

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | VES D5C         |
| Nominal Voltage/Frequency | 230 V 40-150 Hz |
| Engineering Number        | 513907399       |

### 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-Medium Back Pressure          |                                   |              |
| 4.1 Evaporating temperature range  | -35°C to -5°C                     | (-31°F to 23°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) | Static                            | 187 to 255 V                      | 187 to 255 V |
| 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                | 5.19           | [cm <sup>3</sup> ] (0.317 cu.in) |
| 2.1 Bore [mm]                 | 21.000         |                                  |
| 2.2 Stroke [mm]               | 15.000         |                                  |
| 3 Lubricant charge            | 190            | [ml] (6.42 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 40-150 Hz 3 ~ (Three phase) |                                    |
| 2 Starting device type                       | Inverter                          |                                    |
| 2.1 Starting device                          | VCC3 1156 XXXXX/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                   | 13.40                             | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 13.40                             | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (46/133 Hz)    | 2.10/2.10                         | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (46/133 Hz) | 2.10/2.10                         | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (46/133 Hz)  | -                                 | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CCC - VDE                         |                                    |

### 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] |
| 116                                     | 29       | 34  | 19                                  | 0.18                          | 0.36  | 6.04   | 1.52      | 1.77  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 144                                     | 36       | 42  | 24                                  | 0.21                          | 0.45  | 6.10   | 1.54      | 1.79  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 186                                     | 47       | 55  | 30                                  | 0.25                          | 0.58  | 6.28   | 1.58      | 1.84  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 286                                     | 72       | 84  | 46                                  | 0.38                          | 0.90  | 6.19   | 1.56      | 1.81  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 430                                     | 108      | 126 | 73                                  | 0.57                          | 1.35  | 5.90   | 1.49      | 1.73  |

### 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] | [W/W] |
| -35 (-31)                        | 75                         | 19                 | 22       | 13                          | 0.12                                   | 0.23                    | 5.55                      | 1.40     | 1.62      |       |
| -30 (-22)                        | 98                         | 25                 | 29       | 15                          | 0.14                                   | 0.31                    | 6.43                      | 1.62     | 1.88      |       |
| -25 (-13)                        | 128                        | 32                 | 38       | 17                          | 0.16                                   | 0.40                    | 7.44                      | 1.88     | 2.18      |       |
| -20 (- 4)                        | 166                        | 42                 | 49       | 19                          | 0.18                                   | 0.52                    | 8.66                      | 2.18     | 2.54      |       |
| -15 (+ 5)                        | 214                        | 54                 | 63       | 21                          | 0.19                                   | 0.67                    | 10.15                     | 2.56     | 2.97      |       |
| -10 (+14)                        | 271                        | 68                 | 80       | 23                          | 0.20                                   | 0.86                    | 11.95                     | 3.01     | 3.50      |       |
| -5 (+23)                         | 341                        | 86                 | 100      | 24                          | 0.21                                   | 1.08                    | 14.15                     | 3.57     | 4.15      |       |

| 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] | [W/W] |
| -35 (-31)                        | 61                         | 15                 | 18       | 12                          | 0.12                                    | 0.19                    | 4.98                      | 1.25     | 1.46      |       |
| -30 (-22)                        | 86                         | 22                 | 25       | 15                          | 0.14                                    | 0.27                    | 5.81                      | 1.46     | 1.70      |       |
| -25 (-13)                        | 117                        | 30                 | 34       | 18                          | 0.16                                    | 0.37                    | 6.66                      | 1.68     | 1.95      |       |
| -20 (- 4)                        | 155                        | 39                 | 46       | 20                          | 0.19                                    | 0.49                    | 7.59                      | 1.91     | 2.23      |       |
| -15 (+ 5)                        | 202                        | 51                 | 59       | 23                          | 0.21                                    | 0.63                    | 8.67                      | 2.18     | 2.54      |       |
| -10 (+14)                        | 258                        | 65                 | 75       | 26                          | 0.23                                    | 0.81                    | 9.94                      | 2.50     | 2.91      |       |
| -5 (+23)                         | 325                        | 82                 | 95       | 28                          | 0.24                                    | 1.03                    | 11.48                     | 2.89     | 3.36      |       |

| 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] | [W/W] |
| -35 (-31)                        | 43                         | 11                 | 13       | 12                          | 0.12                                    | 0.13                    | 3.64                      | 0.92     | 1.07      |       |
| -30 (-22)                        | 71                         | 18                 | 21       | 15                          | 0.14                                    | 0.22                    | 4.70                      | 1.18     | 1.38      |       |
| -25 (-13)                        | 103                        | 26                 | 30       | 18                          | 0.17                                    | 0.32                    | 5.66                      | 1.43     | 1.66      |       |
| -20 (- 4)                        | 142                        | 36                 | 42       | 22                          | 0.20                                    | 0.45                    | 6.58                      | 1.66     | 1.93      |       |
| -15 (+ 5)                        | 188                        | 47                 | 55       | 25                          | 0.22                                    | 0.59                    | 7.51                      | 1.89     | 2.20      |       |
| -10 (+14)                        | 243                        | 61                 | 71       | 28                          | 0.25                                    | 0.77                    | 8.53                      | 2.15     | 2.50      |       |
| -5 (+23)                         | 308                        | 78                 | 90       | 32                          | 0.27                                    | 0.97                    | 9.69                      | 2.44     | 2.84      |       |

### E - PERFORMANCE - CURVES

| 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)                      | 87                 | 22      | 25                          | 15                                     | 0.14                    | 0.27                      | 5.63   | 1.42     | 1.65      |
| -30                              | (-22)                      | 117                | 30      | 34                          | 18                                     | 0.17                    | 0.37                      | 6.45   | 1.63     | 1.89      |
| -25                              | (-13)                      | 157                | 40      | 46                          | 21                                     | 0.19                    | 0.49                      | 7.50   | 1.89     | 2.20      |
| -20                              | (- 4)                      | 207                | 52      | 61                          | 24                                     | 0.21                    | 0.65                      | 8.78   | 2.21     | 2.57      |
| -15                              | (+ 5)                      | 268                | 68      | 79                          | 26                                     | 0.23                    | 0.84                      | 10.33  | 2.60     | 3.03      |
| -10                              | (+14)                      | 341                | 86      | 100                         | 28                                     | 0.24                    | 1.08                      | 12.16  | 3.06     | 3.56      |
| -5                               | (+23)                      | 427                | 108     | 125                         | 30                                     | 0.25                    | 1.35                      | 14.31  | 3.61     | 4.19      |

| 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] |
| -35                              | (-31)                      | 80                 | 20      | 23                          | 15                                      | 0.14                    | 0.25                      | 5.25   | 1.32     | 1.54      |
| -30                              | (-22)                      | 108                | 27      | 32                          | 18                                      | 0.17                    | 0.34                      | 5.91   | 1.49     | 1.73      |
| -25                              | (-13)                      | 146                | 37      | 43                          | 22                                      | 0.19                    | 0.46                      | 6.71   | 1.69     | 1.97      |
| -20                              | (- 4)                      | 194                | 49      | 57                          | 25                                      | 0.22                    | 0.61                      | 7.66   | 1.93     | 2.25      |
| -15                              | (+ 5)                      | 252                | 64      | 74                          | 29                                      | 0.25                    | 0.79                      | 8.80   | 2.22     | 2.58      |
| -10                              | (+14)                      | 322                | 81      | 94                          | 32                                      | 0.27                    | 1.02                      | 10.14  | 2.56     | 2.97      |
| -5                               | (+23)                      | 404                | 102     | 118                         | 35                                      | 0.29                    | 1.28                      | 11.71  | 2.95     | 3.43      |

| 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] |
| -35                              | (-31)                      | 63                 | 16      | 18                          | 15                                      | 0.13                    | 0.20                      | 4.23   | 1.06     | 1.24      |
| -30                              | (-22)                      | 91                 | 23      | 27                          | 18                                      | 0.16                    | 0.28                      | 4.97   | 1.25     | 1.46      |
| -25                              | (-13)                      | 128                | 32      | 38                          | 22                                      | 0.20                    | 0.40                      | 5.76   | 1.45     | 1.69      |
| -20                              | (- 4)                      | 175                | 44      | 51                          | 26                                      | 0.23                    | 0.55                      | 6.62   | 1.67     | 1.94      |
| -15                              | (+ 5)                      | 233                | 59      | 68                          | 31                                      | 0.26                    | 0.73                      | 7.58   | 1.91     | 2.22      |
| -10                              | (+14)                      | 301                | 76      | 88                          | 35                                      | 0.29                    | 0.95                      | 8.67   | 2.18     | 2.54      |
| -5                               | (+23)                      | 382                | 96      | 112                         | 39                                      | 0.32                    | 1.21                      | 9.90   | 2.49     | 2.90      |

### E - PERFORMANCE - CURVES

| 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)                        | 112                        | 28                 | 33       | 19                          | 0.17                                   | 0.35                    | 5.75                      | 1.45     | 1.68      |       |
| -30 (-22)                        | 149                        | 38                 | 44       | 23                          | 0.20                                   | 0.47                    | 6.56                      | 1.65     | 1.92      |       |
| -25 (-13)                        | 199                        | 50                 | 58       | 26                          | 0.23                                   | 0.62                    | 7.56                      | 1.91     | 2.22      |       |
| -20 (- 4)                        | 260                        | 66                 | 76       | 30                          | 0.25                                   | 0.82                    | 8.79                      | 2.21     | 2.57      |       |
| -15 (+ 5)                        | 336                        | 85                 | 98       | 33                          | 0.27                                   | 1.06                    | 10.26                     | 2.59     | 3.01      |       |
| -10 (+14)                        | 426                        | 107                | 125      | 36                          | 0.29                                   | 1.34                    | 12.01                     | 3.03     | 3.52      |       |
| -5 (+23)                         | 532                        | 134                | 156      | 38                          | 0.31                                   | 1.68                    | 14.06                     | 3.54     | 4.12      |       |

| 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)                        | 101                        | 26                 | 30       | 20                          | 0.17                                    | 0.32                    | 5.21                      | 1.31     | 1.53      |       |
| -30 (-22)                        | 138                        | 35                 | 41       | 23                          | 0.21                                    | 0.43                    | 5.93                      | 1.49     | 1.74      |       |
| -25 (-13)                        | 186                        | 47                 | 55       | 27                          | 0.24                                    | 0.58                    | 6.76                      | 1.70     | 1.98      |       |
| -20 (- 4)                        | 247                        | 62                 | 72       | 32                          | 0.27                                    | 0.78                    | 7.73                      | 1.95     | 2.27      |       |
| -15 (+ 5)                        | 321                        | 81                 | 94       | 36                          | 0.30                                    | 1.01                    | 8.87                      | 2.23     | 2.60      |       |
| -10 (+14)                        | 409                        | 103                | 120      | 40                          | 0.32                                    | 1.29                    | 10.20                     | 2.57     | 2.99      |       |
| -5 (+23)                         | 512                        | 129                | 150      | 44                          | 0.35                                    | 1.62                    | 11.75                     | 2.96     | 3.44      |       |

| 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)                        | 85                         | 21                 | 25       | 19                          | 0.17                                    | 0.26                    | 4.39                      | 1.11     | 1.29      |       |
| -30 (-22)                        | 120                        | 30                 | 35       | 23                          | 0.21                                    | 0.38                    | 5.15                      | 1.30     | 1.51      |       |
| -25 (-13)                        | 166                        | 42                 | 49       | 28                          | 0.24                                    | 0.52                    | 5.94                      | 1.50     | 1.74      |       |
| -20 (- 4)                        | 224                        | 56                 | 66       | 33                          | 0.28                                    | 0.70                    | 6.78                      | 1.71     | 1.99      |       |
| -15 (+ 5)                        | 295                        | 74                 | 87       | 38                          | 0.31                                    | 0.93                    | 7.71                      | 1.94     | 2.26      |       |
| -10 (+14)                        | 381                        | 96                 | 112      | 43                          | 0.35                                    | 1.20                    | 8.76                      | 2.21     | 2.57      |       |
| -5 (+23)                         | 481                        | 121                | 141      | 48                          | 0.39                                    | 1.52                    | 9.94                      | 2.50     | 2.91      |       |

### E - PERFORMANCE - CURVES

| 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)                        | 167                        | 42                 | 49       | 30                          | 0.26                                   | 0.52                    | 5.54                      | 1.40     | 1.62      |       |
| -30 (-22)                        | 230                        | 58                 | 67       | 35                          | 0.29                                   | 0.72                    | 6.52                      | 1.64     | 1.91      |       |
| -25 (-13)                        | 310                        | 78                 | 91       | 41                          | 0.34                                   | 0.97                    | 7.57                      | 1.91     | 2.22      |       |
| -20 (- 4)                        | 408                        | 103                | 120      | 47                          | 0.38                                   | 1.28                    | 8.73                      | 2.20     | 2.56      |       |
| -15 (+ 5)                        | 523                        | 132                | 153      | 52                          | 0.42                                   | 1.65                    | 10.02                     | 2.53     | 2.94      |       |
| -10 (+14)                        | 655                        | 165                | 192      | 57                          | 0.45                                   | 2.07                    | 11.50                     | 2.90     | 3.37      |       |
| -5 (+23)                         | 805                        | 203                | 236      | 61                          | 0.48                                   | 2.54                    | 13.20                     | 3.33     | 3.87      |       |

| 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)                        | 148                        | 37                 | 43       | 30                          | 0.25                                    | 0.46                    | 4.90                      | 1.24     | 1.44      |       |
| -30 (-22)                        | 207                        | 52                 | 61       | 36                          | 0.30                                    | 0.65                    | 5.79                      | 1.46     | 1.70      |       |
| -25 (-13)                        | 285                        | 72                 | 84       | 42                          | 0.35                                    | 0.90                    | 6.70                      | 1.69     | 1.96      |       |
| -20 (- 4)                        | 381                        | 96                 | 112      | 49                          | 0.40                                    | 1.20                    | 7.68                      | 1.94     | 2.25      |       |
| -15 (+ 5)                        | 495                        | 125                | 145      | 56                          | 0.45                                    | 1.56                    | 8.77                      | 2.21     | 2.57      |       |
| -10 (+14)                        | 626                        | 158                | 183      | 63                          | 0.49                                    | 1.97                    | 9.99                      | 2.52     | 2.93      |       |
| -5 (+23)                         | 775                        | 195                | 227      | 68                          | 0.53                                    | 2.45                    | 11.39                     | 2.87     | 3.34      |       |

| 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)                        | 126                        | 32                 | 37       | 30                          | 0.26                                    | 0.39                    | 4.18                      | 1.05     | 1.22      |       |
| -30 (-22)                        | 181                        | 46                 | 53       | 36                          | 0.31                                    | 0.57                    | 5.02                      | 1.26     | 1.47      |       |
| -25 (-13)                        | 254                        | 64                 | 75       | 44                          | 0.36                                    | 0.80                    | 5.85                      | 1.47     | 1.71      |       |
| -20 (- 4)                        | 347                        | 87                 | 102      | 52                          | 0.42                                    | 1.09                    | 6.70                      | 1.69     | 1.96      |       |
| -15 (+ 5)                        | 457                        | 115                | 134      | 60                          | 0.47                                    | 1.44                    | 7.62                      | 1.92     | 2.23      |       |
| -10 (+14)                        | 586                        | 148                | 172      | 68                          | 0.53                                    | 1.85                    | 8.64                      | 2.18     | 2.53      |       |
| -5 (+23)                         | 734                        | 185                | 215      | 75                          | 0.58                                    | 2.32                    | 9.80                      | 2.47     | 2.87      |       |

### 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)                        | 258                        | 65                 | 76       | 50                          | 0.39                                   | 0.81                    | 5.19                      | 1.31     | 1.52      |       |
| -30 (-22)                        | 344                        | 87                 | 101      | 57                          | 0.45                                   | 1.08                    | 6.00                      | 1.51     | 1.76      |       |
| -25 (-13)                        | 452                        | 114                | 132      | 66                          | 0.51                                   | 1.42                    | 6.89                      | 1.74     | 2.02      |       |
| -20 (- 4)                        | 583                        | 147                | 171      | 74                          | 0.57                                   | 1.83                    | 7.88                      | 1.99     | 2.31      |       |
| -15 (+ 5)                        | 744                        | 188                | 218      | 82                          | 0.63                                   | 2.34                    | 9.02                      | 2.27     | 2.64      |       |
| -10 (+14)                        | 939                        | 237                | 275      | 91                          | 0.69                                   | 2.96                    | 10.31                     | 2.60     | 3.02      |       |
| -5 (+23)                         | 1170                       | 295                | 343      | 99                          | 0.75                                   | 3.70                    | 11.80                     | 2.97     | 3.46      |       |

| 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)                        | 228                        | 58                 | 67       | 49                          | 0.39                                    | 0.71                    | 4.67                      | 1.18     | 1.37      |       |
| -30 (-22)                        | 319                        | 80                 | 93       | 59                          | 0.46                                    | 1.00                    | 5.43                      | 1.37     | 1.59      |       |
| -25 (-13)                        | 427                        | 108                | 125      | 69                          | 0.54                                    | 1.34                    | 6.24                      | 1.57     | 1.83      |       |
| -20 (- 4)                        | 557                        | 140                | 163      | 79                          | 0.61                                    | 1.75                    | 7.11                      | 1.79     | 2.08      |       |
| -15 (+ 5)                        | 714                        | 180                | 209      | 88                          | 0.68                                    | 2.25                    | 8.08                      | 2.04     | 2.37      |       |
| -10 (+14)                        | 902                        | 227                | 264      | 98                          | 0.75                                    | 2.85                    | 9.17                      | 2.31     | 2.69      |       |
| -5 (+23)                         | 1125                       | 284                | 330      | 108                         | 0.82                                    | 3.56                    | 10.41                     | 2.62     | 3.05      |       |

| 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)                        | 176                        | 44                 | 52       | 44                          | 0.35                                    | 0.55                    | 3.99                      | 1.01     | 1.17      |       |
| -30 (-22)                        | 272                        | 69                 | 80       | 56                          | 0.45                                    | 0.85                    | 4.79                      | 1.21     | 1.40      |       |
| -25 (-13)                        | 385                        | 97                 | 113      | 69                          | 0.54                                    | 1.21                    | 5.58                      | 1.41     | 1.64      |       |
| -20 (- 4)                        | 517                        | 130                | 151      | 81                          | 0.63                                    | 1.62                    | 6.41                      | 1.61     | 1.88      |       |
| -15 (+ 5)                        | 673                        | 170                | 197      | 93                          | 0.71                                    | 2.12                    | 7.28                      | 1.84     | 2.13      |       |
| -10 (+14)                        | 858                        | 216                | 251      | 104                         | 0.79                                    | 2.71                    | 8.24                      | 2.08     | 2.42      |       |
| -5 (+23)                         | 1075                       | 271                | 315      | 116                         | 0.87                                    | 3.40                    | 9.31                      | 2.35     | 2.73      |       |

### 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 79° up + 0° back     |      |                          |
| 3.2 DISCHARGE           | 5.1 +0.10/+0.00              | [mm] | (0.201" +0.004"/+0.000") |
| 3.2.1 Material          | Copper                       |      |                          |
| 3.2.2 Shape             | Slanted 47° 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                 |      |                          |