NSF/ANSI Standard for Food Equipment –

Commercial warewashing equipment

5 Design and construction

5.7 Temperature indicating devices

5.7.1 Each machine tank, other than a prewash tank, shall be equipped with a clearly visible temperature indicating device that measures and displays the temperature of the water in the tank. A temperature indicating device shall also be provided to measure and display the temperature of the final sanitizing rinse water as it enters the rinse spray arm or manifold. Temperature indicating devices are not required on auxiliary rinse tanks unless a heating device is required in this compartment for the equipment to meet the performance requirements in 6 of this Standard. Temperature indicating devices are not required on post-sanitizing rinse water lines.

5.10 Spray assemblies

5.10.1 Spray assemblies, including auxiliary rinse assemblies, shall be readily removable and easily cleanable or shall be easily cleanable while in place. Final sanitizing rinse spray assemblies and/or components shall be removable for deliming, descaling, and similar maintenance.

5.10.2 Slot and jet openings on all spray assemblies shall be adequate in size and number to deliver the spray volume and pressure necessary to meet the performance requirements in this Standard. The openings shall be sized to prevent clogging.

5.10.3 Spray assemblies shall be located and directed so that the spray is distributed over all wares in the wash or rinse area. Spray assemblies shall be designed to ensure that they are reassembled in the proper alignment.

5.12 Final sanitizing rinse

5.12.1 The final sanitizing rinse supply water and the post-sanitizing rinse supply water shall be from a potable source and shall not contain recycled water from previous machine cycles.

5.12.2 A water line strainer with a removable screen shall be provided upstream of any electrically operated solenoid control valve in the final sanitizing rinse supply line or the post-sanitizing rinse supply line. The strainer shall also be located upstream of the pressure gauge.
5.12.3 When a post-sanitizing rinse system is provided on a chemical sanitizing dishwasher, a readily accessible means shall be provided to temporarily deactivate the post-sanitizing rinse.

**Reason:** Post-sanitizing rinse lines require the same protection from clogging and contamination as the sanitizing rinse. 5.12.3 requires a means to verify proper chemical sanitizer concentration.

5.13 Pressure gauges

Warewashing machines that utilize line pressure final sanitizing rinses shall be provided with a pressure gauge or similar device that measures and displays the line pressure of the final sanitizing rinse. The pressure gauge may be upstream or downstream of the control valve (i.e., solenoid valve) in the final sanitizing rinse line. The gauge shall have increments of 1 psi (7 kPa) or smaller and shall be accurate to ± 2 psi (± 14 kPa) in the 15-25 psi (103-172 kPa) range. The display of the pressure shall be clearly visible to the operator of the machine. If the gauge is located upstream of the control valve, it shall be mounted in an accessible valve with a ¼ in Iron Pipe Size connection.

A pressure gauge is not required for non-recirculating pumped final sanitizing rinses, recirculated final sanitizing rinses, post-sanitizing rinses, or auxiliary rinses.

6 Performance

6.2 Sanitization efficacy

**NOTE** – Warewashing machines that include an auxiliary rinse system shall meet the applicable performance tests of this section with the auxiliary rinse system operating as intended. Warewashing machines that include a post-sanitizing rinse shall meet the applicable performance tests of this section with the post-sanitizing rinse operating as intended.

6.2.2 Chemical sanitizing dishwashing and glasswashing machines

Table 6.1 – Data plate specifications for the chemical sanitizing rinse

<table>
<thead>
<tr>
<th>Sanitizing solution type</th>
<th>Final sanitizing rinse temperature</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>chlorine solution</td>
<td>min: 120 °F (49 °C)¹</td>
<td>min: 50 ppm (as NaOCl)</td>
</tr>
<tr>
<td>iodine solution</td>
<td>min: 75 °F (24 °C)</td>
<td>min: 12.5 ppm – max: 25 ppm</td>
</tr>
<tr>
<td>quaternary ammonium solution</td>
<td>min: 75 °F (24 °C)</td>
<td>min: 150 ppm – max: 400 ppm</td>
</tr>
</tbody>
</table>

¹ See 7.2.6 for an exception to this requirement.

7 Manufacturer’s specifications
7.2 Chemical sanitizing machines

7.2.6 For glasswashing machines that use a chlorine sanitizing solution, the minimum final sanitizing rinse temperature specified by the manufacturer shall be at least 75 °F (24 °C).