

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>EM T6144GK</b>      |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>912EA62</b>         |

### 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                 | Medium Back Pressure (Commercial Compressors) |                                   |           |
| 4.1 Evaporating temperature range  | -20°C to 10°C                                 | (-4°F to 50°F)                    |           |
| 5 Motor type                       | CSIR  |                                   |           |
| 6 Starting torque                  | HST - High 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) | -   | -                                 | -         |
| 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                      | 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      | 1/4-          | [hp]                             |
| 2 Displacement                | 3.97          | [cm <sup>3</sup> ] (0.242 cu.in) |
| 2.1 Bore [mm]                 | 19.000        |                                  |
| 2.2 Stroke [mm]               | 14.000        |                                  |
| 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)    | 7.8           | [kg] (17.20 lb.)                 |
| 5 Nitrogen charge             | -             | [kgf/cm <sup>2</sup> ]           |

### 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-0015                          |                                    |
| 3 Start capacitor                            | 43-53(330)                         | [μF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [μF(VAC minimum)]                  |
| 5 Motor protection                           | T0043/G6                           |                                    |
| 6 Start winding resistance                   |                                    | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     |                                    | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50 Hz)        | 7.70                               | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50 Hz)     | -                                  | [A]                                |
| 10 FLA - Full Load Amperage HBP (50 Hz)      | -                                  | [A]                                |
| 11 Approval boards certification             | VDE                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |                                      |       |  |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|--|
| TEST CONDITIONS:<br>@220V50Hz |          |     | ASHRAEHBP46<br>Fan          |                               | Evaporating temperature<br>(Condensing temperature |                           | 7.2°C (44.96°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] |  |
| 2318                          | 584      | 679 | 284                         | 1.56                          | 19.08  | 8.16                      | 2.06                                 | 2.39  |  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                 |      |                                       |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|------|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE46<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] |
| -20                           | (- 4) | 1115                       | 281             | 327  | 156                                   | 1.05                          | 7.07                    | 7.14                      | 1.80      | 2.09  |
| -15                           | (+ 5) | 1380                       | 348             | 404  | 168                                   | 1.09                          | 8.82                    | 8.22                      | 2.07      | 2.41  |
| -10                           | (+14) | 1690                       | 426             | 495  | 179                                   | 1.13                          | 10.86                   | 9.41                      | 2.37      | 2.76  |
| -5                            | (+23) | 2047                       | 516             | 600  | 191                                   | 1.17                          | 13.25                   | 10.72                     | 2.70      | 3.14  |
| 0                             | (+32) | 2454                       | 618             | 719  | 202                                   | 1.21                          | 16.01                   | 12.15                     | 3.06      | 3.56  |
| +5                            | (+41) | 2913                       | 734             | 854  | 213                                   | 1.25                          | 19.21                   | 13.70                     | 3.45      | 4.02  |
| +10                           | (+50) | 3427                       | 864             | 1004 | 223                                   | 1.29                          | 22.87                   | 15.39                     | 3.88      | 4.51  |

|                               |       |                            |                 |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE46<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] |
| -20                           | (- 4) | 949                        | 239             | 278 | 168                                    | 1.08                          | 6.65                    | 5.66                      | 1.43      | 1.66  |
| -15                           | (+ 5) | 1181                       | 298             | 346 | 184                                    | 1.14                          | 8.33                    | 6.43                      | 1.62      | 1.88  |
| -10                           | (+14) | 1454                       | 366             | 426 | 199                                    | 1.20                          | 10.32                   | 7.29                      | 1.84      | 2.14  |
| -5                            | (+23) | 1770                       | 446             | 519 | 215                                    | 1.25                          | 12.66                   | 8.24                      | 2.08      | 2.42  |
| 0                             | (+32) | 2132                       | 537             | 625 | 229                                    | 1.31                          | 15.40                   | 9.30                      | 2.34      | 2.72  |
| +5                            | (+41) | 2541                       | 640             | 745 | 243                                    | 1.36                          | 18.57                   | 10.46                     | 2.64      | 3.06  |
| +10                           | (+50) | 3001                       | 756             | 879 | 256                                    | 1.42                          | 22.23                   | 11.73                     | 2.96      | 3.44  |

|                               |       |                            |                 |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE46<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] |
| -20                           | (- 4) | 780                        | 197             | 228 | 175                                    | 1.11                          | 6.13                    | 4.45                      | 1.12      | 1.30  |
| -15                           | (+ 5) | 975                        | 246             | 286 | 196                                    | 1.19                          | 7.72                    | 4.97                      | 1.25      | 1.46  |
| -10                           | (+14) | 1207                       | 304             | 354 | 217                                    | 1.26                          | 9.63                    | 5.56                      | 1.40      | 1.63  |
| -5                            | (+23) | 1478                       | 372             | 433 | 237                                    | 1.34                          | 11.90                   | 6.23                      | 1.57      | 1.83  |
| 0                             | (+32) | 1790                       | 451             | 524 | 257                                    | 1.42                          | 14.57                   | 6.98                      | 1.76      | 2.05  |
| +5                            | (+41) | 2145                       | 541             | 629 | 275                                    | 1.50                          | 17.69                   | 7.81                      | 1.97      | 2.29  |
| +10                           | (+50) | 2547                       | 642             | 746 | 291                                    | 1.58                          | 21.31                   | 8.73                      | 2.20      | 2.56  |

### F - EXTERNAL CHARACTERISTICS

|                         |                   |      |                          |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate            | European Standard |      |                          |
| 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°       |      |                          |
| 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             | Straight          |      |                          |
| 3.3 PROCESS             | 6.1 +0.10/+0.00   | [mm] | (0.240" +0.004"/+0.000") |
| 3.3.1 Material          | Copper            |      |                          |
| 3.3.2 Shape             | Slanted 42°       |      |                          |
| 3.4 Oil cooler (Copper) | No                | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs      |      |                          |