

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>VES G9C</b>         |
| Nominal Voltage/Frequency | <b>230 V 32-150 Hz</b> |
| Engineering Number        | <b>513907306</b>       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |   |                                   |           |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor                 |                                   |           |
| 2 Refrigerant                      | R-600a  |                                   |           |
| 3 Nominal voltage and frequency    | 230 / 32-150                                      | [ V / Hz ]                        |           |
| 4 Application type                 | Low-Medium Back Pressure (Fullmotion Compressors) |                                   |           |
| 4.1 Evaporating temperature range  | -35°C to 0°C                                      | (-31°F to 32°F)                   |           |
| 5 Motor type                       | BPM   |                                   |           |
| 6 Starting torque                  | LST - Low Starting Torque                         |                                   |           |
| 7 Expansion device                 | Capillary tube                                    |                                   |           |
| 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                      | 6.9   | [kgf/cm <sup>2</sup> ] (98 psig)  | / °C - °F |
| 9.2 Peak                           | 7.8   | [kgf/cm <sup>2</sup> ] (111 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130   | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |                |                                  |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation      | 1/5            | [hp]                             |
| 2 Displacement                | 9.04           | [cm <sup>3</sup> ] (0.552 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 20.000         |                                  |
| 3 Lubricant charge            | 205            | [ml] (6.93 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 6.8            | [kg] (14.99 lb.)                 |
| 5 Nitrogen charge             | -              | [kgf/cm <sup>2</sup> ]           |

### C - ELETRICAL DATA

|  |                                    |                                    |
|--|------------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 230 V 31.7-150 Hz 3~ (Three phase) |                                    |
| 2 Starting device type                       | Inverter                           |                                    |
| 2.1 Starting device                          | 519303128                          |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | INVERTER VCC3 1156 U               |                                    |
| 6 Start winding resistance                   | 9.30                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 9.30                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (32/150 Hz)    | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (32/150 Hz) | -                                  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (32/150 Hz)  | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             |                                    |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                                 |          |     |                             |                               |   |                           |  |       |
|---------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V950RPM |          |     | ASHRAELBP32<br>Static       |                               | 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] |
| 172                             | 43       | 50  | 26                          | 0.11                          | 0.54  | 6.62                      | 1.67                                   | 1.94  |

|                                  |          |     |                             |                               |   |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V1300RPM |          |     | ASHRAELBP32<br>Static       |                               | 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] |
| 239                              | 60       | 70  | 35                          | 0.14                          | 0.75  | 6.91                      | 1.74                                   | 2.02  |

|                                  |          |     |                             |                               |   |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V2000RPM |          |     | ASHRAELBP32<br>Static       |                               | 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] |
| 364                              | 92       | 107 | 53                          | 0.20                          | 1.14  | 6.87                      | 1.73                                   | 2.01  |

|                                  |          |     |                             |                               |   |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V3000RPM |          |     | ASHRAELBP32<br>Static       |                               | 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] |
| 563                              | 142      | 165 | 83                          | 0.29                          | 1.77  | 6.77                      | 1.71                                   | 1.98  |

|                                  |          |     |                             |                               |   |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|---|---------------------------|--|-------|
| TEST CONDITIONS:<br>@100V4000RPM |          |     | ASHRAELBP32<br>Static       |                               | 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] |
| 717                              | 181      | 210 | 110                         | 0.38                          | 2.25  | 6.52                      | 1.64                                   | 1.91  |

### E - PERFORMANCE - CURVES

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard VES        |      |                          |
| 2 Tray holder           | No                           |      |                          |
| 3 Connectors            |                              |      |                          |
| 3.1 SUCTION             | 6.1 +0.10/+0.00              | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material          | Copper                       |      |                          |
| 3.1.2 Shape             | Slanted 45° up + 15° to Back |      |                          |
| 3.2 DISCHARGE           | 4.9 +0.10/-0.05              | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material          | Copper                       |      |                          |
| 3.2.2 Shape             | Slanted 0° up + 24° to Back  |      |                          |
| 3.3 PROCESS             | 6 +0.08/-0.08                | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material          | Copper(OD)                   |      |                          |
| 3.3.2 Shape             | Slanted 47° up + 59° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                           | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                 |      |                          |