

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM Y60HSC       |
| Nominal Voltage/Frequency | 115-127 V 60 Hz |
| Engineering Number        | 513308068       |

### 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                       | RSCR                              |                                   |              |
| 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                            | 85 to 110 V                       | 103 to 140 V |
| 8.2 LBP (43°C Ambient temperature) | Static                            | 85 to 110 V                       | 103 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 / ISO10 |  |
| 4 Weight (with oil charge)    | 8.29          | [kg] (18.28 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                       | TSD                                |                                    |
| 2.1 Starting device                          | TSD- 115V                          |                                    |
| 3 Start capacitor                            | -                                  | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | 12(180)                            | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM319NFBYY-53                     |                                    |
| 6 Start winding resistance                   | 6.40                               | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 5.10                               | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | -                                  | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (60 Hz)     | -                                  | [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 - NOM - 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 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] |
| 605                           | 152      | 177 | 112                         | 1.02                          | 3.44   | 5.40                      | 1.36                                   | 1.58  |

### E - PERFORMANCE - CURVES

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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] |
| -35 (-31)                     | 338                        | 85       | 99                 | 79                          | 0.71                                   | 1.91                    | 4.26                      | 1.07      | 1.25  |
| -30 (-22)                     | 455                        | 115      | 133                | 92                          | 0.83                                   | 2.58                    | 4.95                      | 1.25      | 1.45  |
| -25 (-13)                     | 597                        | 151      | 175                | 106                         | 0.95                                   | 3.39                    | 5.66                      | 1.43      | 1.66  |
| -20 (- 4)                     | 772                        | 195      | 226                | 120                         | 1.07                                   | 4.39                    | 6.42                      | 1.62      | 1.88  |
| -15 (+ 5)                     | 984                        | 248      | 288                | 135                         | 1.20                                   | 5.62                    | 7.26                      | 1.83      | 2.13  |
| -10 (+14)                     | 1240                       | 312      | 363                | 151                         | 1.34                                   | 7.10                    | 8.19                      | 2.06      | 2.40  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | 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] |
| -35 (-31)                     | 284                        | 72       | 83                 | 77                          | 0.68                                   | 1.61                    | 3.71                      | 0.93      | 1.09  |
| -30 (-22)                     | 405                        | 102      | 119                | 92                          | 0.82                                   | 2.30                    | 4.39                      | 1.11      | 1.29  |
| -25 (-13)                     | 549                        | 138      | 161                | 109                         | 0.97                                   | 3.12                    | 5.05                      | 1.27      | 1.48  |
| -20 (- 4)                     | 722                        | 182      | 212                | 126                         | 1.13                                   | 4.11                    | 5.71                      | 1.44      | 1.67  |
| -15 (+ 5)                     | 930                        | 234      | 272                | 145                         | 1.29                                   | 5.31                    | 6.39                      | 1.61      | 1.87  |
| -10 (+14)                     | 1177                       | 297      | 345                | 165                         | 1.47                                   | 6.74                    | 7.12                      | 1.79      | 2.09  |

|                               |                            |          |                    |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|--------------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |                            |          | ASHRAE32<br>Static |                             | (Condensing temperature 65°C (+149°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] |
| -35 (-31)                     | 231                        | 58       | 68                 | 74                          | 0.65                                   | 1.31                    | 3.13                      | 0.79      | 0.92  |
| -30 (-22)                     | 355                        | 90       | 104                | 91                          | 0.81                                   | 2.01                    | 3.86                      | 0.97      | 1.13  |
| -25 (-13)                     | 499                        | 126      | 146                | 110                         | 0.98                                   | 2.83                    | 4.51                      | 1.14      | 1.32  |
| -20 (- 4)                     | 669                        | 169      | 196                | 131                         | 1.16                                   | 3.80                    | 5.11                      | 1.29      | 1.50  |
| -15 (+ 5)                     | 869                        | 219      | 255                | 154                         | 1.36                                   | 4.96                    | 5.68                      | 1.43      | 1.66  |
| -10 (+14)                     | 1107                       | 279      | 324                | 178                         | 1.57                                   | 6.34                    | 6.24                      | 1.57      | 1.83  |

### 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                                |      |                          |
| 3.1.2 Shape             | Slanted parallel to Base Plate        |      |                          |
| 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                               |      |                          |
| 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             | Slanted parallel to Base Plate        |      |                          |
| 3.4 Oil cooler (Copper) | No                                    | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                          |      |                          |