

### COMPRESSOR DEFINITION

|                           |             |
|---------------------------|-------------|
| Designation               | EM 55HHR    |
| Nominal Voltage/Frequency | 115 V 60 Hz |
| Engineering Number        | 513307096   |

### 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                       | 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) | -                                 | -                                 | -           |
| 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            | 170           | [ml] (5.75 fl.oz.)                         |
| 3.1 Lubricants approved       |               |  |
| 3.2 Lubricants type/viscosity | ESTER / ISO22 |  |
| 4 Weight (with oil charge)    | 7.51          | [kg] (16.56 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                          | 213515250                      |                                    |
| 3 Start capacitor                            | 270-324(165)                   | [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)        | 16.44                          | [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             | 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             |                             | 0.00                                   | 7.78                    | 0.00                      | 0.00      | 0.00  |
| 0 (+32)                       | 1640                       | 413      | 481             |                             | 0.00                                   | 9.47                    | 0.00                      | 0.00      | 0.00  |
| +5 (+41)                      | 1994                       | 503      | 584             |                             | 0.00                                   | 11.60                   | 0.00                      | 0.00      | 0.00  |
| +10 (+50)                     | 2415                       | 609      | 708             |                             | 0.00                                   | 14.15                   | 0.00                      | 0.00      | 0.00  |
| +15 (+59)                     | 2903                       | 732      | 851             |                             | 0.00                                   | 17.14                   | 0.00                      | 0.00      | 0.00  |

|                               |                            |          |                 |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|-----------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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             |                             | 0.00                                   | 7.16                    | 0.00                      | 0.00      | 0.00  |
| 0 (+32)                       | 1551                       | 391      | 454             |                             | 0.00                                   | 8.96                    | 0.00                      | 0.00      | 0.00  |
| +5 (+41)                      | 1911                       | 482      | 560             |                             | 0.00                                   | 11.11                   | 0.00                      | 0.00      | 0.00  |
| +10 (+50)                     | 2326                       | 586      | 681             |                             | 0.00                                   | 13.63                   | 0.00                      | 0.00      | 0.00  |
| +15 (+59)                     | 2794                       | 704      | 819             |                             | 0.00                                   | 16.50                   | 0.00                      | 0.00      | 0.00  |

|                               |                            |          |                 |                             |  |                         |                           |           |       |
|-------------------------------|----------------------------|----------|-----------------|-----------------------------|--|-------------------------|---------------------------|-----------|-------|
| 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             |                             | 0.00                                   | 6.63                    | 0.00                      | 0.00      | 0.00  |
| 0 (+32)                       | 1453                       | 366      | 426             |                             | 0.00                                   | 8.39                    | 0.00                      | 0.00      | 0.00  |
| +5 (+41)                      | 1794                       | 452      | 526             |                             | 0.00                                   | 10.43                   | 0.00                      | 0.00      | 0.00  |
| +10 (+50)                     | 2178                       | 549      | 638             |                             | 0.00                                   | 12.76                   | 0.00                      | 0.00      | 0.00  |
| +15 (+59)                     | 2603                       | 656      | 763             |                             | 0.00                                   | 15.37                   | 0.00                      | 0.00      | 0.00  |

### 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 plated steel           |      |                          |
| 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 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                  |      |                          |