

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | VEM X9C+        |
| Nominal Voltage/Frequency | 230 V 40-150 Hz |
| Engineering Number        | 513906086       |

### 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 temperature   |                                   |                                   |              |
| 9.1 Operating                      | 6.9                               | [kgf/cm <sup>2</sup> ] (98 psig)  | / °C - °F    |
| 9.2 Peak                           | 7.8                               | [kgf/cm <sup>2</sup> ] (111 psig) | / °C - °F    |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |              |

### B - MECHANICAL DATA

|                               |                |                                  |
|-------------------------------|----------------|----------------------------------|
| 1 Commercial designation      | 1/5            | [hp]                             |
| 2 Displacement                | 9.04           | [cm <sup>3</sup> ] (0.552 cu.in) |
| 2.1 Bore [mm]                 | 24.000         |                                  |
| 2.2 Stroke [mm]               | 20.000         |                                  |
| 3 Lubricant charge            | 210            | [ml] (7.10 fl.oz.)               |
| 3.1 Lubricants approved       |                |                                  |
| 3.2 Lubricants type/viscosity | ALQUILB / ISO5 |                                  |
| 4 Weight (with oil charge)    | 7.3            | [kg] (16.09 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                          | VCC31156XXXX/VCC32456XXXX         |                                    |
| 3 Start capacitor                            | -                                 | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                 | [µF(VAC minimum)]                  |
| 5 Motor protection                           | MRA58142-6                        |                                    |
| 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 (40/150 Hz)    | -                                 | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (40/150 Hz) | -                                 | [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

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| TEST CONDITIONS:<br><b>@220V1200RPM</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] |
| 220                                     | 55       | 64  | 38                                  | 0.30                          | 0.69  | 5.84   | 1.47      | 1.71  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 287                                     | 72       | 84  | 47                                  | 0.36                          | 0.90  | 6.15   | 1.55      | 1.80  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 364                                     | 92       | 107 | 57                                  | 0.43                          | 1.14  | 6.41   | 1.62      | 1.88  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 556                                     | 140      | 163 | 84                                  | 0.63                          | 1.75  | 6.59   | 1.66      | 1.93  |

|   |          |     |                                     |                               |   |  |           |       |
|---|----------|-----|-------------------------------------|-------------------------------|---|--|-----------|-------|
| 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] |
| 757                                     | 191      | 222 | 120                                 | 0.87                          | 2.38  | 6.30   | 1.59      | 1.85  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V1200RPM |                            | 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)                      | 221                | 56      | 65                          | 35                                    | 0.26                    | 0.69                      | 6.24   | 1.57     | 1.83      |
| -30                              | (-22)                      | 290                | 73      | 85                          | 42                                    | 0.31                    | 0.91                      | 7.00   | 1.76     | 2.05      |
| -25                              | (-13)                      | 378                | 95      | 111                         | 48                                    | 0.36                    | 1.19                      | 7.97   | 2.01     | 2.33      |
| -20                              | (- 4)                      | 485                | 122     | 142                         | 53                                    | 0.40                    | 1.52                      | 9.11   | 2.29     | 2.67      |
| -15                              | (+ 5)                      | 612                | 154     | 179                         | 59                                    | 0.44                    | 1.92                      | 10.39  | 2.62     | 3.04      |
| -10                              | (+14)                      | 759                | 191     | 223                         | 64                                    | 0.48                    | 2.40                      | 11.79  | 2.97     | 3.46      |

| TEST CONDITIONS:<br>@220V1200RPM |                            | 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)                      | 191                | 48      | 56                          | 38                                     | 0.30                    | 0.60                      | 5.03   | 1.27     | 1.48      |
| -30                              | (-22)                      | 248                | 62      | 73                          | 44                                     | 0.35                    | 0.78                      | 5.64   | 1.42     | 1.65      |
| -25                              | (-13)                      | 322                | 81      | 94                          | 51                                     | 0.40                    | 1.01                      | 6.38   | 1.61     | 1.87      |
| -20                              | (- 4)                      | 416                | 105     | 122                         | 58                                     | 0.45                    | 1.31                      | 7.22   | 1.82     | 2.12      |
| -15                              | (+ 5)                      | 530                | 133     | 155                         | 65                                     | 0.50                    | 1.67                      | 8.16   | 2.06     | 2.39      |
| -10                              | (+14)                      | 664                | 167     | 195                         | 73                                     | 0.55                    | 2.10                      | 9.14   | 2.30     | 2.68      |

| TEST CONDITIONS:<br>@220V1200RPM |                            | 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)                      | 138                | 35      | 40                          | 37                                     | 0.29                    | 0.43                      | 3.76   | 0.95     | 1.10      |
| -30                              | (-22)                      | 193                | 49      | 57                          | 45                                     | 0.35                    | 0.61                      | 4.36   | 1.10     | 1.28      |
| -25                              | (-13)                      | 266                | 67      | 78                          | 53                                     | 0.42                    | 0.84                      | 5.03   | 1.27     | 1.47      |
| -20                              | (- 4)                      | 358                | 90      | 105                         | 62                                     | 0.49                    | 1.12                      | 5.75   | 1.45     | 1.69      |
| -15                              | (+ 5)                      | 470                | 118     | 138                         | 72                                     | 0.56                    | 1.48                      | 6.49   | 1.64     | 1.90      |
| -10                              | (+14)                      | 603                | 152     | 177                         | 84                                     | 0.63                    | 1.90                      | 7.22   | 1.82     | 2.11      |

| 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)                      | 166                | 42      | 49                          | 27                                    | 0.20                    | 0.52                      | 6.32   | 1.59     | 1.85      |
| -30                              | (-22)                      | 249                | 63      | 73                          | 35                                    | 0.27                    | 0.78                      | 7.10   | 1.79     | 2.08      |
| -25                              | (-13)                      | 328                | 83      | 96                          | 40                                    | 0.31                    | 1.03                      | 8.13   | 2.05     | 2.38      |
| -20                              | (- 4)                      | 410                | 103     | 120                         | 44                                    | 0.34                    | 1.29                      | 9.34   | 2.35     | 2.74      |
| -15                              | (+ 5)                      | 503                | 127     | 147                         | 47                                    | 0.37                    | 1.58                      | 10.68  | 2.69     | 3.13      |
| -10                              | (+14)                      | 615                | 155     | 180                         | 51                                    | 0.40                    | 1.94                      | 12.08  | 3.04     | 3.54      |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V1600RPM |       | ASHRAE32<br>Static         |          |     | (Condensing temperature 45°C (+113°F)) |                               |                         |                           |           |       |
|----------------------------------|-------|----------------------------|----------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| Evaporating temperature          |       | Cooling capacity<br>+/- 5% |          |     | Power consumption<br>+/- 5%            | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                               | (°F)  | [Btu/h]                    | [kcal/h] | [W] | [W]                                    | [A]                           | [kg/h]                  | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35                              | (-31) | 179                        | 45       | 52  | 31                                     | 0.25                          | 0.56                    | 5.52                      | 1.39      | 1.62  |
| -30                              | (-22) | 221                        | 56       | 65  | 36                                     | 0.29                          | 0.69                    | 6.05                      | 1.52      | 1.77  |
| -25                              | (-13) | 275                        | 69       | 81  | 41                                     | 0.33                          | 0.86                    | 6.82                      | 1.72      | 2.00  |
| -20                              | (- 4) | 348                        | 88       | 102 | 45                                     | 0.36                          | 1.09                    | 7.78                      | 1.96      | 2.28  |
| -15                              | (+ 5) | 447                        | 113      | 131 | 51                                     | 0.40                          | 1.41                    | 8.87                      | 2.24      | 2.60  |
| -10                              | (+14) | 579                        | 146      | 170 | 58                                     | 0.45                          | 1.83                    | 10.02                     | 2.52      | 2.94  |

| TEST CONDITIONS:<br>@220V1600RPM |       | ASHRAE32<br>Static         |          |     | (Condensing temperature 55°C (+131°F)) |                               |                         |                           |           |       |
|----------------------------------|-------|----------------------------|----------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| Evaporating temperature          |       | Cooling capacity<br>+/- 5% |          |     | Power consumption<br>+/- 5%            | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                               | (°F)  | [Btu/h]                    | [kcal/h] | [W] | [W]                                    | [A]                           | [kg/h]                  | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35                              | (-31) | 143                        | 36       | 42  | 30                                     | 0.24                          | 0.45                    | 4.79                      | 1.21      | 1.40  |
| -30                              | (-22) | 181                        | 46       | 53  | 36                                     | 0.29                          | 0.57                    | 5.18                      | 1.31      | 1.52  |
| -25                              | (-13) | 244                        | 62       | 72  | 43                                     | 0.34                          | 0.77                    | 5.83                      | 1.47      | 1.71  |
| -20                              | (- 4) | 341                        | 86       | 100 | 51                                     | 0.40                          | 1.07                    | 6.65                      | 1.68      | 1.95  |
| -15                              | (+ 5) | 480                        | 121      | 141 | 62                                     | 0.48                          | 1.51                    | 7.61                      | 1.92      | 2.23  |
| -10                              | (+14) | 668                        | 168      | 196 | 76                                     | 0.58                          | 2.11                    | 8.62                      | 2.17      | 2.53  |

| 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) | 225                        | 57       | 66  | 35                                    | 0.26                          | 0.70                    | 6.38                      | 1.61      | 1.87  |
| -30                              | (-22) | 297                        | 75       | 87  | 42                                    | 0.31                          | 0.93                    | 7.16                      | 1.80      | 2.10  |
| -25                              | (-13) | 387                        | 98       | 114 | 48                                    | 0.36                          | 1.22                    | 8.14                      | 2.05      | 2.39  |
| -20                              | (- 4) | 496                        | 125      | 145 | 53                                    | 0.40                          | 1.56                    | 9.31                      | 2.35      | 2.73  |
| -15                              | (+ 5) | 626                        | 158      | 183 | 59                                    | 0.44                          | 1.97                    | 10.63                     | 2.68      | 3.11  |
| -10                              | (+14) | 777                        | 196      | 228 | 64                                    | 0.48                          | 2.45                    | 12.07                     | 3.04      | 3.54  |

| 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) | 212                        | 53       | 62  | 38                                     | 0.30                          | 0.66                    | 5.58                      | 1.41      | 1.63  |
| -30                              | (-22) | 275                        | 69       | 81  | 44                                     | 0.35                          | 0.86                    | 6.25                      | 1.58      | 1.83  |
| -25                              | (-13) | 357                        | 90       | 105 | 51                                     | 0.40                          | 1.12                    | 7.08                      | 1.78      | 2.07  |
| -20                              | (- 4) | 461                        | 116      | 135 | 58                                     | 0.45                          | 1.45                    | 8.02                      | 2.02      | 2.35  |
| -15                              | (+ 5) | 587                        | 148      | 172 | 65                                     | 0.50                          | 1.85                    | 9.06                      | 2.28      | 2.65  |
| -10                              | (+14) | 737                        | 186      | 216 | 73                                     | 0.55                          | 2.33                    | 10.15                     | 2.56      | 2.97  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V2000RPM |                            | ASHRAE32<br>Static |          |                             | (Condensing temperature 55°C (+131°F)) |                         |                           |          |           |       |
|----------------------------------|----------------------------|--------------------|----------|-----------------------------|--|-------------------------|---------------------------|----------|-----------|-------|
| Evaporating temperature          | Cooling capacity<br>+/- 5% |                    |          | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%          | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |          |           |       |
|                                  | °C (°F)                    | [Btu/h]            | [kcal/h] | [W]                         | [W]                                    | [A]                     | [kg/h]                    | [Btu/Wh] | [kcal/Wh] | [W/W] |
| -35 (-31)                        | 168                        | 42                 | 49       | 37                          | 0.29                                   | 0.53                    | 4.57                      | 1.15     | 1.34      |       |
| -30 (-22)                        | 235                        | 59                 | 69       | 45                          | 0.35                                   | 0.74                    | 5.30                      | 1.34     | 1.55      |       |
| -25 (-13)                        | 323                        | 81                 | 95       | 53                          | 0.42                                   | 1.01                    | 6.11                      | 1.54     | 1.79      |       |
| -20 (- 4)                        | 435                        | 110                | 127      | 62                          | 0.49                                   | 1.37                    | 6.98                      | 1.76     | 2.05      |       |
| -15 (+ 5)                        | 571                        | 144                | 167      | 72                          | 0.56                                   | 1.80                    | 7.88                      | 1.99     | 2.31      |       |
| -10 (+14)                        | 733                        | 185                | 215      | 84                          | 0.63                                   | 2.31                    | 8.77                      | 2.21     | 2.57      |       |

| 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)                        | 335                        | 85                 | 98       | 55                          | 0.42                                  | 1.05                    | 6.06                      | 1.53     | 1.78      |       |
| -30 (-22)                        | 444                        | 112                | 130      | 64                          | 0.47                                  | 1.39                    | 6.96                      | 1.76     | 2.04      |       |
| -25 (-13)                        | 585                        | 148                | 172      | 73                          | 0.54                                  | 1.84                    | 8.00                      | 2.02     | 2.34      |       |
| -20 (- 4)                        | 758                        | 191                | 222      | 83                          | 0.61                                  | 2.38                    | 9.14                      | 2.30     | 2.68      |       |
| -15 (+ 5)                        | 962                        | 242                | 282      | 93                          | 0.68                                  | 3.03                    | 10.36                     | 2.61     | 3.04      |       |
| -10 (+14)                        | 1195                       | 301                | 350      | 103                         | 0.76                                  | 3.77                    | 11.63                     | 2.93     | 3.41      |       |

| 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)                        | 314                        | 79                 | 92       | 56                          | 0.43                                   | 0.98                    | 5.60                      | 1.41     | 1.64      |       |
| -30 (-22)                        | 410                        | 103                | 120      | 66                          | 0.50                                   | 1.29                    | 6.27                      | 1.58     | 1.84      |       |
| -25 (-13)                        | 540                        | 136                | 158      | 76                          | 0.58                                   | 1.69                    | 7.07                      | 1.78     | 2.07      |       |
| -20 (- 4)                        | 703                        | 177                | 206      | 88                          | 0.66                                   | 2.21                    | 7.97                      | 2.01     | 2.34      |       |
| -15 (+ 5)                        | 898                        | 226                | 263      | 100                         | 0.75                                   | 2.83                    | 8.95                      | 2.26     | 2.62      |       |
| -10 (+14)                        | 1125                       | 283                | 330      | 113                         | 0.84                                   | 3.55                    | 9.98                      | 2.51     | 2.92      |       |

| 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)                        | 267                        | 67                 | 78       | 55                          | 0.41                                   | 0.84                    | 4.92                      | 1.24     | 1.44      |       |
| -30 (-22)                        | 359                        | 90                 | 105      | 66                          | 0.50                                   | 1.13                    | 5.49                      | 1.38     | 1.61      |       |
| -25 (-13)                        | 486                        | 123                | 143      | 79                          | 0.60                                   | 1.53                    | 6.19                      | 1.56     | 1.81      |       |
| -20 (- 4)                        | 648                        | 163                | 190      | 92                          | 0.70                                   | 2.04                    | 6.99                      | 1.76     | 2.05      |       |
| -15 (+ 5)                        | 844                        | 213                | 247      | 107                         | 0.81                                   | 2.66                    | 7.86                      | 1.98     | 2.30      |       |
| -10 (+14)                        | 1072                       | 270                | 314      | 122                         | 0.91                                   | 3.38                    | 8.78                      | 2.21     | 2.57      |       |

### 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)                        | 479                        | 121                | 140      | 82                          | 0.58                                  | 1.50                    | 5.89                      | 1.48     | 1.73      |       |
| -30 (-22)                        | 609                        | 154                | 179      | 92                          | 0.66                                  | 1.91                    | 6.66                      | 1.68     | 1.95      |       |
| -25 (-13)                        | 759                        | 191                | 222      | 101                         | 0.74                                  | 2.38                    | 7.52                      | 1.89     | 2.20      |       |
| -20 (- 4)                        | 938                        | 236                | 275      | 110                         | 0.83                                  | 2.95                    | 8.47                      | 2.14     | 2.48      |       |
| -15 (+ 5)                        | 1158                       | 292                | 339      | 121                         | 0.91                                  | 3.64                    | 9.53                      | 2.40     | 2.79      |       |
| -10 (+14)                        | 1430                       | 360                | 419      | 133                         | 1.00                                  | 4.51                    | 10.71                     | 2.70     | 3.14      |       |

| 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)                        | 463                        | 117                | 136      | 85                          | 0.61                                   | 1.45                    | 5.40                      | 1.36     | 1.58      |       |
| -30 (-22)                        | 581                        | 146                | 170      | 97                          | 0.71                                   | 1.82                    | 6.01                      | 1.51     | 1.76      |       |
| -25 (-13)                        | 713                        | 180                | 209      | 107                         | 0.80                                   | 2.24                    | 6.69                      | 1.68     | 1.96      |       |
| -20 (- 4)                        | 871                        | 220                | 255      | 118                         | 0.89                                   | 2.74                    | 7.45                      | 1.88     | 2.18      |       |
| -15 (+ 5)                        | 1067                       | 269                | 313      | 129                         | 0.98                                   | 3.36                    | 8.30                      | 2.09     | 2.43      |       |
| -10 (+14)                        | 1310                       | 330                | 384      | 141                         | 1.07                                   | 4.13                    | 9.25                      | 2.33     | 2.71      |       |

| 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)                        | 406                        | 102                | 119      | 87                          | 0.64                                   | 1.27                    | 4.65                      | 1.17     | 1.36      |       |
| -30 (-22)                        | 534                        | 135                | 156      | 101                         | 0.74                                   | 1.67                    | 5.27                      | 1.33     | 1.54      |       |
| -25 (-13)                        | 673                        | 170                | 197      | 113                         | 0.84                                   | 2.11                    | 5.95                      | 1.50     | 1.74      |       |
| -20 (- 4)                        | 835                        | 210                | 245      | 125                         | 0.94                                   | 2.62                    | 6.70                      | 1.69     | 1.96      |       |
| -15 (+ 5)                        | 1029                       | 259                | 302      | 137                         | 1.05                                   | 3.24                    | 7.52                      | 1.89     | 2.20      |       |
| -10 (+14)                        | 1268                       | 320                | 372      | 150                         | 1.15                                   | 4.00                    | 8.43                      | 2.12     | 2.47      |       |

### F - EXTERNAL CHARACTERISTICS

|                         |                              |      |                          |
|-------------------------|------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EUEM       |      |                          |
| 2 Tray holder           | No                           |      |                          |
| 3 Connectors            |                              |      |                          |
| 3.1 SUCTION             | 6.2 +0.05/+0.05              | [mm] | (0.244" +0.002"/+0.002") |
| 3.1.1 Material          | Copper                       |      |                          |
| 3.1.2 Shape             | Slanted 40° up + 45° to Back |      |                          |
| 3.2 DISCHARGE           | 4.9 +0.10/-0.05              | [mm] | (0.193" +0.004"/-0.002") |
| 3.2.1 Material          | Copper                       |      |                          |
| 3.2.2 Shape             | Slanted 0° up + 24° to Back  |      |                          |
| 3.3 PROCESS             | 6.2 +0.05/+0.05              | [mm] | (0.244" +0.002"/+0.002") |
| 3.3.1 Material          | Copper                       |      |                          |
| 3.3.2 Shape             | Slanted 40° up + 45° to Back |      |                          |
| 3.4 Oil cooler (Copper) | No                           | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                 |      |                          |