Sealed Balanced Pressure Thermostatic Steam Trap
TSS300

The welded stainless steel element is self-adjusting over the entire operating pressure range and will discharge condensate at approximately 20°F (11°C) below saturated steam temperature. Trap may be installed in horizontal or vertical pipelines.

### Limiting Operating Conditions

- **Max. Operating Pressure (PMO)**: 300 psig (21 barg)
- **Max. Operating Temperature**: Saturated Steam Temperature

### Pressure Shell Design Conditions

**ANSI 600**

- **PMA**: Max. allowable pressure = 800 psig/up to 725°F / 55 barg/up to 385°C
- **TMA**: Max. allowable temperature = 725°F/0-800 psig / 385°C/0-55 barg

### Typical Applications

Critical and non-critical steam tracing systems and steam main drips.

### Construction Materials

<table>
<thead>
<tr>
<th>No.</th>
<th>Part</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body*</td>
<td>Stainless Steel AISI 304</td>
</tr>
<tr>
<td>2</td>
<td>Element Plates</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>2A</td>
<td>Element Valve</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>3</td>
<td>Element Holder</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>4</td>
<td>Spring</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>5</td>
<td>Strainer Screen (optional)**</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td></td>
<td>Screen Tab</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

* The body weld joint complies with ASME section IX and BS4870 (1981).
** Optional strainer screen can be inserted into the inlet connection.

### Dimensions

(nominal) in inches and millimeters

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;, 1/2&quot;</td>
<td>2.5</td>
<td>1.5</td>
<td>0.7 lb</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>38</td>
<td>0.3 kg</td>
</tr>
</tbody>
</table>

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

In the interests of development and improvement of the product, we reserve the right to change the specification.
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Sample Specification
Steam trap shall be encapsulated Spirax Sarco TSS300 balanced pressure thermostatic type, which will operate installed in either horizontal or vertical piping. Construction of all stainless steel with tamper-proof body sealed against leakage. Operating element to be stainless steel welded thermostatic bellows for operation without adjustment at any pressure to 300 psig. Trap to operate close to steam temperature and shall be provided with internal strainer when required.

Operation
The TSS300 should be used for critical applications (such as draining steam mains or high temperature tracing lines) where it is important to keep the steam space free of condensate. This installation must also be used when the trap discharges into a pressurized condensate return system.
The normal failure mode will be in the open position unless the bellows is distorted by severe operating conditions.
The TSS300 may also be used as a thermostatic air vent. For this use, it should be installed to discharge vertically upward. The discharge should be piped to a drain.

Installation
The trap nameplate indicates the flow direction. A strainer should be installed upstream of the trap (an optional internal strainer is available). Full port isolating valves should be installed upstream and downstream. To avoid damaging the thermostatic element, the pipe connections should never be welded to the trap. For freeze protection, all drain lines must be pitched toward the trap for gravity flow. The trap must discharge vertically downward and the discharge piping must be self-draining.

Maintenance
This product is factory sealed for tamper-proof operation, and no repair parts are available. Complete isolation of the trap from both supply and return line is required before the trap is removed.
Complete installation and maintenance instructions are given in IMI 2.0001, which accompanies the product.