GENERAL INFORMATION

The compressor must be exposed to high-voltage starting tests under vacuum conditions. All Embraco compressors have already been subjected to a 1650V high-voltage test for one second. The compressors must not be tested unless they are connected to the refrigeration system.

The system to which the compressor will be assembled must be developed and adequately prepared for use with HFC 134a and ester oil, i.e. with low moisture indexes and without alkaline residues and chlorides.

In the “G3M”, “G3L”, “G3F” and “G3T” series, the use of the process connector as suction line will cause a drop in capacity, the extent of which depends on the compressor size.

Desiccants similar to the XH7 or XH9 (3Å) types are recommended. Due to the sensitivity of the HFC 134a ester oil systems we would like to make the following recommendations:

- only one system should be connected to each vacuum pump;
- draw vacuum on both sides of appliance, with vacuum level below 0.6 mbar;
- vacuum pumps must be installed on the same level as the compressor or lower;
- use short hoses wherever possible;
- vacuum level should be measured on the appliance and not on the pump;
- draw final vacuum through charging board;
- perform rough leak detection through charging board. In case of leak, the compressor should not be charged;
- limit content of non-condensable gases to 1%;
- use HFC 134a as flushing agent to clean systems;
- gas charging and evacuating equipment must be used exclusively with HFC 134a to avoid chlorinated residue contamination.

STARTING AND OPERATING VOLTAGE

Embraco compressors start at 90% of the nominal voltage, with equalized pressures of up to 8.0 kgf/cm². Depending on the application conditions and system characteristics, compressor may work under lower voltage as shown in the table below.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Operating Voltage Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>115V</td>
<td>103 to 127</td>
</tr>
<tr>
<td>220V</td>
<td>198 to 255</td>
</tr>
<tr>
<td>100V</td>
<td>85 to 110</td>
</tr>
<tr>
<td>187 to 242</td>
<td></td>
</tr>
</tbody>
</table>

Winding Temperature

The winding temperature cannot exceed 55°C during continuous operation. To avoid exceeding the allowable temperature, we recommend the “Temperature Resistance Class III” standard.

START CAPACITOR

The compressors EM HNR, EMI HER and EM HHR can operate without starting capacitor. However, in those cases where electrical supply problems or not equalized pressures occur at the compressor start, starting capacitor can be applied. In this case either terminal 3 and terminal 4 shall be shorted. In case of F and EG series, starting capacitor shall be connected between terminals 11 and 13.

OPERATING CONDITIONS

Condensing Pressure Limit
When operating under maximum ambient temperature conditions (43°C), the condensing pressure in continuous operation must not exceed 16.2 kgf/cm² (230 psig) and the peak condensing pressure must not exceed 20.6 kgf/cm² gauge (293 psig).

TEST CONDITIONS

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond. Temp.</td>
<td>+2°C</td>
<td>+2°C</td>
</tr>
<tr>
<td>Evap. Temp.</td>
<td>+3°C</td>
<td>+3°C</td>
</tr>
<tr>
<td>Suction Temp.</td>
<td>+3°C</td>
<td>+3°C</td>
</tr>
<tr>
<td>Discharge Temp.</td>
<td>+3°C</td>
<td>+3°C</td>
</tr>
</tbody>
</table>

IDENTIFICATION LABEL

A - Serial number for traceability.
B - Part number.
C - Model designation.
D - Maximum input current - LRA/Refrigerant - R 134a
E - Logos indicate the compressor Certification/Approvals.
F - Bar code 39 (ratio 3:1 and 6.5 mils).
G - Paper: White/Print: Black - Dimensions: 70x38 mm.
H - Manufacturing date.
I - Manufacturing plant.
J - Orange border will only appear on 220V labels.