

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | VES A9C         |
| Nominal Voltage/Frequency | 230 V 40-150 Hz |
| Engineering Number        | 513907219       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |              |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |              |
| 2 Refrigerant                      | R-600a                            |                                   |              |
| 3 Nominal voltage and frequency    | 230 / 40-150                      | [ V / Hz ]                        |              |
| 4 Application type                 | Low Back Pressure                 |                                   |              |
| 4.1 Evaporating temperature range  | -35°C to -10°C                    | (-31°F to 14°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) | Static                            | 187 to 255 V                      | 187 to 255 V |
| 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            | 200            | [ml] (6.76 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 6.08           | [kg] (13.40 lb.)                 |
| 5 Nitrogen charge             | -              | [kgf/cm <sup>2</sup> ]           |

### C - ELETRICAL DATA

|  |                                   |                                    |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 230 V 40-150 Hz 3 ~ (Three phase) |                                    |
| 2 Starting device type                       | Inverter                          |                                    |
| 2.1 Starting device                          | VES 2456 XX X X                   |                                    |
| 3 Start capacitor                            | -                                 | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                 | [µF(VAC minimum)]                  |
| 5 Motor protection                           | INVERTER VES 2456X                |                                    |
| 6 Start winding resistance                   | 11.50                             | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 11.50                             | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (40/150 Hz)    | 2.10/2.10                         | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (40/150 Hz) | 2.10/2.10                         | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (40/150 Hz)  | -                                 | [A] - Measured according to UL 984 |
| 11 Approval boards certification             |                                   |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| TEST CONDITIONS:<br><b>@220V1300RPM</b> |          |     | <b>ASHRAELBP32</b><br><b>Static</b> |                               | Evaporating temperature<br>(Condensing temperature) | <b>-23.3°C (-9.94°F)</b><br><b>54.4°C (129.92°F)</b> |           |       |
| 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] |
| 227                                     | 57       | 67  | 39                                  | 0.32                          | 0.71  | 5.90   | 1.49      | 1.73  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| TEST CONDITIONS:<br><b>@220V1600RPM</b> |          |     | <b>ASHRAELBP32</b><br><b>Static</b> |                               | Evaporating temperature<br>(Condensing temperature) | <b>-23.3°C (-9.94°F)</b><br><b>54.4°C (129.92°F)</b> |           |       |
| 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] |
| 282                                     | 71       | 83  | 45                                  | 0.37                          | 0.89  | 6.25   | 1.58      | 1.83  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| TEST CONDITIONS:<br><b>@220V2000RPM</b> |          |     | <b>ASHRAELBP32</b><br><b>Static</b> |                               | Evaporating temperature<br>(Condensing temperature) | <b>-23.3°C (-9.94°F)</b><br><b>54.4°C (129.92°F)</b> |           |       |
| 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] |
| 356                                     | 90       | 104 | 56                                  | 0.45                          | 1.12  | 6.35   | 1.60      | 1.86  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| TEST CONDITIONS:<br><b>@220V3000RPM</b> |          |     | <b>ASHRAELBP32</b><br><b>Static</b> |                               | Evaporating temperature<br>(Condensing temperature) | <b>-23.3°C (-9.94°F)</b><br><b>54.4°C (129.92°F)</b> |           |       |
| 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] |
| 542                                     | 137      | 159 | 86                                  | 0.66                          | 1.70  | 6.33   | 1.60      | 1.85  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| TEST CONDITIONS:<br><b>@220V4500RPM</b> |          |     | <b>ASHRAELBP32</b><br><b>Static</b> |                               | Evaporating temperature<br>(Condensing temperature) | <b>-23.3°C (-9.94°F)</b><br><b>54.4°C (129.92°F)</b> |           |       |
| 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] |
| 762                                     | 192      | 223 | 131                                 | 1.00                          | 2.39  | 5.84   | 1.47      | 1.71  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V1300RPM |                            | ASHRAE32<br>Static |         |                             | (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] |
| -35                              | (-31)                      | 137                | 35      | 40                          | 24                                    | 0.21                    | 0.43                      | 5.79   | 1.46     | 1.70      |
| -30                              | (-22)                      | 182                | 46      | 53                          | 27                                    | 0.24                    | 0.57                      | 6.68   | 1.68     | 1.96      |
| -25                              | (-13)                      | 237                | 60      | 70                          | 31                                    | 0.28                    | 0.74                      | 7.53   | 1.90     | 2.21      |
| -20                              | (- 4)                      | 306                | 77      | 90                          | 36                                    | 0.32                    | 0.96                      | 8.45   | 2.13     | 2.48      |
| -15                              | (+ 5)                      | 389                | 98      | 114                         | 41                                    | 0.35                    | 1.23                      | 9.55   | 2.41     | 2.80      |
| -10                              | (+14)                      | 489                | 123     | 143                         | 45                                    | 0.38                    | 1.54                      | 10.93  | 2.75     | 3.20      |

| TEST CONDITIONS:<br>@220V1300RPM |                            | ASHRAE32<br>Static |         |                             | (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] |
| -35                              | (-31)                      | 122                | 31      | 36                          | 23                                     | 0.21                    | 0.38                      | 5.31   | 1.34     | 1.55      |
| -30                              | (-22)                      | 169                | 43      | 50                          | 28                                     | 0.25                    | 0.53                      | 5.98   | 1.51     | 1.75      |
| -25                              | (-13)                      | 228                | 57      | 67                          | 35                                     | 0.29                    | 0.72                      | 6.57   | 1.65     | 1.92      |
| -20                              | (- 4)                      | 299                | 75      | 88                          | 41                                     | 0.34                    | 0.94                      | 7.18   | 1.81     | 2.10      |
| -15                              | (+ 5)                      | 385                | 97      | 113                         | 48                                     | 0.39                    | 1.21                      | 7.92   | 2.00     | 2.32      |
| -10                              | (+14)                      | 486                | 122     | 142                         | 54                                     | 0.44                    | 1.53                      | 8.90   | 2.24     | 2.61      |

| TEST CONDITIONS:<br>@220V1300RPM |                            | ASHRAE32<br>Static |         |                             | (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] |
| -35                              | (-31)                      | 110                | 28      | 32                          | 24                                     | 0.21                    | 0.35                      | 4.53   | 1.14     | 1.33      |
| -30                              | (-22)                      | 152                | 38      | 45                          | 29                                     | 0.25                    | 0.48                      | 5.18   | 1.30     | 1.52      |
| -25                              | (-13)                      | 205                | 52      | 60                          | 36                                     | 0.30                    | 0.64                      | 5.69   | 1.43     | 1.67      |
| -20                              | (- 4)                      | 270                | 68      | 79                          | 44                                     | 0.37                    | 0.85                      | 6.19   | 1.56     | 1.81      |
| -15                              | (+ 5)                      | 349                | 88      | 102                         | 52                                     | 0.44                    | 1.10                      | 6.77   | 1.71     | 1.98      |
| -10                              | (+14)                      | 443                | 112     | 130                         | 59                                     | 0.52                    | 1.40                      | 7.54   | 1.90     | 2.21      |

| TEST CONDITIONS:<br>@220V1600RPM |                            | ASHRAE32<br>Static |         |                             | (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] |
| -35                              | (-31)                      | 161                | 41      | 47                          | 28                                    | 0.24                    | 0.50                      | 5.87   | 1.48     | 1.72      |
| -30                              | (-22)                      | 217                | 55      | 64                          | 33                                    | 0.28                    | 0.68                      | 6.68   | 1.68     | 1.96      |
| -25                              | (-13)                      | 287                | 72      | 84                          | 38                                    | 0.32                    | 0.90                      | 7.57   | 1.91     | 2.22      |
| -20                              | (- 4)                      | 373                | 94      | 109                         | 43                                    | 0.36                    | 1.17                      | 8.59   | 2.17     | 2.52      |
| -15                              | (+ 5)                      | 478                | 120     | 140                         | 49                                    | 0.40                    | 1.50                      | 9.80   | 2.47     | 2.87      |
| -10                              | (+14)                      | 603                | 152     | 177                         | 54                                    | 0.44                    | 1.90                      | 11.24  | 2.83     | 3.29      |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V1600RPM |       | ASHRAE32<br>Static         |          |     | (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] |
| -35                              | (-31) | 160                        | 40       | 47  | 29                                     | 0.27                          | 0.50                    | 5.47                      | 1.38      | 1.60  |
| -30                              | (-22) | 212                        | 53       | 62  | 35                                     | 0.31                          | 0.67                    | 6.13                      | 1.55      | 1.80  |
| -25                              | (-13) | 278                        | 70       | 81  | 41                                     | 0.35                          | 0.87                    | 6.79                      | 1.71      | 1.99  |
| -20                              | (- 4) | 359                        | 90       | 105 | 48                                     | 0.40                          | 1.13                    | 7.49                      | 1.89      | 2.20  |
| -15                              | (+ 5) | 458                        | 115      | 134 | 55                                     | 0.44                          | 1.44                    | 8.30                      | 2.09      | 2.43  |
| -10                              | (+14) | 575                        | 145      | 169 | 62                                     | 0.49                          | 1.82                    | 9.26                      | 2.33      | 2.71  |

| TEST CONDITIONS:<br>@220V1600RPM |       | ASHRAE32<br>Static         |          |     | (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] |
| -35                              | (-31) | 133                        | 34       | 39  | 29                                     | 0.25                          | 0.42                    | 4.65                      | 1.17      | 1.36  |
| -30                              | (-22) | 187                        | 47       | 55  | 35                                     | 0.29                          | 0.59                    | 5.37                      | 1.35      | 1.57  |
| -25                              | (-13) | 254                        | 64       | 74  | 42                                     | 0.35                          | 0.80                    | 6.00                      | 1.51      | 1.76  |
| -20                              | (- 4) | 335                        | 84       | 98  | 51                                     | 0.41                          | 1.05                    | 6.60                      | 1.66      | 1.93  |
| -15                              | (+ 5) | 432                        | 109      | 127 | 60                                     | 0.48                          | 1.36                    | 7.22                      | 1.82      | 2.11  |
| -10                              | (+14) | 548                        | 138      | 161 | 69                                     | 0.55                          | 1.73                    | 7.90                      | 1.99      | 2.32  |

| TEST CONDITIONS:<br>@220V2000RPM |       | ASHRAE32<br>Static         |          |     | (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] |
| -35                              | (-31) | 205                        | 52       | 60  | 35                                    | 0.30                          | 0.64                    | 5.89                      | 1.48      | 1.72  |
| -30                              | (-22) | 282                        | 71       | 83  | 41                                    | 0.34                          | 0.88                    | 6.77                      | 1.71      | 1.98  |
| -25                              | (-13) | 374                        | 94       | 109 | 48                                    | 0.38                          | 1.17                    | 7.71                      | 1.94      | 2.26  |
| -20                              | (- 4) | 482                        | 121      | 141 | 55                                    | 0.43                          | 1.51                    | 8.74                      | 2.20      | 2.56  |
| -15                              | (+ 5) | 609                        | 154      | 178 | 62                                    | 0.49                          | 1.92                    | 9.90                      | 2.49      | 2.90  |
| -10                              | (+14) | 758                        | 191      | 222 | 68                                    | 0.54                          | 2.39                    | 11.22                     | 2.83      | 3.29  |

| TEST CONDITIONS:<br>@220V2000RPM |       | ASHRAE32<br>Static         |          |     | (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] |
| -35                              | (-31) | 193                        | 49       | 56  | 36                                     | 0.29                          | 0.60                    | 5.37                      | 1.35      | 1.57  |
| -30                              | (-22) | 265                        | 67       | 78  | 43                                     | 0.35                          | 0.83                    | 6.11                      | 1.54      | 1.79  |
| -25                              | (-13) | 353                        | 89       | 103 | 51                                     | 0.41                          | 1.11                    | 6.86                      | 1.73      | 2.01  |
| -20                              | (- 4) | 459                        | 116      | 134 | 60                                     | 0.47                          | 1.44                    | 7.65                      | 1.93      | 2.24  |
| -15                              | (+ 5) | 586                        | 148      | 172 | 68                                     | 0.54                          | 1.84                    | 8.54                      | 2.15      | 2.50  |
| -10                              | (+14) | 736                        | 186      | 216 | 77                                     | 0.61                          | 2.32                    | 9.53                      | 2.40      | 2.79  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V2000RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 173                        | 44                 | 51       | 36                          | 0.29                                   | 0.54                    | 4.81                      | 1.21     | 1.41      |       |
| -30 (-22)                        | 238                        | 60                 | 70       | 44                          | 0.36                                   | 0.75                    | 5.47                      | 1.38     | 1.60      |       |
| -25 (-13)                        | 321                        | 81                 | 94       | 53                          | 0.43                                   | 1.01                    | 6.09                      | 1.54     | 1.79      |       |
| -20 (- 4)                        | 423                        | 107                | 124      | 63                          | 0.50                                   | 1.33                    | 6.73                      | 1.70     | 1.97      |       |
| -15 (+ 5)                        | 548                        | 138                | 161      | 74                          | 0.58                                   | 1.72                    | 7.41                      | 1.87     | 2.17      |       |
| -10 (+14)                        | 697                        | 176                | 204      | 85                          | 0.66                                   | 2.20                    | 8.16                      | 2.06     | 2.39      |       |

| TEST CONDITIONS:<br>@220V3000RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 319                        | 80                 | 93       | 54                          | 0.42                                  | 1.00                    | 5.95                      | 1.50     | 1.74      |       |
| -30 (-22)                        | 432                        | 109                | 127      | 64                          | 0.49                                  | 1.35                    | 6.78                      | 1.71     | 1.99      |       |
| -25 (-13)                        | 569                        | 143                | 167      | 75                          | 0.57                                  | 1.79                    | 7.62                      | 1.92     | 2.23      |       |
| -20 (- 4)                        | 733                        | 185                | 215      | 86                          | 0.66                                  | 2.30                    | 8.51                      | 2.14     | 2.49      |       |
| -15 (+ 5)                        | 928                        | 234                | 272      | 98                          | 0.75                                  | 2.92                    | 9.49                      | 2.39     | 2.78      |       |
| -10 (+14)                        | 1157                       | 292                | 339      | 109                         | 0.84                                  | 3.65                    | 10.59                     | 2.67     | 3.10      |       |

| TEST CONDITIONS:<br>@220V3000RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 291                        | 73                 | 85       | 54                          | 0.43                                   | 0.91                    | 5.35                      | 1.35     | 1.57      |       |
| -30 (-22)                        | 399                        | 100                | 117      | 66                          | 0.51                                   | 1.25                    | 6.06                      | 1.53     | 1.77      |       |
| -25 (-13)                        | 530                        | 134                | 155      | 78                          | 0.61                                   | 1.66                    | 6.76                      | 1.70     | 1.98      |       |
| -20 (- 4)                        | 690                        | 174                | 202      | 92                          | 0.71                                   | 2.17                    | 7.50                      | 1.89     | 2.20      |       |
| -15 (+ 5)                        | 882                        | 222                | 258      | 106                         | 0.81                                   | 2.78                    | 8.31                      | 2.09     | 2.43      |       |
| -10 (+14)                        | 1109                       | 280                | 325      | 120                         | 0.92                                   | 3.50                    | 9.22                      | 2.32     | 2.70      |       |

| TEST CONDITIONS:<br>@220V3000RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 265                        | 67                 | 78       | 55                          | 0.43                                   | 0.83                    | 4.84                      | 1.22     | 1.42      |       |
| -30 (-22)                        | 365                        | 92                 | 107      | 67                          | 0.52                                   | 1.14                    | 5.47                      | 1.38     | 1.60      |       |
| -25 (-13)                        | 491                        | 124                | 144      | 81                          | 0.62                                   | 1.54                    | 6.08                      | 1.53     | 1.78      |       |
| -20 (- 4)                        | 645                        | 163                | 189      | 96                          | 0.74                                   | 2.03                    | 6.71                      | 1.69     | 1.97      |       |
| -15 (+ 5)                        | 833                        | 210                | 244      | 113                         | 0.86                                   | 2.62                    | 7.39                      | 1.86     | 2.16      |       |
| -10 (+14)                        | 1058                       | 267                | 310      | 130                         | 0.98                                   | 3.34                    | 8.15                      | 2.05     | 2.39      |       |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V4500RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 474                        | 119                | 139      | 87                          | 0.67                                  | 1.48                    | 5.47                      | 1.38     | 1.60      |       |
| -30 (-22)                        | 618                        | 156                | 181      | 100                         | 0.74                                  | 1.94                    | 6.16                      | 1.55     | 1.81      |       |
| -25 (-13)                        | 793                        | 200                | 232      | 115                         | 0.85                                  | 2.49                    | 6.87                      | 1.73     | 2.01      |       |
| -20 (- 4)                        | 1007                       | 254                | 295      | 132                         | 0.99                                  | 3.16                    | 7.63                      | 1.92     | 2.24      |       |
| -15 (+ 5)                        | 1268                       | 320                | 372      | 150                         | 1.14                                  | 3.99                    | 8.45                      | 2.13     | 2.48      |       |
| -10 (+14)                        | 1586                       | 400                | 465      | 170                         | 1.28                                  | 5.00                    | 9.36                      | 2.36     | 2.74      |       |

| TEST CONDITIONS:<br>@220V4500RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 444                        | 112                | 130      | 89                          | 0.69                                   | 1.39                    | 4.96                      | 1.25     | 1.45      |       |
| -30 (-22)                        | 582                        | 147                | 170      | 105                         | 0.79                                   | 1.82                    | 5.55                      | 1.40     | 1.63      |       |
| -25 (-13)                        | 750                        | 189                | 220      | 122                         | 0.93                                   | 2.35                    | 6.18                      | 1.56     | 1.81      |       |
| -20 (- 4)                        | 957                        | 241                | 280      | 140                         | 1.07                                   | 3.01                    | 6.86                      | 1.73     | 2.01      |       |
| -15 (+ 5)                        | 1212                       | 305                | 355      | 160                         | 1.21                                   | 3.82                    | 7.61                      | 1.92     | 2.23      |       |
| -10 (+14)                        | 1525                       | 384                | 447      | 180                         | 1.33                                   | 4.81                    | 8.46                      | 2.13     | 2.48      |       |

| TEST CONDITIONS:<br>@220V4500RPM |                            | ASHRAE32<br>Static |          |                             | (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] |
| -35 (-31)                        | 385                        | 97                 | 113      | 86                          | 0.67                                   | 1.21                    | 4.47                      | 1.13     | 1.31      |       |
| -30 (-22)                        | 525                        | 132                | 154      | 104                         | 0.80                                   | 1.65                    | 5.01                      | 1.26     | 1.47      |       |
| -25 (-13)                        | 695                        | 175                | 204      | 124                         | 0.95                                   | 2.18                    | 5.60                      | 1.41     | 1.64      |       |
| -20 (- 4)                        | 905                        | 228                | 265      | 145                         | 1.10                                   | 2.84                    | 6.25                      | 1.58     | 1.83      |       |
| -15 (+ 5)                        | 1164                       | 293                | 341      | 167                         | 1.22                                   | 3.66                    | 6.98                      | 1.76     | 2.05      |       |
| -10 (+14)                        | 1480                       | 373                | 434      | 189                         | 1.32                                   | 4.67                    | 7.81                      | 1.97     | 2.29      |       |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard VES        |      |                          |
| 2 Tray holder           | Yes                          |      |                          |
| 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             | 6.2 +0.05/+0.05              | [mm] | (0.244" +0.002"/+0.002") |
| 3.3.1 Material          | Copper                       |      |                          |
| 3.3.2 Shape             | Slanted 47° up + 59° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                           | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                 |      |                          |