

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>VES D7C</b>         |
| Nominal Voltage/Frequency | <b>230 V 40-150 Hz</b> |
| Engineering Number        | <b>800BY08</b>         |

### 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 254 V                      | 187 to 254 V |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 187 to 254 V                      | 187 to 254 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      |                | [hp]                             |
| 2 Displacement                | 7.23           | [cm <sup>3</sup> ] (0.441 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 16.000         |                                  |
| 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                          | 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)    | 2.10/2.10                        | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (40/150 Hz) | 2.10/2.10                        | [A]                                |
| 10 FLA - Full Load Amperage HBP (40/150 Hz)  | -                                | [A]                                |
| 11 Approval boards certification             | 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] |
| 166                                     | 42       | 49  | 27                                  | 0.21                          | 0.52  | 6.22   | 1.57      | 1.82  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 214                                     | 54       | 63  | 33                                  | 0.25                          | 0.67  | 6.56   | 1.65      | 1.92  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 270                                     | 68       | 79  | 41                                  | 0.30                          | 0.85  | 6.63   | 1.67      | 1.94  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 409                                     | 103      | 120 | 63                                  | 0.47                          | 1.28  | 6.47   | 1.63      | 1.90  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 628                                     | 158      | 184 | 99                                  | 0.70                          | 1.97  | 6.36   | 1.60      | 1.86  |

### 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)                        | 106                        | 27                 | 31       | 17                          | 0.12                                  | 0.33                    | 6.22                      | 1.57     | 1.82      |       |
| -30 (-22)                        | 142                        | 36                 | 42       | 20                          | 0.15                                  | 0.45                    | 7.13                      | 1.80     | 2.09      |       |
| -25 (-13)                        | 186                        | 47                 | 55       | 23                          | 0.18                                  | 0.58                    | 8.10                      | 2.04     | 2.37      |       |
| -20 (- 4)                        | 240                        | 61                 | 70       | 26                          | 0.20                                  | 0.75                    | 9.23                      | 2.32     | 2.70      |       |
| -15 (+ 5)                        | 306                        | 77                 | 90       | 29                          | 0.22                                  | 0.96                    | 10.58                     | 2.67     | 3.10      |       |
| -10 (+14)                        | 386                        | 97                 | 113      | 32                          | 0.24                                  | 1.22                    | 12.25                     | 3.09     | 3.59      |       |

| 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)                        | 90                         | 23                 | 27       | 17                          | 0.13                                   | 0.28                    | 5.19                      | 1.31     | 1.52      |       |
| -30 (-22)                        | 126                        | 32                 | 37       | 21                          | 0.16                                   | 0.39                    | 6.08                      | 1.53     | 1.78      |       |
| -25 (-13)                        | 169                        | 43                 | 50       | 24                          | 0.19                                   | 0.53                    | 6.95                      | 1.75     | 2.04      |       |
| -20 (- 4)                        | 222                        | 56                 | 65       | 28                          | 0.22                                   | 0.70                    | 7.88                      | 1.98     | 2.31      |       |
| -15 (+ 5)                        | 286                        | 72                 | 84       | 32                          | 0.24                                   | 0.90                    | 8.95                      | 2.25     | 2.62      |       |
| -10 (+14)                        | 364                        | 92                 | 107      | 35                          | 0.27                                   | 1.15                    | 10.24                     | 2.58     | 3.00      |       |

| 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)                        | 66                         | 17                 | 19       | 17                          | 0.14                                   | 0.21                    | 3.93                      | 0.99     | 1.15      |       |
| -30 (-22)                        | 103                        | 26                 | 30       | 21                          | 0.17                                   | 0.32                    | 4.95                      | 1.25     | 1.45      |       |
| -25 (-13)                        | 148                        | 37                 | 43       | 25                          | 0.20                                   | 0.46                    | 5.86                      | 1.48     | 1.72      |       |
| -20 (- 4)                        | 201                        | 51                 | 59       | 30                          | 0.23                                   | 0.63                    | 6.74                      | 1.70     | 1.97      |       |
| -15 (+ 5)                        | 265                        | 67                 | 78       | 34                          | 0.27                                   | 0.83                    | 7.67                      | 1.93     | 2.25      |       |
| -10 (+14)                        | 342                        | 86                 | 100      | 39                          | 0.29                                   | 1.08                    | 8.74                      | 2.20     | 2.56      |       |

| 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] | [W/W] |
| -35 (-31)                        | 127                        | 32                 | 37       | 21                          | 0.16                                  | 0.40                    | 5.97                      | 1.51     | 1.75      |       |
| -30 (-22)                        | 175                        | 44                 | 51       | 25                          | 0.19                                  | 0.55                    | 7.03                      | 1.77     | 2.06      |       |
| -25 (-13)                        | 232                        | 58                 | 68       | 29                          | 0.21                                  | 0.73                    | 8.12                      | 2.05     | 2.38      |       |
| -20 (- 4)                        | 300                        | 76                 | 88       | 32                          | 0.24                                  | 0.94                    | 9.32                      | 2.35     | 2.73      |       |
| -15 (+ 5)                        | 382                        | 96                 | 112      | 36                          | 0.27                                  | 1.20                    | 10.71                     | 2.70     | 3.14      |       |
| -10 (+14)                        | 480                        | 121                | 141      | 39                          | 0.29                                  | 1.51                    | 12.37                     | 3.12     | 3.62      |       |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 45°C (+113°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)               | 110              | 28       | 32  | 21                | 0.16                                   | 0.35          | 5.20            | 1.31      | 1.52  |  |
| -30 (-22)               | 159              | 40       | 46  | 26                | 0.19                                   | 0.50          | 6.19            | 1.56      | 1.81  |  |
| -25 (-13)               | 215              | 54       | 63  | 30                | 0.23                                   | 0.67          | 7.13            | 1.80      | 2.09  |  |
| -20 (- 4)               | 281              | 71       | 82  | 35                | 0.26                                   | 0.88          | 8.10            | 2.04      | 2.37  |  |
| -15 (+ 5)               | 360              | 91       | 105 | 39                | 0.30                                   | 1.13          | 9.16            | 2.31      | 2.68  |  |
| -10 (+14)               | 454              | 114      | 133 | 43                | 0.33                                   | 1.43          | 10.41           | 2.62      | 3.05  |  |

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 55°C (+131°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)               | 86               | 22       | 25  | 20                | 0.16                                   | 0.27          | 4.23            | 1.07      | 1.24  |  |
| -30 (-22)               | 135              | 34       | 40  | 25                | 0.20                                   | 0.42          | 5.30            | 1.33      | 1.55  |  |
| -25 (-13)               | 191              | 48       | 56  | 31                | 0.24                                   | 0.60          | 6.22            | 1.57      | 1.82  |  |
| -20 (- 4)               | 257              | 65       | 75  | 36                | 0.28                                   | 0.81          | 7.07            | 1.78      | 2.07  |  |
| -15 (+ 5)               | 334              | 84       | 98  | 42                | 0.32                                   | 1.05          | 7.95            | 2.00      | 2.33  |  |
| -10 (+14)               | 425              | 107      | 125 | 48                | 0.36                                   | 1.34          | 8.92            | 2.25      | 2.61  |  |

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 35°C (+95°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|---------------------------------------|---------------|-----------------|-----------|-------|--|
| @220V2000RPM            |                  | 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)               | 158              | 40       | 46  | 27                | 0.20                                  | 0.49          | 5.95            | 1.50      | 1.74  |  |
| -30 (-22)               | 216              | 54       | 63  | 31                | 0.22                                  | 0.68          | 6.96            | 1.75      | 2.04  |  |
| -25 (-13)               | 288              | 73       | 84  | 36                | 0.26                                  | 0.90          | 8.05            | 2.03      | 2.36  |  |
| -20 (- 4)               | 375              | 95       | 110 | 41                | 0.29                                  | 1.18          | 9.27            | 2.34      | 2.72  |  |
| -15 (+ 5)               | 479              | 121      | 140 | 45                | 0.33                                  | 1.51          | 10.66           | 2.69      | 3.12  |  |
| -10 (+14)               | 600              | 151      | 176 | 49                | 0.37                                  | 1.89          | 12.27           | 3.09      | 3.60  |  |

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 45°C (+113°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|--|---------------|-----------------|-----------|-------|--|
| @220V2000RPM            |                  | 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)               | 137              | 35       | 40  | 27                | 0.21                                   | 0.43          | 5.17            | 1.30      | 1.52  |  |
| -30 (-22)               | 195              | 49       | 57  | 32                | 0.23                                   | 0.61          | 6.11            | 1.54      | 1.79  |  |
| -25 (-13)               | 266              | 67       | 78  | 38                | 0.27                                   | 0.83          | 7.06            | 1.78      | 2.07  |  |
| -20 (- 4)               | 353              | 89       | 103 | 44                | 0.32                                   | 1.11          | 8.08            | 2.03      | 2.37  |  |
| -15 (+ 5)               | 456              | 115      | 134 | 49                | 0.36                                   | 1.44          | 9.20            | 2.32      | 2.69  |  |
| -10 (+14)               | 577              | 145      | 169 | 55                | 0.40                                   | 1.82          | 10.46           | 2.64      | 3.07  |  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 55°C (+131°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|--|---------------|-----------------|-----------|-------|--|
| @220V2000RPM            |                  | 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)               | 116              | 29       | 34  | 26                | 0.21                                   | 0.36          | 4.44            | 1.12      | 1.30  |  |
| -30 (-22)               | 171              | 43       | 50  | 32                | 0.24                                   | 0.54          | 5.39            | 1.36      | 1.58  |  |
| -25 (-13)               | 241              | 61       | 71  | 38                | 0.28                                   | 0.76          | 6.29            | 1.58      | 1.84  |  |
| -20 (- 4)               | 326              | 82       | 95  | 45                | 0.33                                   | 1.02          | 7.18            | 1.81      | 2.10  |  |
| -15 (+ 5)               | 427              | 108      | 125 | 53                | 0.39                                   | 1.35          | 8.12            | 2.05      | 2.38  |  |
| -10 (+14)               | 547              | 138      | 160 | 60                | 0.44                                   | 1.72          | 9.13            | 2.30      | 2.68  |  |

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 35°C (+95°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|---------------------------------------|---------------|-----------------|-----------|-------|--|
| @220V3000RPM            |                  | 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)               | 233              | 59       | 68  | 41                | 0.32                                  | 0.73          | 5.72            | 1.44      | 1.67  |  |
| -30 (-22)               | 326              | 82       | 95  | 49                | 0.36                                  | 1.02          | 6.68            | 1.68      | 1.96  |  |
| -25 (-13)               | 439              | 111      | 129 | 57                | 0.41                                  | 1.38          | 7.73            | 1.95      | 2.26  |  |
| -20 (- 4)               | 574              | 145      | 168 | 65                | 0.47                                  | 1.80          | 8.88            | 2.24      | 2.60  |  |
| -15 (+ 5)               | 735              | 185      | 215 | 73                | 0.52                                  | 2.31          | 10.16           | 2.56      | 2.98  |  |
| -10 (+14)               | 921              | 232      | 270 | 80                | 0.58                                  | 2.91          | 11.59           | 2.92      | 3.40  |  |

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 45°C (+113°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|--|---------------|-----------------|-----------|-------|--|
| @220V3000RPM            |                  | 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)               | 211              | 53       | 62  | 41                | 0.31                                   | 0.66          | 5.13            | 1.29      | 1.50  |  |
| -30 (-22)               | 297              | 75       | 87  | 50                | 0.36                                   | 0.93          | 5.97            | 1.50      | 1.75  |  |
| -25 (-13)               | 404              | 102      | 118 | 59                | 0.43                                   | 1.27          | 6.87            | 1.73      | 2.01  |  |
| -20 (- 4)               | 536              | 135      | 157 | 68                | 0.50                                   | 1.69          | 7.85            | 1.98      | 2.30  |  |
| -15 (+ 5)               | 695              | 175      | 204 | 78                | 0.57                                   | 2.19          | 8.93            | 2.25      | 2.62  |  |
| -10 (+14)               | 882              | 222      | 259 | 87                | 0.63                                   | 2.78          | 10.13           | 2.55      | 2.97  |  |

| TEST CONDITIONS:        |                  | ASHRAE32 |     |                   | (Condensing temperature 55°C (+131°F)) |               |                 |           |       |  |
|-------------------------|------------------|----------|-----|-------------------|--|---------------|-----------------|-----------|-------|--|
| @220V3000RPM            |                  | 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)               | 193              | 49       | 56  | 42                | 0.32                                   | 0.60          | 4.62            | 1.16      | 1.35  |  |
| -30 (-22)               | 268              | 67       | 78  | 50                | 0.37                                   | 0.84          | 5.36            | 1.35      | 1.57  |  |
| -25 (-13)               | 367              | 92       | 108 | 60                | 0.44                                   | 1.15          | 6.15            | 1.55      | 1.80  |  |
| -20 (- 4)               | 493              | 124      | 144 | 71                | 0.52                                   | 1.55          | 6.99            | 1.76      | 2.05  |  |
| -15 (+ 5)               | 647              | 163      | 190 | 82                | 0.60                                   | 2.04          | 7.90            | 1.99      | 2.32  |  |
| -10 (+14)               | 832              | 210      | 244 | 93                | 0.68                                   | 2.63          | 8.92            | 2.25      | 2.61  |  |

### 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) | 368                        | 93       | 108 | 67                                    | 0.49                          | 1.15                    | 5.47                      | 1.38      | 1.60  |
| -30                              | (-22) | 498                        | 125      | 146 | 78                                    | 0.56                          | 1.56                    | 6.39                      | 1.61      | 1.87  |
| -25                              | (-13) | 647                        | 163      | 190 | 88                                    | 0.62                          | 2.03                    | 7.40                      | 1.86      | 2.17  |
| -20                              | (- 4) | 824                        | 208      | 241 | 97                                    | 0.68                          | 2.59                    | 8.48                      | 2.14      | 2.49  |
| -15                              | (+ 5) | 1036                       | 261      | 303 | 107                                   | 0.75                          | 3.26                    | 9.64                      | 2.43      | 2.83  |
| -10                              | (+14) | 1290                       | 325      | 378 | 118                                   | 0.82                          | 4.07                    | 10.87                     | 2.74      | 3.19  |

| 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) | 330                        | 83       | 97  | 66                                     | 0.48                          | 1.03                    | 4.98                      | 1.25      | 1.46  |
| -30                              | (-22) | 461                        | 116      | 135 | 80                                     | 0.57                          | 1.45                    | 5.75                      | 1.45      | 1.69  |
| -25                              | (-13) | 611                        | 154      | 179 | 93                                     | 0.65                          | 1.92                    | 6.60                      | 1.66      | 1.93  |
| -20                              | (- 4) | 788                        | 198      | 231 | 105                                    | 0.72                          | 2.47                    | 7.52                      | 1.89      | 2.20  |
| -15                              | (+ 5) | 998                        | 252      | 293 | 118                                    | 0.80                          | 3.14                    | 8.49                      | 2.14      | 2.49  |
| -10                              | (+14) | 1251                       | 315      | 367 | 131                                    | 0.87                          | 3.95                    | 9.53                      | 2.40      | 2.79  |

| 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) | 278                        | 70       | 82  | 62                                     | 0.47                          | 0.87                    | 4.49                      | 1.13      | 1.31  |
| -30                              | (-22) | 410                        | 103      | 120 | 78                                     | 0.58                          | 1.29                    | 5.20                      | 1.31      | 1.52  |
| -25                              | (-13) | 561                        | 141      | 164 | 94                                     | 0.68                          | 1.76                    | 5.98                      | 1.51      | 1.75  |
| -20                              | (- 4) | 737                        | 186      | 216 | 108                                    | 0.76                          | 2.32                    | 6.81                      | 1.71      | 1.99  |
| -15                              | (+ 5) | 947                        | 239      | 278 | 124                                    | 0.85                          | 2.98                    | 7.68                      | 1.94      | 2.25  |
| -10                              | (+14) | 1198                       | 302      | 351 | 140                                    | 0.93                          | 3.78                    | 8.60                      | 2.17      | 2.52  |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard            |      |                          |
| 2 Tray holder           | Yes                          |      |                          |
| 3 Connectors            |                              |      |                          |
| 3.1 SUCTION             | 6.1 +0.10/+0.00              | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material          | Copper                       |      |                          |
| 3.1.2 Shape             | Slanted 45° up + 15° to Back |      |                          |
| 3.2 DISCHARGE           | 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                 |      |                          |