

### COMPRESSOR DEFINITION

|                           |             |
|---------------------------|-------------|
| Designation               | EM 55HHR    |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number        | 513307378   |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |             |
|------------------------------------|-----------------------------------|-----------------------------------|-------------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |             |
| 2 Refrigerant                      | R-134a                            |                                   |             |
| 3 Nominal voltage and frequency    | 115 / 60                          | [ V / Hz ]                        |             |
| 4 Application type                 | High Back Pressure                |                                   |             |
| 4.1 Evaporating temperature range  | -5°C to 15°C                      | (23°F to 59°F)                    |             |
| 5 Motor type                       | RSIR                              |                                   |             |
| 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) | -                                 | -                                 | -           |
| 8.2 LBP (43°C Ambient temperature) | -                                 | -                                 | -           |
| 8.3 HBP (32°C Ambient temperature) | Fan                               | -                                 | 98 to 135 V |
| 8.4 HBP (43°C Ambient temperature) | Fan                               | -                                 | 98 to 135 V |
| 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                | 4.60          | [cm <sup>3</sup> ] (0.281 cu.in)           |
| 2.1 Bore [mm]                 | 21.000        |  |
| 2.2 Stroke [mm]               | 13.300        |  |
| 3 Lubricant charge            | 160           | [ml] (5.41 fl.oz)                          |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |  |
| 4 Weight (with oil charge)    | 7.5           | [kg] (16.53 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 V 60 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                  |                                    |
| 2.1 Starting device                          | 213514067                      |                                    |
| 3 Start capacitor                            | -                              | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                              | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM762NFBZZ-53                 |                                    |
| 6 Start winding resistance                   | 8.85                           | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 3.85                           | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (60 Hz)        | 24.50                          | [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)      | 3.50                           | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CCC - CE - UKCA - UL           |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                             |                               |  |                           |                                      |       |  |
|-------------------------------|----------|-----|-----------------------------|-------------------------------|--|---------------------------|--------------------------------------|-------|--|
| TEST CONDITIONS:<br>@115V60Hz |          |     | ASHRAEHBP32<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] |  |
| 2150                          | 542      | 630 | 250                         | 2.85                          |  | 8.60                      | 2.17                                 | 2.52  |  |

### E - PERFORMANCE - CURVES

|                               |       |                            |                 |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       |                            | ASHRAE32<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] |
| -5                            | (+23) | 1353                       | 341             | 396 | 187                                    | 2.50                          | 7.78                    | 7.24                      | 1.82      | 2.12  |
| 0                             | (+32) | 1640                       | 413             | 481 | 202                                    | 2.60                          | 9.47                    | 8.16                      | 2.06      | 2.39  |
| +5                            | (+41) | 1994                       | 503             | 584 | 219                                    | 2.71                          | 11.60                   | 9.10                      | 2.29      | 2.67  |
| +10                           | (+50) | 2415                       | 609             | 708 | 240                                    | 2.82                          | 14.15                   | 10.06                     | 2.54      | 2.95  |
| +15                           | (+59) | 2903                       | 732             | 851 | 263                                    | 2.95                          | 17.14                   | 11.04                     | 2.78      | 3.24  |

|                               |       |                            |                 |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       |                            | ASHRAE32<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] |
| -5                            | (+23) | 1244                       | 314             | 365 | 202                                    | 2.56                          | 7.16                    | 6.15                      | 1.55      | 1.80  |
| 0                             | (+32) | 1551                       | 391             | 454 | 220                                    | 2.66                          | 8.96                    | 7.07                      | 1.78      | 2.07  |
| +5                            | (+41) | 1911                       | 482             | 560 | 238                                    | 2.78                          | 11.11                   | 8.02                      | 2.02      | 2.35  |
| +10                           | (+50) | 2326                       | 586             | 681 | 259                                    | 2.93                          | 13.63                   | 8.98                      | 2.26      | 2.63  |
| +15                           | (+59) | 2794                       | 704             | 819 | 280                                    | 3.11                          | 16.50                   | 9.97                      | 2.51      | 2.92  |

|                               |       |                            |                 |     |  |                               |                         |                           |           |       |
|-------------------------------|-------|----------------------------|-----------------|-----|--|-------------------------------|-------------------------|---------------------------|-----------|-------|
| TEST CONDITIONS:<br>@115V60Hz |       |                            | ASHRAE32<br>Fan |     | (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] |
| -5                            | (+23) | 1153                       | 290             | 338 | 213                                    | 2.60                          | 6.63                    | 5.42                      | 1.36      | 1.59  |
| 0                             | (+32) | 1453                       | 366             | 426 | 237                                    | 2.76                          | 8.39                    | 6.13                      | 1.54      | 1.80  |
| +5                            | (+41) | 1794                       | 452             | 526 | 261                                    | 2.96                          | 10.43                   | 6.86                      | 1.73      | 2.01  |
| +10                           | (+50) | 2178                       | 549             | 638 | 286                                    | 3.21                          | 12.76                   | 7.62                      | 1.92      | 2.23  |
| +15                           | (+59) | 2603                       | 656             | 763 | 310                                    | 3.50                          | 15.37                   | 8.40                      | 2.12      | 2.46  |

### F - EXTERNAL CHARACTERISTICS

|                         |                               |      |                          |
|-------------------------|-------------------------------|------|--------------------------|
| 1 Base plate            | Universal 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             | Straight                      |      |                          |
| 3.2 DISCHARGE           | 6.5 +0.12/-0.08               | [mm] | (0.256" +0.005"/-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             | Straight                      |      |                          |
| 3.4 Oil cooler (Copper) | No                            | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                  |      |                          |