# Steam Trap Test Station With Universal Mount

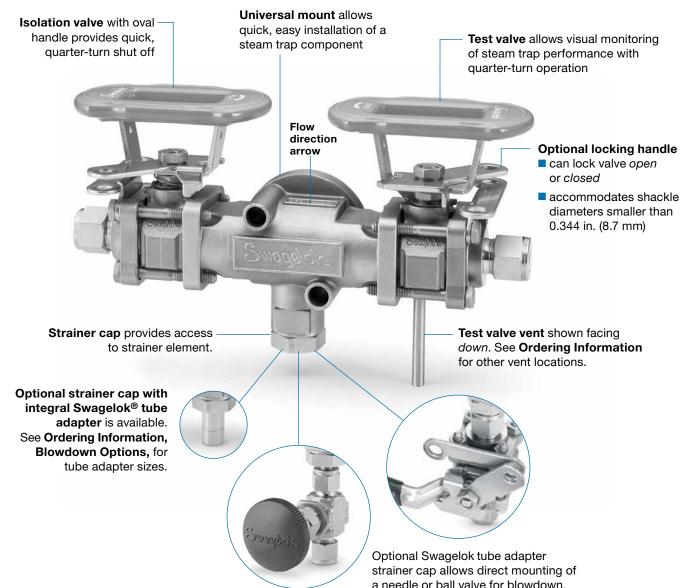


# **TVA** Series

- Offers fast visual monitoring of steam trap performance
- Includes universal mount for steam trap
- Service rating: 250 psig (17.2 bar) at 417°F (213°C)
- 316 and 316L stainless steel materials
- Universal mount without test valves available separately
  - Service rating: 600 psig (41.3 bar) at 750°F (400°C)



# Features



# **Steam Trap Test Station**

- Assembly consists of two stainless steel 63 series ball valves and a universal mount; two mounting bolts to mount steam trap are included. Steam trap is not included.
- Compact design reduces space requirements; flange of universal mount bolts directly to the ball valve body.
- Choice of left or right flow direction with a flow direction arrow on the universal mount.

#### **Universal Mount**

- Two-bolt, universal design offers quick, easy installation of a steam trap.
- Cast body material is CF3M and includes an integral 20-mesh (840 µm) strainer.
- Optional strainer cap with integral Swagelok tube adapter allows direct mounting of blowdown valve.
- See page 5 for more information on the universal mount, including materials of construction.

### **Isolation and Test Ball Valves**

- Quarter-turn handles show valve open or closed position.
- Oval handle types include locking, nonlocking, and latchlocking.
  - Locking handles enable compliance with OSHA Lockout/Tagout, Standard 29 CFR Part 1910.147 Control Of Hazardous Energy.
- Valve end connection options include Swagelok tube fittings (1/2 and 3/4 in., and 12 mm), female NPT (1/2 in.) and female ISO 7/1 (1/2 in.)
- Choice of test valve vent locations includes facing towards the steam trap, facing away from steam trap, and facing down.
- See the Swagelok Ball Valves, General Purpose and Special Application—60 Series catalog, MS-01-146, for stainless steel 63 series valve technical data, including materials of construction and other options.



# **Steam Trap Test Station**

# **Technical Data**

- Pressure rating: 600 psig (41.3 bar) at 70°F (20°C)
- Temperature rating: 450°F (232°C) at 100 psig (6.8 bar)
- Service rating: 250 psig (17.2 bar) at 417°F (213°C)
- Valve seat and seal options can affect service ratings.

# Testing

Every Swagelok steam trap test station assembly is factory tested with nitrogen at 1000 psig (69 bar) or its maximum working pressure if less than 1000 psig (69 bar). Seats have a maximum allowable leak rate of 0.1 std cm<sup>3</sup>/min, lower than allowable in FCI 70-2 Specification Class VI.

Shell testing with nitrogen at 1000 psig (69 bar) or the maximum rated pressure if less than 1000 psig (69 bar) is performed to a requirement of no detectable leakage with a liquid leak detector.

# **Cleaning and Packaging**

All Swagelok integrated test valve assemblies are cleaned in accordance with Swagelok *Standard Cleaning and Packaging (SC-10),* MS-06-62.

### Accessories

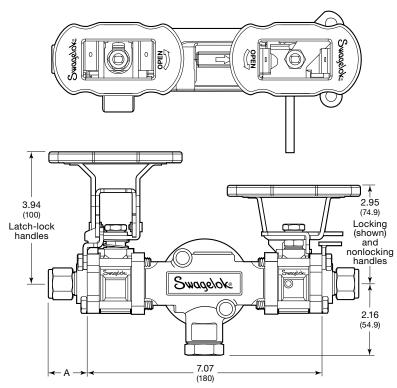
To order the universal mount component separately, see page 6.

### **Maintenance Kits**

- For the valves, see the Swagelok Ball Valves, General Purpose and Special Application—60 Series catalog, MS-01-146.
- For the universal mount component, see page 6.

# Dimensions

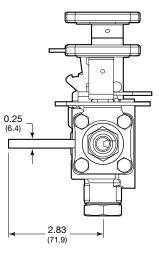
Dimensions, in inches (millimeters), are for reference only, and are subject to change.



| End Conne                | Α       |          |  |
|--------------------------|---------|----------|--|
| Туре                     | Size    | in. (mm) |  |
| Swagelok<br>tube fitting | 1/2 in. | 1.16     |  |
|                          | 3/4 in. |          |  |
|                          | 12 mm   | (20.0)   |  |
| Female NPT               | 1/2 in. | 0.49     |  |
| Female ISO 7/1           | 1/2 in. | (12.4)   |  |

Dimensions shown with Swagelok nuts fingertight, where applicable.

See specifications ISO 7, BS 21, and JIS B0203.



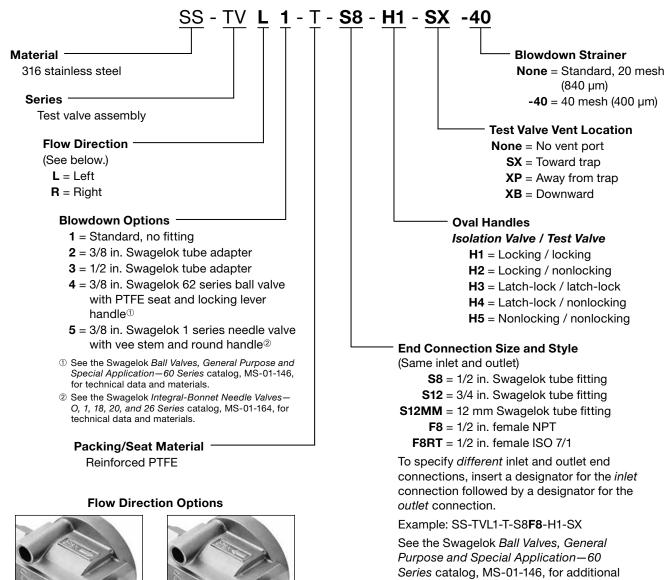


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# **Steam Trap Test Station**

# **Ordering Information**

To create an ordering number, select designators in the sequence shown.



Flow Direction: Right (Outlet on the right)



**Flow Direction: Left** (Outlet on the left)

# Swagelok Custom Solutions

Although a variety of steam trap test station assemblies are available as standard, there may be those applications which require different components or configurations.

If a custom solution is required, Swagelok welcomes these requests.

stainless steel 63 series valve end connection options.

Swagelok

# **Universal Mount**

### Features

- Two-bolt universal mount offers quick, easy installation of a steam trap
- Swagelok tube fitting end connections for tubing systems (1/2 and 3/4 in., and 12 mm)
- Female pipe thread end connections for piping systems (1/2 and 3/4 in. NPT and ISO tapered)
- Integral 20-mesh (840 µm) strainer
- Carbon steel mounting bolts (3/8-16 threads) included
- Choice of left or right flow direction options





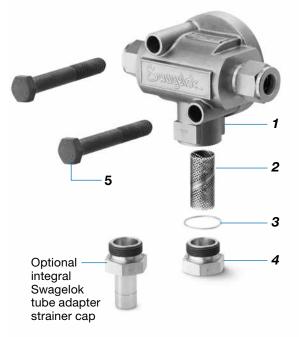
Flow Direction: Right (Outlet on the right)

Flow Direction: Left (Outlet on the left)

# **Technical Data**

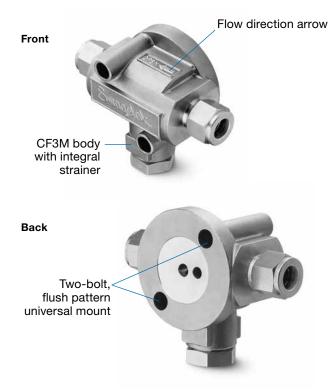
- Maximum pressure rating: 600 psig (41.3 bar)
- Maximum temperature rating: 750°F (400°C)
- Service rating: 600 psig (41.3 bar) at 750°F (400°C)

# **Materials of Construction**





Every Swagelok universal mount is factory shell tested with nitrogen at 600 psig (41.3 bar) using a liquid leak detector with a requirement of no detectable leakage.



| Component                | Material Grade/<br>ASTM Specification            |
|--------------------------|--|
| <b>1</b> Body            | CF3M/A351  |
| 2 Strainer element       | 316 SS/A580                                      |
| <b>3</b> Strainer gasket | Silver-plated 316 SS/A240                        |
| 4 Strainer cap           | 316 SS A479                                      |
| 5 Bolts                  | Grade B7 carbon steel/A193                       |
| Lubricants               | Fluorinated-based and molybdenum disulfide-based |

Wetted components listed in *italics*.

# **Cleaning and Packaging**

All Swagelok universal mounts are cleaned in accordance with Swagelok *Standard Cleaning and Packaging (SC-10),* MS-06-62.



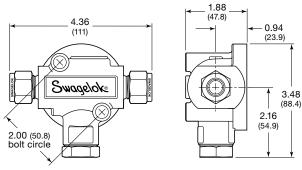
### **Universal Mount**

### **Ordering Information and Dimensions**

Select an ordering number.

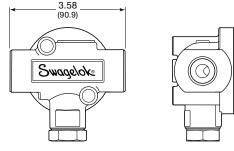
| End Connection |          | Flow      | Ordering         |
|----------------|----------|-----------|------------------|
| Туре           | Size     | Direction | Number           |
|                | 1/2 in.  | Right     | SS-MB-UM-S8-R    |
|                | 1/2 111. | Left      | SS-MB-UM-S8-L    |
| Swagelok       | 3/4 in.  | Right     | SS-MB-UM-S12-R   |
| tube fitting   |          | Left      | SS-MB-UM-S12-L   |
|                | 12 mm    | Right     | SS-MB-UM-S12MM-R |
|                |          | Left      | SS-MB-UM-S12MM-L |
|                | 1/2 in.  | Right     | SS-MB-UM-F8-R    |
| Female         | 1/2 in.  | Left      | SS-MB-UM-F8-L    |
| NPT            | 3/4 in.  | Right     | SS-MB-UM-F12-R   |
|                |          | Left      | SS-MB-UM-F12-L   |
|                | 1/2 in.  | Right     | SS-MB-UM-F8RT-R  |
| Female         |          | Left      | SS-MB-UM-F8RT-L  |
| ISO 7/1        | 3/4 in.  | Right     | SS-MB-UM-F12RT-R |
|                |          | Left      | SS-MB-UM-F12RT-L |

Dimensions, in inches (millimeters), are for reference only and are subject to change.



#### Swagelok Tube Fitting Ends

Dimensions shown with Swagelok tube fitting nuts finger-tight.



Female Pipe (NPT and ISO) Ends

### Options

#### Swagelok Tube Adapter Strainer Cap

To order a universal mount with factory-assembled integral Swagelok tube adapter strainer cap, add a blowdown strainer cap designator to the universal mount ordering number.

| Tube<br>Adapter Size | Blowdown<br>Strainer Cap<br>Designator |
|----------------------|--|
| 3/8 in.              | 2                                      |
| 1/2 in.              | 3                                      |

Example: SS-MB-UM-S8-R2

Strainer cap kits for field assembly are available. The kits contain an integral tube adapter strainer cap, strainer gasket, and instructions. Select a kit ordering number.

| Tube<br>Adapter Size | Kit Ordering<br>Number |
|----------------------|------------------------|
| 3/8 in.              | SS-UM-TA6              |
| 1/2 in.              | SS-UM-TA8              |

### **Maintenance Kits**

#### Bolt and Strainer Kit

Kit includes two mounting bolts, a strainer, a strainer gasket, and instructions.

Kit ordering number: SS-3K-UM-4F

#### Strainer Gasket Kit

Kit includes a strainer gasket and instructions. Kit ordering number: **SS-UM-K3** 





Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers.

# **Warranty Information**

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit swagelok.com or contact your authorized Swagelok representative.