

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM T2125GK      |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513306245       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-404A                            |                                   |           |
| 3 Nominal voltage and frequency    | 220-240 / 50                      | [ V / Hz ]                        |           |
| 4 Application type                 | Low Back Pressure R404A           |                                   |           |
| 4.1 Evaporating temperature range  | -40°C to -10°C                    | (-40°F to 14°F)                   |           |
| 5 Motor type                       | CSIR                              |                                   |           |
| 6 Starting torque                  | HST - Hight starting torque       |                                   |           |
| 7 Expansion device                 | Capillary tube or Expansion valve |                                   |           |
| 8 Compressor cooling               |                                   | Operating voltage range           |           |
|                                    |                                   | 50 Hz                             | 60 Hz     |
| 8.1 LBP (32°C Ambient temperature) | Fan                               | 198 to 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Fan                               | 198 to 255 V                      | -         |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -         |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -         |
| 9 Maximum condensing temperature   |                                   |                                   |           |
| 9.1 Operating                      | 25.2                              | [kgf/cm <sup>2</sup> ] (358 psig) | / °C - °F |
| 9.2 Peak                           | 28.3                              | [kgf/cm <sup>2</sup> ] (402 psig) | / °C - °F |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |           |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1/3+          | [hp]                                       |
| 2 Displacement                | 5.96          | [cm <sup>3</sup> ] (0.364 cu.in)           |
| 2.1 Bore [mm]                 | 22.500        |  |
| 2.2 Stroke [mm]               | 15.000        |  |
| 3 Lubricant charge            | 180           | [ml] (6.09 fl.oz.)                         |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |  |
| 4 Weight (with oil charge)    | 7.75          | [kg] (17.09 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 | 220-240 V 50 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                      |                                    |
| 2.1 Starting device                          | MTRP-36/QL2-4.35 **                |                                    |
| 3 Start capacitor                            | 64-77(330)                         | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | DRB180L61AXF                       |                                    |
| 6 Start winding resistance                   | 19.15                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 11.30                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | -                                  | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CCC - ISI - VDE                    |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |                               |       |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|-------------------------------|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | EN12900LBP_HH<br>Fan        |                               | Evaporating temperature<br>(Condensing temperature |                           | -35°C (-31°F)<br>40°C (104°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] |
| 695                           | 175      | 204 | 178                         | 1.36                          | 5.12   | 3.91                      | 0.99                          | 1.15  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                  |     |                                       |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|-----|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<br>Fan |     | (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] |
| -40                           | (-40) | 584                        | 147              | 171 | 155                                   | 1.29                          | 4.04                    | 3.76                      | 0.95      | 1.10  |
| -35                           | (-31) | 760                        | 191              | 223 | 174                                   | 1.35                          | 5.29                    | 4.36                      | 1.10      | 1.28  |
| -30                           | (-22) | 972                        | 245              | 285 | 195                                   | 1.41                          | 6.79                    | 4.99                      | 1.26      | 1.46  |
| -25                           | (-13) | 1224                       | 308              | 359 | 217                                   | 1.48                          | 8.58                    | 5.65                      | 1.42      | 1.66  |
| -20                           | (- 4) | 1522                       | 384              | 446 | 239                                   | 1.55                          | 10.72                   | 6.36                      | 1.60      | 1.86  |
| -15                           | (+ 5) | 1870                       | 471              | 548 | 262                                   | 1.62                          | 13.26                   | 7.13                      | 1.80      | 2.09  |
| -10                           | (+14) | 2274                       | 573              | 666 | 286                                   | 1.70                          | 16.25                   | 7.95                      | 2.00      | 2.33  |

|                               |       |                            |                  |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<br>Fan |     | (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] |
| -40                           | (-40) | 477                        | 120              | 140 | 158                                    | 1.29                          | 3.72                    | 3.03                      | 0.76      | 0.89  |
| -35                           | (-31) | 631                        | 159              | 185 | 180                                    | 1.36                          | 4.93                    | 3.50                      | 0.88      | 1.03  |
| -30                           | (-22) | 813                        | 205              | 238 | 204                                    | 1.43                          | 6.38                    | 3.98                      | 1.00      | 1.17  |
| -25                           | (-13) | 1028                       | 259              | 301 | 230                                    | 1.51                          | 8.11                    | 4.47                      | 1.13      | 1.31  |
| -20                           | (- 4) | 1281                       | 323              | 375 | 256                                    | 1.60                          | 10.16                   | 4.99                      | 1.26      | 1.46  |
| -15                           | (+ 5) | 1577                       | 397              | 462 | 285                                    | 1.70                          | 12.60                   | 5.54                      | 1.40      | 1.62  |
| -10                           | (+14) | 1920                       | 484              | 563 | 314                                    | 1.80                          | 15.46                   | 6.12                      | 1.54      | 1.79  |

|                               |       |                            |                  |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | EN12900HH<br>Fan |     | (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] |
| -40                           | (-40) | 362                        | 91               | 106 | 156                                    | 1.29                          | 3.26                    | 2.32                      | 0.59      | 0.68  |
| -35                           | (-31) | 494                        | 125              | 145 | 182                                    | 1.37                          | 4.46                    | 2.71                      | 0.68      | 0.79  |
| -30                           | (-22) | 648                        | 163              | 190 | 210                                    | 1.45                          | 5.87                    | 3.08                      | 0.78      | 0.90  |
| -25                           | (-13) | 826                        | 208              | 242 | 240                                    | 1.55                          | 7.54                    | 3.45                      | 0.87      | 1.01  |
| -20                           | (- 4) | 1035                       | 261              | 303 | 272                                    | 1.66                          | 9.53                    | 3.81                      | 0.96      | 1.12  |
| -15                           | (+ 5) | 1279                       | 322              | 375 | 306                                    | 1.78                          | 11.87                   | 4.18                      | 1.05      | 1.22  |
| -10                           | (+14) | 1563                       | 394              | 458 | 342                                    | 1.91                          | 14.62                   | 4.57                      | 1.15      | 1.34  |

### F - EXTERNAL CHARACTERISTICS

|                         |                                |      |                          |
|-------------------------|--------------------------------|------|--------------------------|
| 1 Base plate            | European Standard EUEM         |      |                          |
| 2 Tray holder           | No                             |      |                          |
| 3 Connectors            |                                |      |                          |
| 3.1 SUCTION             | 6.1 +0.10/+0.00                | [mm] | (0.240" +0.004"/+0.000") |
| 3.1.1 Material          | Copper                         |      |                          |
| 3.1.2 Shape             | Slanted 42° up + 45° to Back   |      |                          |
| 3.2 DISCHARGE           | 4.94 +0.08/-0.08               | [mm] | (0.194" +0.003"/-0.003") |
| 3.2.1 Material          | Copper                         |      |                          |
| 3.2.2 Shape             | Slanted parallel BP+24°to Back |      |                          |
| 3.3 PROCESS             | 6 +0.08/-0.08                  | [mm] | (0.236" +0.003"/-0.003") |
| 3.3.1 Material          | Copper(OD)                     |      |                          |
| 3.3.2 Shape             | Slanted 43° up + 45° to Back   |      |                          |
| 3.4 Oil cooler (Copper) | No                             | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                   |      |                          |