

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM I60HER       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513307201       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |             |
|------------------------------------|-----------------------------------|-----------------------------------|-------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |             |
| 2 Refrigerant                      | R-134a                            |                                   |             |
| 3 Nominal voltage and frequency    | 115-127 / 60                      | [ V / Hz ]                        |             |
| 4 Application type                 | Low Back Pressure                 |                                   |             |
| 4.1 Evaporating temperature range  | -35°C to -10°C                    | (-31°F to 14°F)                   |             |
| 5 Motor type                       | RSIR/CSIR                         |                                   |             |
| 6 Starting torque                  | LST - Low Starting Torque         |                                   |             |
| 7 Expansion device                 | Capillary tube                    |                                   |             |
| 8 Compressor cooling               |                                   | Operating voltage range           |             |
|                                    |                                   | 50 Hz                             | 60 Hz       |
| 8.1 LBP (32°C Ambient temperature) | Static                            | -                                 | 98 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static                            | -                                 | 98 to 140 V |
| 8.3 HBP (32°C Ambient temperature) | -                                 | -                                 | -           |
| 8.4 HBP (43°C Ambient temperature) | -                                 | -                                 | -           |
| 9 Maximum condensing temperature   |                                   |                                   |             |
| 9.1 Operating                      | 14.2                              | [kgf/cm <sup>2</sup> ] (202 psig) | / °C - °F   |
| 9.2 Peak                           | 15.9                              | [kgf/cm <sup>2</sup> ] (226 psig) | / °C - °F   |
| 10 Maximum winding temperature     | 130                               | [ °C ]                            |             |

### B - MECHANICAL DATA

|                               |               |  |
|-------------------------------|---------------|--|
| 1 Commercial designation      | 1/6           | [hp]                                       |
| 2 Displacement                | 4.99          | [cm <sup>3</sup> ] (0.305 cu.in)           |
| 2.1 Bore [mm]                 | 21.000        |  |
| 2.2 Stroke [mm]               | 14.400        |  |
| 3 Lubricant charge            | 170           | [ml] (5.75 fl.oz.)                         |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |  |
| 4 Weight (with oil charge)    | 7.69          | [kg] (16.95 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 | 115-127 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                      |                                    |
| 2.1 Starting device                          | 213514083/213515007                |                                    |
| 3 Start capacitor                            | 161-193(120)                       | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM762MDBYY-53                     |                                    |
| 6 Start winding resistance                   | 9.40                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 3.40                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 20.90                              | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | 2.45                               | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (60 Hz)      | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - IRAM - TUV - UKCA - UL        |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |  |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|--|---------------------------|--|-------|
| TEST CONDITIONS:<br>@115V60Hz |          |     | 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<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5% | Gas flow<br>rate<br>+/- 5%                         | EFFICIENCY RATE<br>+/- 7% |  |       |
| [Btu/h]                       | [kcal/h] | [W] | [W]                            | [A]                              | [kg/h]   | [Btu/Wh]                  | [kcal/Wh]                              | [W/W] |
| 570                           | 144      | 167 | 136                            | 1.93                             | 3.24   | 4.19                      | 1.06                                   | 1.23  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | ASHRAE32<br>Static |                                | (Condensing temperature 45°C (+113°F)) |                            |                           |           |       |
| Evaporating<br>temperature    | Cooling capacity<br>+/- 5% |          |                    | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5%       | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C (°F)                       | [Btu/h]                    | [kcal/h] | [W]                | [W]                            | [A]                                    | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35 (-31)                     | 303                        | 76       | 89                 | 97                             | 1.67                                   | 1.71                       | 3.12                      | 0.79      | 0.92  |
| -30 (-22)                     | 423                        | 106      | 124                | 111                            | 1.75                                   | 2.39                       | 3.83                      | 0.97      | 1.12  |
| -25 (-13)                     | 576                        | 145      | 169                | 126                            | 1.83                                   | 3.27                       | 4.59                      | 1.16      | 1.35  |
| -20 (- 4)                     | 762                        | 192      | 223                | 142                            | 1.92                                   | 4.34                       | 5.39                      | 1.36      | 1.58  |
| -15 (+ 5)                     | 979                        | 247      | 287                | 158                            | 2.01                                   | 5.59                       | 6.21                      | 1.57      | 1.82  |
| -10 (+14)                     | 1227                       | 309      | 359                | 174                            | 2.12                                   | 7.03                       | 7.04                      | 1.77      | 2.06  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | ASHRAE32<br>Static |                                | (Condensing temperature 55°C (+131°F)) |                            |                           |           |       |
| Evaporating<br>temperature    | Cooling capacity<br>+/- 5% |          |                    | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5%       | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C (°F)                       | [Btu/h]                    | [kcal/h] | [W]                | [W]                            | [A]                                    | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35 (-31)                     | 238                        | 60       | 70                 | 94                             | 1.66                                   | 1.35                       | 2.52                      | 0.64      | 0.74  |
| -30 (-22)                     | 356                        | 90       | 104                | 110                            | 1.74                                   | 2.02                       | 3.22                      | 0.81      | 0.94  |
| -25 (-13)                     | 507                        | 128      | 149                | 128                            | 1.84                                   | 2.88                       | 3.94                      | 0.99      | 1.16  |
| -20 (- 4)                     | 689                        | 174      | 202                | 147                            | 1.94                                   | 3.92                       | 4.69                      | 1.18      | 1.37  |
| -15 (+ 5)                     | 902                        | 227      | 264                | 166                            | 2.06                                   | 5.15                       | 5.43                      | 1.37      | 1.59  |
| -10 (+14)                     | 1144                       | 288      | 335                | 186                            | 2.19                                   | 6.55                       | 6.17                      | 1.55      | 1.81  |

|                               |                            |          |                    |                                |  |                            |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|--------------------------------|--|----------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | ASHRAE32<br>Static |                                | (Condensing temperature 65°C (+149°F)) |                            |                           |           |       |
| Evaporating<br>temperature    | Cooling capacity<br>+/- 5% |          |                    | Power<br>consumption<br>+/- 5% | Current<br>consumption<br>+/- 5%       | Gas flow<br>rate<br>+/- 5% | EFFICIENCY RATE<br>+/- 7% |           |       |
| °C (°F)                       | [Btu/h]                    | [kcal/h] | [W]                | [W]                            | [A]                                    | [kg/h]                     | [Btu/Wh]                  | [kcal/Wh] | [W/W] |
| -35 (-31)                     | 199                        | 50       | 58                 | 89                             | 1.64                                   | 1.12                       | 2.26                      | 0.57      | 0.66  |
| -30 (-22)                     | 310                        | 78       | 91                 | 107                            | 1.73                                   | 1.76                       | 2.90                      | 0.73      | 0.85  |
| -25 (-13)                     | 453                        | 114      | 133                | 127                            | 1.83                                   | 2.57                       | 3.56                      | 0.90      | 1.04  |
| -20 (- 4)                     | 627                        | 158      | 184                | 149                            | 1.96                                   | 3.57                       | 4.21                      | 1.06      | 1.23  |
| -15 (+ 5)                     | 830                        | 209      | 243                | 171                            | 2.10                                   | 4.73                       | 4.85                      | 1.22      | 1.42  |
| -10 (+14)                     | 1061                       | 267      | 311                | 195                            | 2.26                                   | 6.08                       | 5.45                      | 1.37      | 1.60  |

### F - EXTERNAL CHARACTERISTICS

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