

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>FMF D413UE</b>      |
| Nominal Voltage/Frequency | <b>230 V 53-167 Hz</b> |
| Engineering Number        | <b>513805015</b>       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |   |                                   |           |
|------------------------------------|---|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor                                   |                                   |           |
| 2 Refrigerant                      | R-290   |                                   |           |
| 3 Nominal voltage and frequency    | 230 / 53-167  | [ V / Hz ]                        |           |
| 4 Application type                 | Low-Medium Back Pressure (Light Commercial - Curves until T.Evap -4 |                                   |           |
| 4.1 Evaporating temperature range  | -40°C to 0°C  | (-40°F to 32°F)                   |           |
| 5 Motor type                       | BPM   |                                   |           |
| 6 Starting torque                  | LST/HST - Low/Hight starting sorque                                 |                                   |           |
| 7 Expantion device                 | Capillary tube or Expansion valve                                   |                                   |           |
| 8 Compressor cooling               |   | Operating voltage range           |           |
|                                    |   | 50 Hz                             | 60 Hz     |
| 8.1 LBP (32°C Ambient temperature) | -   | -                                 | -         |
| 8.2 LBP (43°C Ambient temperature) | -   | -                                 | -         |
| 8.3 HBP (32°C Ambient temperature) | -   | -                                 | -         |
| 8.4 HBP (43°C Ambient temperature) | -   | -                                 | -         |
| 9 Maximum condensing temperature   |   |                                   |           |
| 9.1 Operating                      | 18.4  | [kgf/cm <sup>2</sup> ] (262 psig) | / °C - °F |
| 9.2 Peak                           | 20.6  | [kgf/cm <sup>2</sup> ] (293 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130   | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1             | [hp]                                       |
| 2 Displacement                | 10.85         | [cm <sup>3</sup> ] (0.662 cu.in)           |
| 2.1 Bore [mm]                 | 24.000        |  |
| 2.2 Stroke [mm]               | 24.000        |  |
| 3 Lubricant charge            | 430           | [ml] (14.54 fl.oz.)                        |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO10 |  |
| 4 Weight (with oil charge)    | 10.87         | [kg] (23.96 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 53-167Hz 3 ~ (Three phase) |                                    |
| 2 Starting device type                       | Inverter                         |                                    |
| 2.1 Starting device                          | CF10B01 N 0.1 X                  |                                    |
| 3 Start capacitor                            | -                                | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                | [µF(VAC minimum)]                  |
| 5 Motor protection                           | CF10B01 N 0.1 XX A Y             |                                    |
| 6 Start winding resistance                   | 4.30                             | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 4.30                             | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 6.50/6.50                        | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | 2.00                             | [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             | UL - VDE                         |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|   |          |     |                             |                               |  |  |           |       |
|---|----------|-----|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS:<br><b>@115V1600RPM</b> |          |     | <b>ASHRAELBP32<br/>Fan</b>  |                               | Evaporating temperature<br>(Condensing temperature | <b>-23.3°C (-9.94°F)<br/>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] |
| 1128                                    | 284      | 331 | 169                         | 2.85                          | 3.36   | 6.67   | 1.68      | 1.95  |

|   |          |     |                             |                               |  |  |           |       |
|---|----------|-----|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS:<br><b>@115V2400RPM</b> |          |     | <b>ASHRAELBP32<br/>Fan</b>  |                               | Evaporating temperature<br>(Condensing temperature | <b>-23.3°C (-9.94°F)<br/>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] |
| 1672                                    | 421      | 490 | 246                         | 3.99                          | 4.98   | 6.79   | 1.71      | 1.99  |

|   |          |     |                             |                               |  |  |           |       |
|---|----------|-----|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS:<br><b>@115V3000RPM</b> |          |     | <b>ASHRAELBP32<br/>Fan</b>  |                               | Evaporating temperature<br>(Condensing temperature | <b>-23.3°C (-9.94°F)<br/>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] |
| 2059                                    | 519      | 603 | 305                         | 4.87                          | 6.13   | 6.75   | 1.70      | 1.98  |

|   |          |     |                             |                               |  |  |           |       |
|---|----------|-----|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS:<br><b>@115V3600RPM</b> |          |     | <b>ASHRAELBP32<br/>Fan</b>  |                               | Evaporating temperature<br>(Condensing temperature | <b>-23.3°C (-9.94°F)<br/>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] |
| 2444                                    | 616      | 716 | 373                         | 5.83                          | 7.27   | 6.55   | 1.65      | 1.92  |

|   |          |     |                             |                               |  |  |           |       |
|---|----------|-----|-----------------------------|-------------------------------|--|--|-----------|-------|
| TEST CONDITIONS:<br><b>@115V5000RPM</b> |          |     | <b>ASHRAELBP32<br/>Fan</b>  |                               | Evaporating temperature<br>(Condensing temperature | <b>-23.3°C (-9.94°F)<br/>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] |
| 3270                                    | 824      | 958 | 528                         | 8.05                          | 9.73   | 6.20   | 1.56      | 1.82  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |       | ASHRAE32         |          |     | (Condensing temperature 35°C (+95°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|-----|---------------------------------------|---------------------|---------------|-----------------|-----------|-------|
| @115V1600RPM            |       | Fan              |          |     |                                       |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 570              | 144      | 167 | 96                                    | 0.93                | 1.68          | 5.97            | 1.50      | 1.75  |
| -35                     | (-31) | 727              | 183      | 213 | 108                                   | 1.03                | 2.15          | 6.70            | 1.69      | 1.96  |
| -30                     | (-22) | 908              | 229      | 266 | 121                                   | 1.13                | 2.69          | 7.50            | 1.89      | 2.20  |
| -25                     | (-13) | 1120             | 282      | 328 | 133                                   | 1.22                | 3.33          | 8.41            | 2.12      | 2.47  |
| -20                     | (- 4) | 1369             | 345      | 401 | 145                                   | 1.31                | 4.08          | 9.47            | 2.39      | 2.77  |
| -15                     | (+ 5) | 1659             | 418      | 486 | 155                                   | 1.39                | 4.97          | 10.69           | 2.69      | 3.13  |
| -10                     | (+14) | 1998             | 503      | 585 | 165                                   | 1.47                | 6.01          | 12.13           | 3.06      | 3.55  |
| -5                      | (+23) | 2390             | 602      | 700 | 173                                   | 1.54                | 7.23          | 13.80           | 3.48      | 4.04  |
| 0                       | (+32) | 2842             | 716      | 833 | 180                                   | 1.60                | 8.64          | 15.76           | 3.97      | 4.62  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |     | (Condensing temperature 45°C (+113°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|-----|--|---------------------|---------------|-----------------|-----------|-------|
| @115V1600RPM            |       | Fan              |          |     |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 536              | 135      | 157 | 99                                     | 0.95                | 1.58          | 5.44            | 1.37      | 1.59  |
| -35                     | (-31) | 694              | 175      | 204 | 116                                    | 1.10                | 2.06          | 6.01            | 1.51      | 1.76  |
| -30                     | (-22) | 876              | 221      | 257 | 132                                    | 1.25                | 2.60          | 6.62            | 1.67      | 1.94  |
| -25                     | (-13) | 1086             | 274      | 318 | 148                                    | 1.38                | 3.23          | 7.31            | 1.84      | 2.14  |
| -20                     | (- 4) | 1330             | 335      | 390 | 164                                    | 1.50                | 3.97          | 8.12            | 2.05      | 2.38  |
| -15                     | (+ 5) | 1614             | 407      | 473 | 178                                    | 1.61                | 4.83          | 9.07            | 2.29      | 2.66  |
| -10                     | (+14) | 1944             | 490      | 570 | 190                                    | 1.70                | 5.85          | 10.20           | 2.57      | 2.99  |
| -5                      | (+23) | 2326             | 586      | 682 | 201                                    | 1.78                | 7.03          | 11.56           | 2.91      | 3.39  |
| 0                       | (+32) | 2766             | 697      | 810 | 210                                    | 1.84                | 8.41          | 13.16           | 3.32      | 3.86  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |     | (Condensing temperature 55°C (+131°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|-----|--|---------------------|---------------|-----------------|-----------|-------|
| @115V1600RPM            |       | Fan              |          |     |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 490              | 123      | 144 | 100                                    | 0.97                | 1.45          | 4.88            | 1.23      | 1.43  |
| -35                     | (-31) | 652              | 164      | 191 | 122                                    | 1.19                | 1.93          | 5.37            | 1.35      | 1.57  |
| -30                     | (-22) | 835              | 210      | 245 | 143                                    | 1.38                | 2.48          | 5.88            | 1.48      | 1.72  |
| -25                     | (-13) | 1044             | 263      | 306 | 163                                    | 1.55                | 3.10          | 6.44            | 1.62      | 1.89  |
| -20                     | (- 4) | 1285             | 324      | 377 | 182                                    | 1.70                | 3.83          | 7.08            | 1.79      | 2.08  |
| -15                     | (+ 5) | 1565             | 394      | 459 | 199                                    | 1.83                | 4.69          | 7.85            | 1.98      | 2.30  |
| -10                     | (+14) | 1889             | 476      | 553 | 215                                    | 1.94                | 5.68          | 8.78            | 2.21      | 2.57  |
| -5                      | (+23) | 2262             | 570      | 663 | 228                                    | 2.02                | 6.84          | 9.89            | 2.49      | 2.90  |
| 0                       | (+32) | 2691             | 678      | 789 | 240                                    | 2.08                | 8.18          | 11.23           | 2.83      | 3.29  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 35°C (+95°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|---------------------------------------|---------------------|---------------|-----------------|-----------|-------|
| @115V3000RPM            |       | Fan              |          |      |                                       |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1007             | 254      | 295  | 176                                   | 1.51                | 2.97          | 5.70            | 1.44      | 1.67  |
| -35                     | (-31) | 1295             | 326      | 380  | 202                                   | 1.72                | 3.83          | 6.39            | 1.61      | 1.87  |
| -30                     | (-22) | 1632             | 411      | 478  | 227                                   | 1.89                | 4.84          | 7.18            | 1.81      | 2.10  |
| -25                     | (-13) | 2027             | 511      | 594  | 252                                   | 2.03                | 6.03          | 8.06            | 2.03      | 2.36  |
| -20                     | (- 4) | 2492             | 628      | 730  | 276                                   | 2.16                | 7.44          | 9.05            | 2.28      | 2.65  |
| -15                     | (+ 5) | 3037             | 765      | 890  | 299                                   | 2.30                | 9.10          | 10.16           | 2.56      | 2.98  |
| -10                     | (+14) | 3671             | 925      | 1076 | 323                                   | 2.46                | 11.05         | 11.39           | 2.87      | 3.34  |
| -5                      | (+23) | 4406             | 1110     | 1291 | 346                                   | 2.67                | 13.33         | 12.74           | 3.21      | 3.73  |
| 0                       | (+32) | 5252             | 1324     | 1539 | 369                                   | 2.94                | 15.97         | 14.24           | 3.59      | 4.17  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 45°C (+113°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @115V3000RPM            |       | Fan              |          |      |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 943              | 238      | 276  | 184                                    | 1.58                | 2.78          | 5.16            | 1.30      | 1.51  |
| -35                     | (-31) | 1235             | 311      | 362  | 214                                    | 1.91                | 3.65          | 5.75            | 1.45      | 1.69  |
| -30                     | (-22) | 1572             | 396      | 461  | 245                                    | 2.18                | 4.66          | 6.41            | 1.62      | 1.88  |
| -25                     | (-13) | 1967             | 496      | 576  | 275                                    | 2.40                | 5.85          | 7.14            | 1.80      | 2.09  |
| -20                     | (- 4) | 2427             | 612      | 711  | 305                                    | 2.60                | 7.24          | 7.95            | 2.00      | 2.33  |
| -15                     | (+ 5) | 2965             | 747      | 869  | 334                                    | 2.79                | 8.88          | 8.85            | 2.23      | 2.59  |
| -10                     | (+14) | 3591             | 905      | 1052 | 364                                    | 3.00                | 10.81         | 9.84            | 2.48      | 2.88  |
| -5                      | (+23) | 4315             | 1087     | 1264 | 394                                    | 3.23                | 13.05         | 10.94           | 2.76      | 3.20  |
| 0                       | (+32) | 5147             | 1297     | 1508 | 425                                    | 3.51                | 15.65         | 12.14           | 3.06      | 3.56  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 55°C (+131°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @115V3000RPM            |       | Fan              |          |      |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 896              | 226      | 262  | 189                                    | 1.73                | 2.64          | 4.74            | 1.19      | 1.39  |
| -35                     | (-31) | 1184             | 298      | 347  | 224                                    | 2.13                | 3.50          | 5.28            | 1.33      | 1.55  |
| -30                     | (-22) | 1516             | 382      | 444  | 259                                    | 2.45                | 4.50          | 5.86            | 1.48      | 1.72  |
| -25                     | (-13) | 1902             | 479      | 557  | 294                                    | 2.72                | 5.65          | 6.49            | 1.63      | 1.90  |
| -20                     | (- 4) | 2352             | 593      | 689  | 329                                    | 2.95                | 7.01          | 7.16            | 1.81      | 2.10  |
| -15                     | (+ 5) | 2876             | 725      | 843  | 365                                    | 3.15                | 8.61          | 7.90            | 1.99      | 2.31  |
| -10                     | (+14) | 3486             | 879      | 1022 | 401                                    | 3.35                | 10.49         | 8.70            | 2.19      | 2.55  |
| -5                      | (+23) | 4192             | 1056     | 1228 | 437                                    | 3.57                | 12.67         | 9.58            | 2.41      | 2.81  |
| 0                       | (+32) | 5003             | 1261     | 1466 | 475                                    | 3.82                | 15.21         | 10.53           | 2.65      | 3.09  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 35°C (+95°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|---------------------------------------|---------------------|---------------|-----------------|-----------|-------|
| @115V3600RPM            |       | Fan              |          |      |                                       |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1227             | 309      | 360  | 214                                   | 1.68                | 3.62          | 5.71            | 1.44      | 1.67  |
| -35                     | (-31) | 1550             | 391      | 454  | 249                                   | 2.12                | 4.59          | 6.25            | 1.57      | 1.83  |
| -30                     | (-22) | 1950             | 491      | 571  | 281                                   | 2.44                | 5.78          | 6.96            | 1.75      | 2.04  |
| -25                     | (-13) | 2432             | 613      | 713  | 311                                   | 2.68                | 7.23          | 7.82            | 1.97      | 2.29  |
| -20                     | (- 4) | 3001             | 756      | 879  | 341                                   | 2.86                | 8.95          | 8.80            | 2.22      | 2.58  |
| -15                     | (+ 5) | 3660             | 922      | 1073 | 370                                   | 3.03                | 10.97         | 9.88            | 2.49      | 2.90  |
| -10                     | (+14) | 4416             | 1113     | 1294 | 400                                   | 3.21                | 13.29         | 11.03           | 2.78      | 3.23  |
| -5                      | (+23) | 5272             | 1329     | 1545 | 431                                   | 3.43                | 15.95         | 12.22           | 3.08      | 3.58  |
| 0                       | (+32) | 6233             | 1571     | 1826 | 464                                   | 3.73                | 18.95         | 13.43           | 3.38      | 3.94  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 45°C (+113°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @115V3600RPM            |       | Fan              |          |      |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1153             | 291      | 338  | 221                                    | 1.75                | 3.40          | 5.22            | 1.32      | 1.53  |
| -35                     | (-31) | 1478             | 372      | 433  | 262                                    | 2.32                | 4.37          | 5.66            | 1.43      | 1.66  |
| -30                     | (-22) | 1876             | 473      | 550  | 300                                    | 2.75                | 5.56          | 6.24            | 1.57      | 1.83  |
| -25                     | (-13) | 2353             | 593      | 689  | 338                                    | 3.08                | 7.00          | 6.94            | 1.75      | 2.03  |
| -20                     | (- 4) | 2913             | 734      | 854  | 376                                    | 3.33                | 8.69          | 7.74            | 1.95      | 2.27  |
| -15                     | (+ 5) | 3561             | 897      | 1043 | 414                                    | 3.55                | 10.67         | 8.59            | 2.17      | 2.52  |
| -10                     | (+14) | 4301             | 1084     | 1260 | 453                                    | 3.76                | 12.94         | 9.49            | 2.39      | 2.78  |
| -5                      | (+23) | 5138             | 1295     | 1505 | 494                                    | 3.99                | 15.54         | 10.41           | 2.62      | 3.05  |
| 0                       | (+32) | 6077             | 1531     | 1781 | 538                                    | 4.28                | 18.47         | 11.31           | 2.85      | 3.31  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 55°C (+131°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @115V3600RPM            |       | Fan              |          |      |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1058             | 267      | 310  | 227                                    | 1.70                | 3.12          | 4.66            | 1.17      | 1.36  |
| -35                     | (-31) | 1387             | 349      | 406  | 272                                    | 2.36                | 4.10          | 5.10            | 1.28      | 1.49  |
| -30                     | (-22) | 1785             | 450      | 523  | 315                                    | 2.87                | 5.29          | 5.65            | 1.42      | 1.66  |
| -25                     | (-13) | 2259             | 569      | 662  | 359                                    | 3.25                | 6.72          | 6.29            | 1.58      | 1.84  |
| -20                     | (- 4) | 2812             | 709      | 824  | 402                                    | 3.54                | 8.39          | 6.99            | 1.76      | 2.05  |
| -15                     | (+ 5) | 3450             | 869      | 1011 | 447                                    | 3.76                | 10.33         | 7.73            | 1.95      | 2.26  |
| -10                     | (+14) | 4177             | 1053     | 1224 | 494                                    | 3.96                | 12.57         | 8.48            | 2.14      | 2.48  |
| -5                      | (+23) | 4997             | 1259     | 1464 | 543                                    | 4.17                | 15.11         | 9.21            | 2.32      | 2.70  |
| 0                       | (+32) | 5916             | 1491     | 1734 | 596                                    | 4.40                | 17.98         | 9.91            | 2.50      | 2.90  |

### E - PERFORMANCE - CURVES

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 35°C (+95°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|---------------------------------------|---------------------|---------------|-----------------|-----------|-------|
| @115V5000RPM            |       | Fan              |          |      |                                       |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1597             | 402      | 468  | 305                                   | 2.22                | 4.72          | 5.23            | 1.32      | 1.53  |
| -35                     | (-31) | 2048             | 516      | 600  | 353                                   | 2.71                | 6.06          | 5.82            | 1.47      | 1.70  |
| -30                     | (-22) | 2590             | 653      | 759  | 402                                   | 3.14                | 7.68          | 6.44            | 1.62      | 1.89  |
| -25                     | (-13) | 3224             | 812      | 945  | 453                                   | 3.53                | 9.59          | 7.11            | 1.79      | 2.08  |
| -20                     | (- 4) | 3949             | 995      | 1157 | 503                                   | 3.88                | 11.78         | 7.85            | 1.98      | 2.30  |
| -15                     | (+ 5) | 4766             | 1201     | 1397 | 550                                   | 4.20                | 14.28         | 8.66            | 2.18      | 2.54  |
| -10                     | (+14) | 5677             | 1431     | 1663 | 595                                   | 4.50                | 17.09         | 9.56            | 2.41      | 2.80  |
| -5                      | (+23) | 6681             | 1684     | 1958 | 634                                   | 4.79                | 20.21         | 10.55           | 2.66      | 3.09  |
| 0                       | (+32) | 7779             | 1960     | 2279 | 667                                   | 5.08                | 23.65         | 11.66           | 2.94      | 3.42  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 45°C (+113°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @115V5000RPM            |       | Fan              |          |      |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1525             | 384      | 447  | 315                                    | 2.22                | 4.50          | 4.83            | 1.22      | 1.42  |
| -35                     | (-31) | 1971             | 497      | 578  | 367                                    | 2.84                | 5.83          | 5.37            | 1.35      | 1.57  |
| -30                     | (-22) | 2501             | 630      | 733  | 422                                    | 3.38                | 7.42          | 5.93            | 1.50      | 1.74  |
| -25                     | (-13) | 3117             | 786      | 913  | 477                                    | 3.85                | 9.27          | 6.53            | 1.65      | 1.91  |
| -20                     | (- 4) | 3819             | 962      | 1119 | 531                                    | 4.25                | 11.39         | 7.18            | 1.81      | 2.10  |
| -15                     | (+ 5) | 4607             | 1161     | 1350 | 583                                    | 4.59                | 13.80         | 7.89            | 1.99      | 2.31  |
| -10                     | (+14) | 5482             | 1381     | 1606 | 632                                    | 4.88                | 16.50         | 8.67            | 2.19      | 2.54  |
| -5                      | (+23) | 6444             | 1624     | 1888 | 676                                    | 5.13                | 19.49         | 9.54            | 2.40      | 2.79  |
| 0                       | (+32) | 7495             | 1889     | 2196 | 714                                    | 5.35                | 22.78         | 10.50           | 2.64      | 3.08  |

| TEST CONDITIONS:        |       | ASHRAE32         |          |      | (Condensing temperature 55°C (+131°F)) |                     |               |                 |           |       |
|-------------------------|-------|------------------|----------|------|--|---------------------|---------------|-----------------|-----------|-------|
| @115V5000RPM            |       | Fan              |          |      |  |                     |               |                 |           |       |
| 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] |
| -40                     | (-40) | 1456             | 367      | 427  | 325                                    | 2.33                | 4.30          | 4.48            | 1.13      | 1.31  |
| -35                     | (-31) | 1905             | 480      | 558  | 383                                    | 3.10                | 5.64          | 4.98            | 1.25      | 1.46  |
| -30                     | (-22) | 2433             | 613      | 713  | 444                                    | 3.75                | 7.22          | 5.49            | 1.38      | 1.61  |
| -25                     | (-13) | 3041             | 766      | 891  | 505                                    | 4.29                | 9.04          | 6.02            | 1.52      | 1.76  |
| -20                     | (- 4) | 3728             | 939      | 1092 | 566                                    | 4.74                | 11.12         | 6.58            | 1.66      | 1.93  |
| -15                     | (+ 5) | 4495             | 1133     | 1317 | 625                                    | 5.10                | 13.46         | 7.19            | 1.81      | 2.11  |
| -10                     | (+14) | 5344             | 1347     | 1566 | 680                                    | 5.38                | 16.08         | 7.85            | 1.98      | 2.30  |
| -5                      | (+23) | 6273             | 1581     | 1838 | 731                                    | 5.59                | 18.97         | 8.59            | 2.16      | 2.52  |
| 0                       | (+32) | 7285             | 1836     | 2135 | 775                                    | 5.74                | 22.14         | 9.40            | 2.37      | 2.76  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal EG/F/AMEM version 2 |      |                          |
| 2 Tray holder           | No                            |      |                          |
| 3 Connectors            |                               |      |                          |
| 3.1 SUCTION             | 8.2 +0.12/-0.08               | [mm] | (0.323" +0.005"/-0.003") |
| 3.1.1 Material          | Copper                        |      |                          |
| 3.1.2 Shape             | Straight                      |      |                          |
| 3.2 DISCHARGE           | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-0.003") |
| 3.2.1 Material          | Copper                        |      |                          |
| 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                        |      |                          |
| 3.3.2 Shape             | Straight                      |      |                          |
| 3.4 Oil cooler (Copper) | No                            | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                  |      |                          |