

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | NJ X2215U       |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 887FA23         |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-290                             |                                   |           |
| 3 Nominal voltage and frequency    | 220-240 / 50                      | [ V / Hz ]                        |           |
| 4 Application type                 | Low Back Pressure R290            |                                   |           |
| 4.1 Evaporating temperature range  | -40°C to -10°C                    | (-40°F to 14°F)                   |           |
| 5 Motor type                       | CSCR                              |                                   |           |
| 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                      | 18.4                              | [kgf/cm <sup>2</sup> ] (262 psig) | / °C - °F |
| 9.2 Peak                           | 20.6                              | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |                                  |
|-------------------------------|---------------|----------------------------------|
| 1 Commercial designation      | 1 3/4         | [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)    | 23.8          | [kg] (52.47 lb.)                 |
| 5 Nitrogen charge             | -             | [kgf/cm <sup>2</sup> ]           |

### C - ELETRICAL DATA

|  |                                    |                                    |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 220-240 V 50 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Voltage Relay                      |                                    |
| 2.1 Starting device                          | RVA3H3C-108                        |                                    |
| 3 Start capacitor                            | 108-130(330)                       | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 20(400)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 15HM1994-248                       |                                    |
| 6 Start winding resistance                   | 4.30                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 1.78                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 34.00                              | [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 - VDE                          |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |      |                             |                               |  |                           |  |       |
|-------------------------------|----------|------|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |      | ASHRAELBP32<br>Fan          |                               | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°F)<br>54.4°C (129.92°F) |       |
| Cooling capacity<br>+/- 5%    |          |      | Power consumption<br>+/- 5% | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5%                            | EFFICIENCY RATE<br>+/- 7% |  |       |
| [Btu/h]                       | [kcal/h] | [W]  | [W]                         | [A]                           | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                              | [W/W] |
| 5701                          | 1437     | 1671 | 1089                        | 5.45                          | 16.97  | 5.24                      | 1.32                                   | 1.54  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                 |      |                                       |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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] |
| -40                           | (-40) | 2794                       | 704             | 819  | 627                                   | 3.49                          | 8.25                    | 4.44                      | 1.12      | 1.30  |
| -35                           | (-31) | 3682                       | 928             | 1079 | 729                                   | 3.91                          | 10.90                   | 5.07                      | 1.28      | 1.48  |
| -30                           | (-22) | 4783                       | 1205            | 1401 | 831                                   | 4.34                          | 14.18                   | 5.76                      | 1.45      | 1.69  |
| -25                           | (-13) | 6095                       | 1536            | 1786 | 934                                   | 4.80                          | 18.13                   | 6.52                      | 1.64      | 1.91  |
| -20                           | (- 4) | 7619                       | 1920            | 2232 | 1039                                  | 5.27                          | 22.74                   | 7.33                      | 1.85      | 2.15  |
| -15                           | (+ 5) | 9354                       | 2357            | 2741 | 1144                                  | 5.75                          | 28.03                   | 8.18                      | 2.06      | 2.40  |
| -10                           | (+14) | 11302                      | 2848            | 3312 | 1250                                  | 6.25                          | 34.01                   | 9.04                      | 2.28      | 2.65  |

|                               |       |                            |                 |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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] |
| -40                           | (-40) | 2530                       | 638             | 741  | 644                                    | 3.60                          | 7.47                    | 3.93                      | 0.99      | 1.15  |
| -35                           | (-31) | 3400                       | 857             | 996  | 757                                    | 4.08                          | 10.06                   | 4.49                      | 1.13      | 1.32  |
| -30                           | (-22) | 4466                       | 1125            | 1309 | 874                                    | 4.58                          | 13.24                   | 5.10                      | 1.29      | 1.49  |
| -25                           | (-13) | 5727                       | 1443            | 1678 | 995                                    | 5.10                          | 17.03                   | 5.75                      | 1.45      | 1.68  |
| -20                           | (- 4) | 7184                       | 1810            | 2105 | 1118                                   | 5.65                          | 21.44                   | 6.42                      | 1.62      | 1.88  |
| -15                           | (+ 5) | 8838                       | 2227            | 2590 | 1245                                   | 6.22                          | 26.47                   | 7.10                      | 1.79      | 2.08  |
| -10                           | (+14) | 10687                      | 2693            | 3131 | 1375                                   | 6.81                          | 32.15                   | 7.78                      | 1.96      | 2.28  |

|                               |       |                            |                 |      |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<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] |
| -40                           | (-40) | 2224                       | 560             | 652  | 647                                    | 3.58                          | 6.56                    | 3.44                      | 0.87      | 1.01  |
| -35                           | (-31) | 3072                       | 774             | 900  | 775                                    | 4.14                          | 9.09                    | 3.96                      | 1.00      | 1.16  |
| -30                           | (-22) | 4100                       | 1033            | 1201 | 908                                    | 4.72                          | 12.16                   | 4.51                      | 1.14      | 1.32  |
| -25                           | (-13) | 5307                       | 1337            | 1555 | 1048                                   | 5.33                          | 15.78                   | 5.07                      | 1.28      | 1.48  |
| -20                           | (- 4) | 6695                       | 1687            | 1962 | 1193                                   | 5.98                          | 19.97                   | 5.62                      | 1.42      | 1.65  |
| -15                           | (+ 5) | 8262                       | 2082            | 2421 | 1344                                   | 6.66                          | 24.74                   | 6.16                      | 1.55      | 1.80  |
| -10                           | (+14) | 10010                      | 2522            | 2933 | 1500                                   | 7.37                          | 30.11                   | 6.66                      | 1.68      | 1.95  |

### 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      |      |                          |