

### COMPRESSOR DEFINITION

|                           |                        |
|---------------------------|------------------------|
| Designation               | <b>EM T2117GK</b>      |
| Nominal Voltage/Frequency | <b>220-240 V 50 Hz</b> |
| Engineering Number        | <b>912BA67</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                 | 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 - 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                | 4.50          | [cm <sup>3</sup> ] (0.275 cu.in) |
| 2.1 Bore [mm]                 | 21.000        |                                  |
| 2.2 Stroke [mm]               | 13.000        |                                  |
| 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                           | T0040/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             | IMQ                                |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |  |       |  |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--|-------|--|
| TEST CONDITIONS:<br>@220V50Hz |          |     | 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] |  |
| 834                           | 210      | 244 | 181                         | 1.15                          | 5.65   | 4.61                      | 1.16                                   | 1.35  |  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                    |     |                                       |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|---------------------------------------|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | ASHRAE32<br>Static |     | (Condensing temperature 35°C (+95°F)) |                               |                         |                           |           |       |
| Evaporating temperature       |       | Cooling capacity<br>+/- 5% |                    |     | Power consumption<br>+/- 5%           | Current consumption<br>+/- 5% | Gas flow rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C                            | (°F)  | [Btu/h]                    | [kcal/h]           | [W] | [W]                                   | [A]                           | [kg/h]                  | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -40                           | (-40) | 416                        | 105                | 122 | 113                                   | 0.99                          | 2.80                    | 3.67                      | 0.93      | 1.08  |
| -35                           | (-31) | 546                        | 138                | 160 | 127                                   | 1.02                          | 3.68                    | 4.30                      | 1.08      | 1.26  |
| -30                           | (-22) | 702                        | 177                | 206 | 142                                   | 1.06                          | 4.75                    | 4.97                      | 1.25      | 1.46  |
| -25                           | (-13) | 892                        | 225                | 261 | 157                                   | 1.11                          | 6.06                    | 5.70                      | 1.44      | 1.67  |
| -20                           | (- 4) | 1123                       | 283                | 329 | 172                                   | 1.16                          | 7.67                    | 6.52                      | 1.64      | 1.91  |
| -15                           | (+ 5) | 1401                       | 353                | 410 | 188                                   | 1.21                          | 9.63                    | 7.44                      | 1.88      | 2.18  |
| -10                           | (+14) | 1733                       | 437                | 508 | 204                                   | 1.26                          | 11.99                   | 8.51                      | 2.14      | 2.49  |

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | 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] |
| -40                           | (-40) | 361                        | 91                 | 106 | 114                                    | 0.99                          | 2.42                    | 3.17                      | 0.80      | 0.93  |
| -35                           | (-31) | 497                        | 125                | 146 | 131                                    | 1.03                          | 3.34                    | 3.78                      | 0.95      | 1.11  |
| -30                           | (-22) | 653                        | 165                | 191 | 149                                    | 1.08                          | 4.41                    | 4.39                      | 1.11      | 1.29  |
| -25                           | (-13) | 837                        | 211                | 245 | 167                                    | 1.14                          | 5.67                    | 5.02                      | 1.26      | 1.47  |
| -20                           | (- 4) | 1055                       | 266                | 309 | 186                                    | 1.20                          | 7.19                    | 5.68                      | 1.43      | 1.67  |
| -15                           | (+ 5) | 1314                       | 331                | 385 | 205                                    | 1.27                          | 9.01                    | 6.42                      | 1.62      | 1.88  |
| -10                           | (+14) | 1622                       | 409                | 475 | 224                                    | 1.33                          | 11.20                   | 7.25                      | 1.83      | 2.12  |

|                               |       |                            |                    |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|--------------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@220V50Hz |       |                            | 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] |
| -40                           | (-40) | 277                        | 70                 | 81  | 109                                    | 0.99                          | 1.85                    | 2.57                      | 0.65      | 0.75  |
| -35                           | (-31) | 423                        | 107                | 124 | 131                                    | 1.03                          | 2.84                    | 3.21                      | 0.81      | 0.94  |
| -30                           | (-22) | 584                        | 147                | 171 | 153                                    | 1.09                          | 3.93                    | 3.80                      | 0.96      | 1.11  |
| -25                           | (-13) | 766                        | 193                | 224 | 176                                    | 1.16                          | 5.18                    | 4.37                      | 1.10      | 1.28  |
| -20                           | (- 4) | 977                        | 246                | 286 | 199                                    | 1.24                          | 6.64                    | 4.92                      | 1.24      | 1.44  |
| -15                           | (+ 5) | 1223                       | 308                | 358 | 222                                    | 1.32                          | 8.37                    | 5.51                      | 1.39      | 1.61  |
| -10                           | (+14) | 1512                       | 381                | 443 | 246                                    | 1.40                          | 10.42                   | 6.14                      | 1.55      | 1.80  |

### F - EXTERNAL CHARACTERISTICS

|                         |                   |      |                          |
|-------------------------|-------------------|------|--------------------------|
| 1 Base plate            | European Standard |      |                          |
| 2 Tray holder           | Yes               |      |                          |
| 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           | 4.86 +0.07/+0.00  | [mm] | (0.191" +0.003"/+0.000") |
| 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      |      |                          |