

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | VES D9C         |
| Nominal Voltage/Frequency | 230 V 40-150 Hz |
| Engineering Number        | 513907012       |

### 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)         | 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 pressures/temperature |                                   |                                   |              |
| 9.1 Operating (gauge)                      | 7.7                               | [kgf/cm <sup>2</sup> ] (109 psig) | / °C - °F    |
| 9.2 Peak (gauge)                           | 9.8                               | [kgf/cm <sup>2</sup> ] (139 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            | 190            | [ml] (6.42 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 6.77           | [kg] (14.93 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                   | 9.60                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 9.60                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (40/150 Hz)    | 2.10                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (40/150 Hz) | 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             | CCC - VDE                         |                                    |

### D - PERFORMANCE - CHECK POINT DATA

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |                  | CECOMAF  |     |                   | (Condensing temperature 35°C (+95°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|---------------------------------------|---------------|-----------------|-----------|-------|--|
| @220V1300RPM            |                  | Static   |     |                   |                                       |               |                 |           |       |  |
| Evaporating temperature | Cooling capacity |          |     | Power consumption | Current consumption                   | Gas flow rate | EFFICIENCY RATE |           |       |  |
|                         | +/- 5%           |          |     | +/- 5%            | +/- 5%                                | +/- 5%        | +/- 7%          |           |       |  |
| °C (°F)                 | [Btu/h]          | [kcal/h] | [W] | [W]               | [A]                                   | [kg/h]        | [Btu/Wh]        | [kcal/Wh] | [W/W] |  |
| -35 (-31)               | 135              | 34       | 39  | 22                | 0.17                                  | 0.43          | 6.10            | 1.54      | 1.79  |  |
| -30 (-22)               | 179              | 45       | 53  | 25                | 0.22                                  | 0.58          | 7.03            | 1.77      | 2.06  |  |
| -25 (-13)               | 235              | 59       | 69  | 29                | 0.25                                  | 0.75          | 8.06            | 2.03      | 2.36  |  |
| -20 (- 4)               | 303              | 76       | 89  | 33                | 0.27                                  | 0.97          | 9.22            | 2.32      | 2.70  |  |
| -15 (+ 5)               | 384              | 97       | 113 | 37                | 0.29                                  | 1.24          | 10.53           | 2.65      | 3.08  |  |
| -10 (+14)               | 480              | 121      | 141 | 40                | 0.31                                  | 1.55          | 12.03           | 3.03      | 3.52  |  |

| TEST CONDITIONS:        |                  | CECOMAF  |     |                   | (Condensing temperature 45°C (+113°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|--|---------------|-----------------|-----------|-------|--|
| @220V1300RPM            |                  | Static   |     |                   |  |               |                 |           |       |  |
| Evaporating temperature | Cooling capacity |          |     | Power consumption | Current consumption                    | Gas flow rate | EFFICIENCY RATE |           |       |  |
|                         | +/- 5%           |          |     | +/- 5%            | +/- 5%                                 | +/- 5%        | +/- 7%          |           |       |  |
| °C (°F)                 | [Btu/h]          | [kcal/h] | [W] | [W]               | [A]                                    | [kg/h]        | [Btu/Wh]        | [kcal/Wh] | [W/W] |  |
| -35 (-31)               | 109              | 28       | 32  | 22                | 0.20                                   | 0.38          | 4.97            | 1.25      | 1.45  |  |
| -30 (-22)               | 152              | 38       | 44  | 27                | 0.23                                   | 0.53          | 5.65            | 1.42      | 1.66  |  |
| -25 (-13)               | 205              | 52       | 60  | 32                | 0.25                                   | 0.71          | 6.39            | 1.61      | 1.87  |  |
| -20 (- 4)               | 269              | 68       | 79  | 37                | 0.28                                   | 0.94          | 7.21            | 1.82      | 2.11  |  |
| -15 (+ 5)               | 346              | 87       | 101 | 42                | 0.31                                   | 1.21          | 8.15            | 2.05      | 2.39  |  |
| -10 (+14)               | 438              | 110      | 128 | 47                | 0.36                                   | 1.53          | 9.24            | 2.33      | 2.71  |  |

| TEST CONDITIONS:        |                  | CECOMAF  |     |                   | (Condensing temperature 55°C (+131°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|--|---------------|-----------------|-----------|-------|--|
| @220V1300RPM            |                  | Static   |     |                   |  |               |                 |           |       |  |
| Evaporating temperature | Cooling capacity |          |     | Power consumption | Current consumption                    | Gas flow rate | EFFICIENCY RATE |           |       |  |
|                         | +/- 5%           |          |     | +/- 5%            | +/- 5%                                 | +/- 5%        | +/- 7%          |           |       |  |
| °C (°F)                 | [Btu/h]          | [kcal/h] | [W] | [W]               | [A]                                    | [kg/h]        | [Btu/Wh]        | [kcal/Wh] | [W/W] |  |
| -35 (-31)               | 87               | 22       | 26  | 23                | 0.18                                   | 0.33          | 3.73            | 0.94      | 1.09  |  |
| -30 (-22)               | 122              | 31       | 36  | 28                | 0.21                                   | 0.46          | 4.34            | 1.09      | 1.27  |  |
| -25 (-13)               | 167              | 42       | 49  | 34                | 0.25                                   | 0.64          | 4.97            | 1.25      | 1.46  |  |
| -20 (- 4)               | 223              | 56       | 65  | 40                | 0.30                                   | 0.85          | 5.64            | 1.42      | 1.65  |  |
| -15 (+ 5)               | 292              | 73       | 85  | 46                | 0.38                                   | 1.12          | 6.38            | 1.61      | 1.87  |  |
| -10 (+14)               | 374              | 94       | 110 | 52                | 0.48                                   | 1.44          | 7.23            | 1.82      | 2.12  |  |

| TEST CONDITIONS:        |                  | CECOMAF  |     |                   | (Condensing temperature 35°C (+95°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|---------------------------------------|---------------|-----------------|-----------|-------|--|
| @220V1600RPM            |                  | Static   |     |                   |                                       |               |                 |           |       |  |
| Evaporating temperature | Cooling capacity |          |     | Power consumption | Current consumption                   | Gas flow rate | EFFICIENCY RATE |           |       |  |
|                         | +/- 5%           |          |     | +/- 5%            | +/- 5%                                | +/- 5%        | +/- 7%          |           |       |  |
| °C (°F)                 | [Btu/h]          | [kcal/h] | [W] | [W]               | [A]                                   | [kg/h]        | [Btu/Wh]        | [kcal/Wh] | [W/W] |  |
| -35 (-31)               | 169              | 43       | 50  | 27                | 0.22                                  | 0.54          | 6.17            | 1.56      | 1.81  |  |
| -30 (-22)               | 225              | 57       | 66  | 32                | 0.27                                  | 0.72          | 7.02            | 1.77      | 2.06  |  |
| -25 (-13)               | 292              | 74       | 86  | 37                | 0.30                                  | 0.94          | 7.99            | 2.01      | 2.34  |  |
| -20 (- 4)               | 374              | 94       | 110 | 41                | 0.33                                  | 1.20          | 9.11            | 2.30      | 2.67  |  |
| -15 (+ 5)               | 473              | 119      | 139 | 46                | 0.36                                  | 1.52          | 10.41           | 2.62      | 3.05  |  |
| -10 (+14)               | 593              | 149      | 174 | 50                | 0.39                                  | 1.91          | 11.92           | 3.00      | 3.49  |  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V1600RPM |       | CECOMAF<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) | 137                        | 35       | 40  | 28                                     | 0.23                          | 0.48                    | 5.07                      | 1.28      | 1.49  |
| -30                              | (-22) | 192                        | 48       | 56  | 33                                     | 0.27                          | 0.67                    | 5.75                      | 1.45      | 1.69  |
| -25                              | (-13) | 257                        | 65       | 75  | 39                                     | 0.30                          | 0.89                    | 6.49                      | 1.63      | 1.90  |
| -20                              | (- 4) | 336                        | 85       | 98  | 46                                     | 0.34                          | 1.17                    | 7.31                      | 1.84      | 2.14  |
| -15                              | (+ 5) | 431                        | 109      | 126 | 52                                     | 0.38                          | 1.51                    | 8.25                      | 2.08      | 2.42  |
| -10                              | (+14) | 546                        | 138      | 160 | 58                                     | 0.44                          | 1.91                    | 9.34                      | 2.35      | 2.74  |

| TEST CONDITIONS:<br>@220V1600RPM |       | CECOMAF<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) | 112                        | 28       | 33  | 28                                     | 0.22                          | 0.43                    | 3.88                      | 0.98      | 1.14  |
| -30                              | (-22) | 156                        | 39       | 46  | 34                                     | 0.26                          | 0.59                    | 4.52                      | 1.14      | 1.33  |
| -25                              | (-13) | 209                        | 53       | 61  | 41                                     | 0.31                          | 0.80                    | 5.15                      | 1.30      | 1.51  |
| -20                              | (- 4) | 275                        | 69       | 81  | 48                                     | 0.36                          | 1.05                    | 5.80                      | 1.46      | 1.70  |
| -15                              | (+ 5) | 357                        | 90       | 105 | 55                                     | 0.44                          | 1.37                    | 6.51                      | 1.64      | 1.91  |
| -10                              | (+14) | 457                        | 115      | 134 | 63                                     | 0.52                          | 1.76                    | 7.30                      | 1.84      | 2.14  |

| TEST CONDITIONS:<br>@220V2000RPM |       | CECOMAF<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) | 210                        | 53       | 62  | 34                                    | 0.27                          | 0.67                    | 6.11                      | 1.54      | 1.79  |
| -30                              | (-22) | 282                        | 71       | 83  | 40                                    | 0.31                          | 0.91                    | 7.00                      | 1.76      | 2.05  |
| -25                              | (-13) | 370                        | 93       | 108 | 46                                    | 0.36                          | 1.19                    | 7.97                      | 2.01      | 2.33  |
| -20                              | (- 4) | 475                        | 120      | 139 | 53                                    | 0.41                          | 1.53                    | 9.04                      | 2.28      | 2.65  |
| -15                              | (+ 5) | 601                        | 151      | 176 | 59                                    | 0.45                          | 1.93                    | 10.28                     | 2.59      | 3.01  |
| -10                              | (+14) | 750                        | 189      | 220 | 64                                    | 0.50                          | 2.42                    | 11.71                     | 2.95      | 3.43  |

| TEST CONDITIONS:<br>@220V2000RPM |       | CECOMAF<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) | 179                        | 45       | 52  | 36                                     | 0.28                          | 0.62                    | 5.03                      | 1.27      | 1.47  |
| -30                              | (-22) | 244                        | 62       | 72  | 42                                     | 0.33                          | 0.85                    | 5.75                      | 1.45      | 1.68  |
| -25                              | (-13) | 323                        | 81       | 95  | 50                                     | 0.38                          | 1.12                    | 6.49                      | 1.64      | 1.90  |
| -20                              | (- 4) | 418                        | 105      | 122 | 57                                     | 0.44                          | 1.46                    | 7.30                      | 1.84      | 2.14  |
| -15                              | (+ 5) | 531                        | 134      | 156 | 65                                     | 0.49                          | 1.86                    | 8.21                      | 2.07      | 2.41  |
| -10                              | (+14) | 666                        | 168      | 195 | 72                                     | 0.54                          | 2.33                    | 9.27                      | 2.34      | 2.72  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V2000RPM |                            | CECOMAF<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]  |
| -35                              | (-31)                      | 142               | 36      | 42                          | 36                                     | 0.27                    | 0.54                      | 3.97 | 1.00 | 1.16 |
| -30                              | (-22)                      | 201               | 51      | 59                          | 44                                     | 0.34                    | 0.76                      | 4.61 | 1.16 | 1.35 |
| -25                              | (-13)                      | 272               | 69      | 80                          | 52                                     | 0.40                    | 1.04                      | 5.22 | 1.31 | 1.53 |
| -20                              | (- 4)                      | 357               | 90      | 105                         | 61                                     | 0.47                    | 1.36                      | 5.84 | 1.47 | 1.71 |
| -15                              | (+ 5)                      | 458               | 116     | 134                         | 70                                     | 0.53                    | 1.76                      | 6.52 | 1.64 | 1.91 |
| -10                              | (+14)                      | 579               | 146     | 170                         | 79                                     | 0.59                    | 2.22                      | 7.30 | 1.84 | 2.14 |

| TEST CONDITIONS:<br>@220V3000RPM |                            | CECOMAF<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]  |
| -35                              | (-31)                      | 312               | 79      | 91                          | 53                                    | 0.40                    | 1.00                      | 5.84  | 1.47 | 1.71 |
| -30                              | (-22)                      | 428               | 108     | 126                         | 63                                    | 0.47                    | 1.37                      | 6.75  | 1.70 | 1.98 |
| -25                              | (-13)                      | 565               | 142     | 166                         | 74                                    | 0.55                    | 1.81                      | 7.68  | 1.94 | 2.25 |
| -20                              | (- 4)                      | 726               | 183     | 213                         | 84                                    | 0.62                    | 2.33                      | 8.66  | 2.18 | 2.54 |
| -15                              | (+ 5)                      | 914               | 230     | 268                         | 94                                    | 0.69                    | 2.94                      | 9.71  | 2.45 | 2.85 |
| -10                              | (+14)                      | 1132              | 285     | 332                         | 105                                   | 0.76                    | 3.65                      | 10.84 | 2.73 | 3.18 |

| TEST CONDITIONS:<br>@220V3000RPM |                            | CECOMAF<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]  |
| -35                              | (-31)                      | 259               | 65      | 76                          | 54                                     | 0.41                    | 0.90                      | 4.82 | 1.21 | 1.41 |
| -30                              | (-22)                      | 364               | 92      | 107                         | 65                                     | 0.50                    | 1.27                      | 5.55 | 1.40 | 1.63 |
| -25                              | (-13)                      | 489               | 123     | 143                         | 77                                     | 0.58                    | 1.70                      | 6.30 | 1.59 | 1.85 |
| -20                              | (- 4)                      | 637               | 160     | 187                         | 90                                     | 0.66                    | 2.22                      | 7.09 | 1.79 | 2.08 |
| -15                              | (+ 5)                      | 810               | 204     | 237                         | 102                                    | 0.74                    | 2.83                      | 7.93 | 2.00 | 2.32 |
| -10                              | (+14)                      | 1013              | 255     | 297                         | 115                                    | 0.82                    | 3.55                      | 8.85 | 2.23 | 2.59 |

| TEST CONDITIONS:<br>@220V3000RPM |                            | CECOMAF<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]  |
| -35                              | (-31)                      | 213               | 54      | 62                          | 54                                     | 0.40                    | 0.81                      | 3.93 | 0.99 | 1.15 |
| -30                              | (-22)                      | 304               | 77      | 89                          | 67                                     | 0.50                    | 1.15                      | 4.53 | 1.14 | 1.33 |
| -25                              | (-13)                      | 413               | 104     | 121                         | 80                                     | 0.60                    | 1.57                      | 5.13 | 1.29 | 1.50 |
| -20                              | (- 4)                      | 543               | 137     | 159                         | 94                                     | 0.70                    | 2.08                      | 5.76 | 1.45 | 1.69 |
| -15                              | (+ 5)                      | 699               | 176     | 205                         | 108                                    | 0.79                    | 2.68                      | 6.43 | 1.62 | 1.89 |
| -10                              | (+14)                      | 882               | 222     | 259                         | 123                                    | 0.89                    | 3.39                      | 7.17 | 1.81 | 2.10 |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V4500RPM |                            | CECOMAF<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)                      | 447               | 113     | 131                         | 83                                    | 0.61                    | 1.43                      | 5.37   | 1.35     | 1.57      |
| -30                              | (-22)                      | 590               | 149     | 173                         | 97                                    | 0.69                    | 1.90                      | 6.11   | 1.54     | 1.79      |
| -25                              | (-13)                      | 749               | 189     | 220                         | 109                                   | 0.76                    | 2.41                      | 6.92   | 1.74     | 2.03      |
| -20                              | (- 4)                      | 943               | 238     | 276                         | 121                                   | 0.83                    | 3.03                      | 7.80   | 1.97     | 2.29      |
| -15                              | (+ 5)                      | 1188              | 299     | 348                         | 135                                   | 0.91                    | 3.82                      | 8.76   | 2.21     | 2.57      |
| -10                              | (+14)                      | 1504              | 379     | 441                         | 152                                   | 1.00                    | 4.85                      | 9.80   | 2.47     | 2.87      |

| TEST CONDITIONS:<br>@220V4500RPM |                            | CECOMAF<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)                      | 401               | 101     | 118                         | 86                                     | 0.64                    | 1.39                      | 4.63   | 1.17     | 1.36      |
| -30                              | (-22)                      | 535               | 135     | 157                         | 102                                    | 0.73                    | 1.86                      | 5.22   | 1.31     | 1.53      |
| -25                              | (-13)                      | 677               | 171     | 198                         | 116                                    | 0.82                    | 2.36                      | 5.86   | 1.48     | 1.72      |
| -20                              | (- 4)                      | 847               | 213     | 248                         | 130                                    | 0.89                    | 2.95                      | 6.56   | 1.65     | 1.92      |
| -15                              | (+ 5)                      | 1061              | 267     | 311                         | 145                                    | 0.97                    | 3.71                      | 7.33   | 1.85     | 2.15      |
| -10                              | (+14)                      | 1338              | 337     | 392                         | 163                                    | 1.06                    | 4.69                      | 8.18   | 2.06     | 2.40      |

| TEST CONDITIONS:<br>@220V4500RPM |                            | CECOMAF<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)                      | 324               | 82      | 95                          | 86                                     | 0.63                    | 1.24                      | 3.79   | 0.96     | 1.11      |
| -30                              | (-22)                      | 458               | 115     | 134                         | 105                                    | 0.75                    | 1.73                      | 4.28   | 1.08     | 1.25      |
| -25                              | (-13)                      | 595               | 150     | 174                         | 123                                    | 0.85                    | 2.26                      | 4.81   | 1.21     | 1.41      |
| -20                              | (- 4)                      | 751               | 189     | 220                         | 139                                    | 0.94                    | 2.87                      | 5.39   | 1.36     | 1.58      |
| -15                              | (+ 5)                      | 945               | 238     | 277                         | 157                                    | 1.03                    | 3.63                      | 6.03   | 1.52     | 1.77      |
| -10                              | (+14)                      | 1195              | 301     | 350                         | 177                                    | 1.12                    | 4.60                      | 6.75   | 1.70     | 1.98      |

### F - EXTERNAL CHARACTERISTICS

|                         |                             |      |                          |
|-------------------------|-----------------------------|------|--------------------------|
| 1 Base plate            | Universal VES               |      |                          |
| 2 Tray holder           | No                          |      |                          |
| 3 Connectors            |                             |      |                          |
| 3.1 SUCTION             | 6.5 +0.12/-0.08             | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material          | Copper                      |      |                          |
| 3.1.2 Shape             | Straight                    |      |                          |
| 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             | 6.5 +0.12/-0.08             | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material          | Copper                      |      |                          |
| 3.3.2 Shape             | Slanted 0° up + 59° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                          | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                |      |                          |