

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | VEG T7H         |
| Nominal Voltage/Frequency | 230 V 53-150 Hz |
| Engineering Number        | 513800007       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |              |
|------------------------------------|-----------------------------------|-----------------------------------|--------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |              |
| 2 Refrigerant                      | R-134a                            |                                   |              |
| 3 Nominal voltage and frequency    | 230 / 53-150                      | [ 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                            | 198 to 265 V                      | 198 to 265 V |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 198 to 265 V                      | 198 to 265 V |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -            |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -            |
| 9 Maximum condensing temperature   |                                   |                                   |              |
| 9.1 Operating                      | 14.2                              | [kgf/cm <sup>2</sup> ] (202 psig) | / °C - °F    |
| 9.2 Peak                           | 15.9                              | [kgf/cm <sup>2</sup> ] (226 psig) | / °C - °F    |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |              |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1/4           | [hp]                                       |
| 2 Displacement                | 7.15          | [cm <sup>3</sup> ] (0.436 cu.in)           |
| 2.1 Bore [mm]                 | 22.500        |  |
| 2.2 Stroke [mm]               | 18.000        |  |
| 3 Lubricant charge            | 430           | [ml] (14.54 fl.oz.)                        |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |  |
| 4 Weight (with oil charge)    | 11.13         | [kg] (24.54 lb.)                           |
| 5 Nitrogen charge             | 0.2 to 0.3    | [kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig) |

### C - ELETRICAL DATA

|  |                                   |                                    |
|--|-----------------------------------|------------------------------------|
| 1 Nominal Voltage/Frequency/Number of Phases | 230 V 53-150 Hz 3 ~ (Three phase) |                                    |
| 2 Starting device type                       | Inverter                          |                                    |
| 2.1 Starting device                          | EU245607B02/EU245607N00           |                                    |
| 3 Start capacitor                            | -                                 | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                 | [µF(VAC minimum)]                  |
| 5 Motor protection                           | EU245607B02                       |                                    |
| 6 Start winding resistance                   | 6.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 6.40                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 3.30                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | 3.30                              | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | -                                 | [A] - Measured according to UL 984 |
| 11 Approval boards certification             |                                   |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                                  |          |     |                             |                               |  |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V1600RPM |          |     | ASHRAELBP32<br>Static       |                               | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°F)<br>54.4°C (129.92°F) |       |
| 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] |
| 345                              | 87       | 101 | 67                          | 0.49                          | 1.96   | 5.13                      | 1.29                                   | 1.50  |

|                                  |          |     |                             |                               |  |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V3000RPM |          |     | ASHRAELBP32<br>Static       |                               | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°F)<br>54.4°C (129.92°F) |       |
| 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] |
| 730                              | 184      | 214 | 134                         | 0.94                          | 4.15   | 5.43                      | 1.37                                   | 1.59  |

|                                  |          |     |                             |                               |  |                           |  |       |
|----------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@220V4500RPM |          |     | ASHRAELBP32<br>Static       |                               | Evaporating temperature<br>(Condensing temperature |                           | -23.3°C (-9.94°F)<br>54.4°C (129.92°F) |       |
| 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] |
| 990                              | 249      | 290 | 198                         | 1.36                          | 5.63   | 4.99                      | 1.26                                   | 1.46  |

### 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] |
| -35                              | (-31)                      | 156  | 39                 | 46                          | 38                                     | 0.29                    | 0.88                      | 4.18   | 1.05     | 1.23      |
| -30                              | (-22)                      | 243  | 61                 | 71                          | 47                                     | 0.39                    | 1.38                      | 5.09   | 1.28     | 1.49      |
| -25                              | (-13)                      | 343  | 87                 | 101                         | 58                                     | 0.48                    | 1.95                      | 5.91   | 1.49     | 1.73      |
| -20                              | (- 4)                      | 462  | 116                | 135                         | 69                                     | 0.55                    | 2.63                      | 6.72   | 1.69     | 1.97      |
| -15                              | (+ 5)                      | 604  | 152                | 177                         | 80                                     | 0.61                    | 3.45                      | 7.60   | 1.91     | 2.23      |
| -10                              | (+14)                      | 774  | 195                | 227                         | 90                                     | 0.66                    | 4.44                      | 8.63   | 2.17     | 2.53      |

|                                  |                            |      |                    |                             |  |                         |                           |        |          |           |
|----------------------------------|----------------------------|------|--------------------|-----------------------------|--|-------------------------|---------------------------|--------|----------|-----------|
| TEST CONDITIONS:<br>@220V1600RPM |                            |      | ASHRAE32<br>Static |                             | (Condensing temperature 55°C (+131°F)) |                         |                           |        |          |           |
| Evaporating temperature          | Cooling capacity<br>+/- 5% |      |                    | Power consumption<br>+/- 5% | Current consumption<br>+/- 5%          | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |        |          |           |
|                                  | °C                         | (°F) | [Btu/h]            | [kcal/h]                    | [W]                                    | [W]                     | [A]                       | [kg/h] | [Btu/Wh] | [kcal/Wh] |
| -35                              | (-31)                      | 128  | 32                 | 38                          | 40                                     | 0.29                    | 0.73                      | 3.17   | 0.80     | 0.93      |
| -30                              | (-22)                      | 204  | 51                 | 60                          | 50                                     | 0.39                    | 1.16                      | 4.05   | 1.02     | 1.19      |
| -25                              | (-13)                      | 294  | 74                 | 86                          | 61                                     | 0.49                    | 1.67                      | 4.82   | 1.22     | 1.41      |
| -20                              | (- 4)                      | 405  | 102                | 119                         | 73                                     | 0.57                    | 2.31                      | 5.55   | 1.40     | 1.63      |
| -15                              | (+ 5)                      | 541  | 136                | 159                         | 86                                     | 0.66                    | 3.09                      | 6.32   | 1.59     | 1.85      |
| -10                              | (+14)                      | 707  | 178                | 207                         | 98                                     | 0.74                    | 4.05                      | 7.21   | 1.82     | 2.11      |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:<br>@220V1600RPM |                            | ASHRAE32<br>Static |          |                             | (Condensing temperature 65°C (+149°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)                        | 93                         | 23                 | 27       | 40                          | 0.29                                   | 0.53                    | 2.34                      | 0.59     | 0.69      |       |
| -30 (-22)                        | 157                        | 40                 | 46       | 50                          | 0.37                                   | 0.89                    | 3.19                      | 0.81     | 0.94      |       |
| -25 (-13)                        | 238                        | 60                 | 70       | 62                          | 0.45                                   | 1.35                    | 3.90                      | 0.98     | 1.14      |       |
| -20 (- 4)                        | 341                        | 86                 | 100      | 76                          | 0.54                                   | 1.94                    | 4.53                      | 1.14     | 1.33      |       |
| -15 (+ 5)                        | 471                        | 119                | 138      | 91                          | 0.64                                   | 2.69                    | 5.17                      | 1.30     | 1.52      |       |
| -10 (+14)                        | 633                        | 159                | 185      | 106                         | 0.75                                   | 3.62                    | 5.91                      | 1.49     | 1.73      |       |

| 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)                        | 346                        | 87                 | 102      | 83                          | 0.58                                   | 1.96                    | 4.19                      | 1.06     | 1.23      |       |
| -30 (-22)                        | 505                        | 127                | 148      | 100                         | 0.75                                   | 2.86                    | 5.02                      | 1.27     | 1.47      |       |
| -25 (-13)                        | 691                        | 174                | 202      | 118                         | 0.88                                   | 3.92                    | 5.84                      | 1.47     | 1.71      |       |
| -20 (- 4)                        | 915                        | 231                | 268      | 137                         | 1.01                                   | 5.21                    | 6.69                      | 1.69     | 1.96      |       |
| -15 (+ 5)                        | 1190                       | 300                | 349      | 156                         | 1.12                                   | 6.80                    | 7.63                      | 1.92     | 2.24      |       |
| -10 (+14)                        | 1528                       | 385                | 448      | 175                         | 1.25                                   | 8.76                    | 8.70                      | 2.19     | 2.55      |       |

| 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)                        | 296                        | 74                 | 87       | 81                          | 0.56                                   | 1.67                    | 3.68                      | 0.93     | 1.08      |       |
| -30 (-22)                        | 454                        | 114                | 133      | 101                         | 0.75                                   | 2.57                    | 4.48                      | 1.13     | 1.31      |       |
| -25 (-13)                        | 637                        | 161                | 187      | 122                         | 0.92                                   | 3.62                    | 5.23                      | 1.32     | 1.53      |       |
| -20 (- 4)                        | 858                        | 216                | 251      | 144                         | 1.06                                   | 4.88                    | 5.97                      | 1.51     | 1.75      |       |
| -15 (+ 5)                        | 1126                       | 284                | 330      | 167                         | 1.21                                   | 6.43                    | 6.75                      | 1.70     | 1.98      |       |
| -10 (+14)                        | 1456                       | 367                | 427      | 190                         | 1.36                                   | 8.34                    | 7.62                      | 1.92     | 2.23      |       |

| TEST CONDITIONS:<br>@220V3000RPM |                            | ASHRAE32<br>Static |          |                             | (Condensing temperature 65°C (+149°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)                        | 215                        | 54                 | 63       | 72                          | 0.48                                   | 1.22                    | 2.97                      | 0.75     | 0.87      |       |
| -30 (-22)                        | 372                        | 94                 | 109      | 96                          | 0.71                                   | 2.11                    | 3.81                      | 0.96     | 1.12      |       |
| -25 (-13)                        | 551                        | 139                | 161      | 120                         | 0.90                                   | 3.13                    | 4.56                      | 1.15     | 1.34      |       |
| -20 (- 4)                        | 765                        | 193                | 224      | 146                         | 1.07                                   | 4.35                    | 5.25                      | 1.32     | 1.54      |       |
| -15 (+ 5)                        | 1025                       | 258                | 300      | 173                         | 1.24                                   | 5.85                    | 5.94                      | 1.50     | 1.74      |       |
| -10 (+14)                        | 1344                       | 339                | 394      | 201                         | 1.42                                   | 7.70                    | 6.68                      | 1.68     | 1.96      |       |

### E - PERFORMANCE - CURVES

| 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) | 494                        | 124      | 145 | 124                                    | 0.85                          | 2.79                    | 3.99                      | 1.01      | 1.17  |
| -30                              | (-22) | 722                        | 182      | 212 | 152                                    | 1.08                          | 4.09                    | 4.75                      | 1.20      | 1.39  |
| -25                              | (-13) | 970                        | 244      | 284 | 176                                    | 1.26                          | 5.51                    | 5.52                      | 1.39      | 1.62  |
| -20                              | (- 4) | 1258                       | 317      | 368 | 198                                    | 1.42                          | 7.16                    | 6.32                      | 1.59      | 1.85  |
| -15                              | (+ 5) | 1606                       | 405      | 471 | 222                                    | 1.58                          | 9.17                    | 7.19                      | 1.81      | 2.11  |
| -10                              | (+14) | 2036                       | 513      | 596 | 249                                    | 1.75                          | 11.66                   | 8.13                      | 2.05      | 2.38  |

| 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) | 421                        | 106      | 123 | 121                                    | 0.82                          | 2.38                    | 3.47                      | 0.88      | 1.02  |
| -30                              | (-22) | 649                        | 163      | 190 | 154                                    | 1.09                          | 3.68                    | 4.21                      | 1.06      | 1.23  |
| -25                              | (-13) | 890                        | 224      | 261 | 182                                    | 1.32                          | 5.05                    | 4.92                      | 1.24      | 1.44  |
| -20                              | (- 4) | 1165                       | 294      | 342 | 209                                    | 1.50                          | 6.63                    | 5.63                      | 1.42      | 1.65  |
| -15                              | (+ 5) | 1496                       | 377      | 438 | 236                                    | 1.68                          | 8.54                    | 6.36                      | 1.60      | 1.86  |
| -10                              | (+14) | 1901                       | 479      | 557 | 265                                    | 1.86                          | 10.89                   | 7.13                      | 1.80      | 2.09  |

| TEST CONDITIONS:<br>@220V4500RPM |       | ASHRAE32<br>Static         |          |     | (Condensing temperature 65°C (+149°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) | 304                        | 77       | 89  | 108                                    | 0.75                          | 1.72                    | 2.80                      | 0.70      | 0.82  |
| -30                              | (-22) | 544                        | 137      | 159 | 148                                    | 1.07                          | 3.08                    | 3.57                      | 0.90      | 1.05  |
| -25                              | (-13) | 791                        | 199      | 232 | 183                                    | 1.32                          | 4.49                    | 4.29                      | 1.08      | 1.26  |
| -20                              | (- 4) | 1067                       | 269      | 313 | 216                                    | 1.53                          | 6.07                    | 4.97                      | 1.25      | 1.46  |
| -15                              | (+ 5) | 1391                       | 351      | 408 | 248                                    | 1.73                          | 7.94                    | 5.64                      | 1.42      | 1.65  |
| -10                              | (+14) | 1785                       | 450      | 523 | 283                                    | 1.92                          | 10.23                   | 6.32                      | 1.59      | 1.85  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal EG/F/AMEM version 2 |      |                          |
| 2 Tray holder           | No                            |      |                          |
| 3 Connectors            |                               |      |                          |
| 3.1 SUCTION             | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.1.1 Material          | Copper plated steel           |      |                          |
| 3.1.2 Shape             | Straight                      |      |                          |
| 3.2 DISCHARGE           | 5 +0.18/-0.06                 | [mm] | (0.197" +0.007"/-0.002") |
| 3.2.1 Material          | Copper plated steel           |      |                          |
| 3.2.2 Shape             | Straight                      |      |                          |
| 3.3 PROCESS             | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.3.1 Material          | Copper plated steel           |      |                          |
| 3.3.2 Shape             | Straight                      |      |                          |
| 3.4 Oil cooler (Copper) | No                            | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                  |      |                          |