consumption<br><br>+/- 5% | Gas flow<br>rate<br><br>+/- 5%                     | EFFICIENCY RATE<br><br>+/- 7% |                             |       |
| [Btu/h]                        | [kcal/h] | [W]  | [W]                                | [A]                                  | [kg/h]                                             | [Btu/Wh]                      | [kcal/Wh]                   | [W/W] |
| 6896                           | 1738     | 2021 | 934                                | 5.94                                 | 50.72                                              | 7.38                          | 1.86                        | 2.16  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V50Hz |       | 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] |
| -15                           | (+ 5) | 3530                       | 890      | 1034 | 605                                    | 4.40                          | 21.88                   | 5.83                      | 1.47      | 1.71  |
| -10                           | (+14) | 4610                       | 1162     | 1351 | 667                                    | 4.54                          | 28.76                   | 6.91                      | 1.74      | 2.03  |
| -5                            | (+23) | 5824                       | 1468     | 1707 | 721                                    | 4.69                          | 36.49                   | 8.09                      | 2.04      | 2.37  |
| 0                             | (+32) | 7219                       | 1819     | 2115 | 771                                    | 4.83                          | 45.49                   | 9.37                      | 2.36      | 2.74  |
| +5                            | (+41) | 8842                       | 2228     | 2591 | 822                                    | 4.98                          | 56.14                   | 10.74                     | 2.71      | 3.15  |
| +10                           | (+50) | 10742                      | 2707     | 3148 | 880                                    | 5.12                          | 68.85                   | 12.21                     | 3.08      | 3.58  |

| TEST CONDITIONS:<br>@220V50Hz |       | 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] |
| -15                           | (+ 5) | 2802                       | 706      | 821  | 594                         | 4.39                                    | 19.05                   | 4.73                      | 1.19      | 1.39  |
| -10                           | (+14) | 3763                       | 948      | 1103 | 676                         | 4.60                                    | 25.73                   | 5.56                      | 1.40      | 1.63  |
| -5                            | (+23) | 4836                       | 1219     | 1417 | 751                         | 4.81                                    | 33.24                   | 6.44                      | 1.62      | 1.89  |
| 0                             | (+32) | 6069                       | 1529     | 1778 | 822                         | 5.03                                    | 41.99                   | 7.38                      | 1.86      | 2.16  |
| +5                            | (+41) | 7508                       | 1892     | 2200 | 895                         | 5.26                                    | 52.39                   | 8.38                      | 2.11      | 2.46  |
| +10                           | (+50) | 9201                       | 2319     | 2696 | 975                         | 5.51                                    | 64.84                   | 9.45                      | 2.38      | 2.77  |

| TEST CONDITIONS:<br>@220V50Hz |       | 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] |
| -15                           | (+ 5) | 2143                       | 540      | 628  | 582                                     | 4.39                          | 16.22                   | 3.68                      | 0.93      | 1.08  |
| -10                           | (+14) | 2981                       | 751      | 873  | 685                                     | 4.65                          | 22.63                   | 4.34                      | 1.09      | 1.27  |
| -5                            | (+23) | 3909                       | 985      | 1145 | 780                                     | 4.93                          | 29.87                   | 5.02                      | 1.26      | 1.47  |
| 0                             | (+32) | 4974                       | 1253     | 1458 | 872                                     | 5.24                          | 38.34                   | 5.72                      | 1.44      | 1.67  |
| +5                            | (+41) | 6224                       | 1568     | 1824 | 967                                     | 5.56                          | 48.44                   | 6.44                      | 1.62      | 1.89  |
| +10                           | (+50) | 7706                       | 1942     | 2258 | 1071                                    | 5.90                          | 60.56                   | 7.19                      | 1.81      | 2.11  |

## F - EXTERNAL CHARACTERISTICS

|                         |                   |      |                          |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate            | American Standard |      |                          |
| 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           | 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      |      |                          |