

### COMPRESSOR DEFINITION

|                           |                 |
|---------------------------|-----------------|
| Designation               | EM 45HHR        |
| Nominal Voltage/Frequency | 220-240 V 50 Hz |
| Engineering Number        | 513307120       |

### A - APPLICATION / LIMIT WORKING CONDITIONS

|                                    |                                   |                                   |           |
|------------------------------------|-----------------------------------|-----------------------------------|-----------|
| 1 Type                             | Hermetic reciprocating compressor |                                   |           |
| 2 Refrigerant                      | R-134a                            |                                   |           |
| 3 Nominal voltage and frequency    | 220-240 / 50                      | [ V / Hz ]                        |           |
| 4 Application type                 | Low-Medium-High Back Pressure     |                                   |           |
| 4.1 Evaporating temperature range  | -35°C to 15°C                     | (-31°F to 59°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/Fan                        | 198 to 255 V                      | -         |
| 8.2 LBP (43°C Ambient temperature) | Static/Fan                        | 198 to 255 V                      | -         |
| 8.3 HBP (32°C Ambient temperature) | Fan                               | 198 to 255 V                      | -         |
| 8.4 HBP (43°C Ambient temperature) | Fan                               | 198 to 255 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      | 1/8           | [hp]                                       |
| 2 Displacement                | 3.77          | [cm <sup>3</sup> ] (0.230 cu.in)           |
| 2.1 Bore [mm]                 | 19.000        |  |
| 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)    | 7.66          | [kg] (16.89 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 | 220-240 V 50 Hz 1 ~ (Single phase) |                                    |
| 2 Starting device type                       | Current Relay                      |                                    |
| 2.1 Starting device                          | 213514130/213515004                |                                    |
| 3 Start capacitor                            | 38-46(220)                         | [µF(VAC minimum)]                  |
| 4 Run capacitor                              | -                                  | [µF(VAC minimum)]                  |
| 5 Motor protection                           | 4TM718MFBYY-53                     |                                    |
| 6 Start winding resistance                   | 38.00                              | [Ω at 25°C (77°F)] +/- 8%          |
| 7 Run winding resistance                     | 20.50                              | [Ω at 25°C (77°F)] +/- 8%          |
| 8 LRA - Locked rotor amperage (50/60 Hz)     | 9.50/9.00                          | [A] - Measured according to UL 984 |
| 9 FLA - Full load amperage L/MBP (50/60 Hz)  | 1.05/0.90                          | [A] - Measured according to UL 984 |
| 10 FLA - Full Load Amperage HBP (50/60 Hz)   | -                                  | [A] - Measured according to UL 984 |
| 11 Approval boards certification             | CE - IRAM - ISI - TUV - UKCA - VDE |                                    |

### D - PERFORMANCE - CHECK POINT DATA

|                               |          |     |                                |                                  |   |                           |                                      |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|---|---------------------------|--------------------------------------|-------|
| TEST CONDITIONS:<br>@220V50Hz |          |     | 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<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] |
| 1500                          | 378      | 440 | 167                            | 1.05                             |   | 8.96                      | 2.26                                 | 2.63  |

|                               |          |     |                                |                                  |   |                           |  |       |
|-------------------------------|----------|-----|--------------------------------|----------------------------------|---|---------------------------|--|-------|
| 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<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] |
| 348                           | 88       | 102 | 99                             | 0.86                             | 1.98  | 3.50                      | 0.88                                   | 1.03  |

### E - PERFORMANCE - CURVES

### 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             | Straight                              |      |                          |
| 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             | Straight                              |      |                          |
| 3.4 Oil cooler (Copper) | No                                    | [mm] |                          |
| 3.5 Connector sealing   | Rubber Plugs                          |      |                          |