In regular piping, steam carries large quantities of entrained material. With TLV’s Separator Filter, improve heating efficiency and product quality by removing condensate, dirt, and scale. Ideal for bio-related industries and other applications requiring high-quality dry steam.

SF1, when fitted with a 0.5 micron filter element, conforms to the recommendations for the production of culinary steam to 3-A Accepted Practice No. 609-03.

**Cleaner filter for longer...**

**...utilize the cyclone effect**

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### Clamp Construction
Ferrule clamp joint facilitates assembly and disassembly.

### Cyclone Separator

### Sintered Wire Mesh Filter

### All Stainless Steel
Body is made of rust-proof CF8 stainless steel.

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<table>
<thead>
<tr>
<th>Parts with USP/FDA/EN Compliant Materials</th>
<th>USP</th>
<th>FDA</th>
<th>EN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Gasket</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Gasket</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Seal Tape for Plug</td>
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</tbody>
</table>
Time between cleaning & replacement is increased, maintenance cost is reduced

Typical Applications
- Sterilizers, steam washers, etc.
- Live steam use - food, pharmaceutical
- Bio-related steam equipment
- Non-hazardous gas applications

Cyclone Separator

Centrifugal Force and Gravity Remove:
- **98%** of Condensate
  Eliminating condensate produces the highest quality steam.
  * for steam velocity up to 100 ft/s
- Large dirt particles & scale
  Preventing major sources of filter blockage from reaching the filter results in a longer service life.

**Maintenance cycle is nearly 3 times longer!**
Compared to a filter with no separator, the time between required maintenance is improved by nearly 3 times.

Effective cleaning allows repeated use

The five-layer sintered wire mesh filter catches small dirt and scale particles on the outside surface of the filtration layer. Compared to sintered metal powder the wire mesh filter is easier to clean resulting in longer durability, and reusability.

Low Pressure Loss

TLV’s sintered wire mesh filters provide a longer maintenance cycle than powder filters of the same rating. Therefore, the decision to use a finer filter rating or a more compact filter becomes easier.

**TLV SF1**
- **Sintered Wire Mesh**
  (Diameter 11/2"; Length 5; Surface Area 25 in²)
- **Sintered Powder**
  (Diameter 21/2"; Length 10; Surface Area 75 in²)

Stress Test Parameters
- Inlet steam pressure: 15 psig
- Flow rate: 66 lb/h
- Iron powder introduced: 1¾ oz/h (average size of particles 8 μm)
- Housing: 1"
Specifications

<table>
<thead>
<tr>
<th>Connection</th>
<th>Screwed</th>
<th>Socket Weld</th>
<th>Flanged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (in)</td>
<td>1/4, 3/4, 1, 1 1/2, 2</td>
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<tr>
<td>Maximum Operating Pressure (psig) PMO</td>
<td>150</td>
<td></td>
<td></td>
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<tr>
<td>Maximum Operating Temperature (°F) TMO</td>
<td>365</td>
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<tr>
<td>Maximum Allowable Pressure (psig) PMA</td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Allowable Temperature (°F) TMA</td>
<td>365</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal Filter Rating* (μm)</td>
<td>0.5, 2, 5</td>
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<tr>
<td>Internal &amp; External Finishing**</td>
<td>Acid Cleaning (lost-wax cast)</td>
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<td></td>
</tr>
<tr>
<td>Ferrule Clamp</td>
<td>Two-piece two-bolt clamp</td>
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<td></td>
</tr>
<tr>
<td>Applicable Fluids***</td>
<td>Steam, Air</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Consult TLV for other available filter ratings. ** Optional electro-polishing (lost-wax cast) available on request. *** Do not use for toxic, flammable or otherwise hazardous fluids.

CAUTION: To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside the specification range. Local regulations may restrict this product to below the conditions quoted.

Piping Examples

Typical Installation

Ahead of the inlet valve for the SF1, install a valve for piping blowdown or a trap with sufficient discharge capacity when differential pressure is extremely low.

In cases where more stable pressure is needed

For applications where it is desirable to prevent pressure drop at the outlet due to build-up of dirt/scale at the filter.

Installing a COSPECT PRV*1 with an external pressure sensing line from the outlet of the SF1 will help supply stable pressure and minimize pressure drop, which gradually increases due to build-up of dirt/scale at the filter.

1. Dirt & scale build up, SF1 outlet pressure drops.
2. PRV detects pressure drop and automatically increases SF1 inlet pressure.
3. SF1 outlet pressure rises to maintain set pressure*2

1 If a PRV other than COSPECT [with built-in strainer, separator, and steam/air trap] is installed, the equipment indicated by A in the diagram above must be installed ahead of the PRV for the SF1 inlet.
2 If it becomes impossible to adjust the pressure with the PRV due to build-up of dirt/scale, clean or replace the filter.

For explanation purposes only, not intended as installation designs.

CAUTION: DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE. Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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Specifications subject to change without notice.