



NEWTON Fluid Technology CO., LTD

Inverted Bucket Steam Trap

Pilot-inverted Bucket Steam Trap

Ball Float Steam Trap

Thermodynamic Steam Trap

Thermostatic(bimetallic) Steam Trap

Thermostatic(film box) Steam Trap

STEAM TRAP

Pilot-inverted Bucket Steam Trap



Secure System Generates
Smart Energy Conservation

www.steamvalves.com

VMV Newton has become a well-known high-end brand manufacturer and end-user service provider in the field of steam and thermal energy engineering systems.

Pilot-operated Inverted Bucket Steam Trap

The Pilot Inverted Bucket Stem Trap is characterized by large displacement, long life, good energy saving effect, water hammer resistance, and beautiful appearance. It is widely used in process heating, jacket heating kettle, reboiler and other equipment.

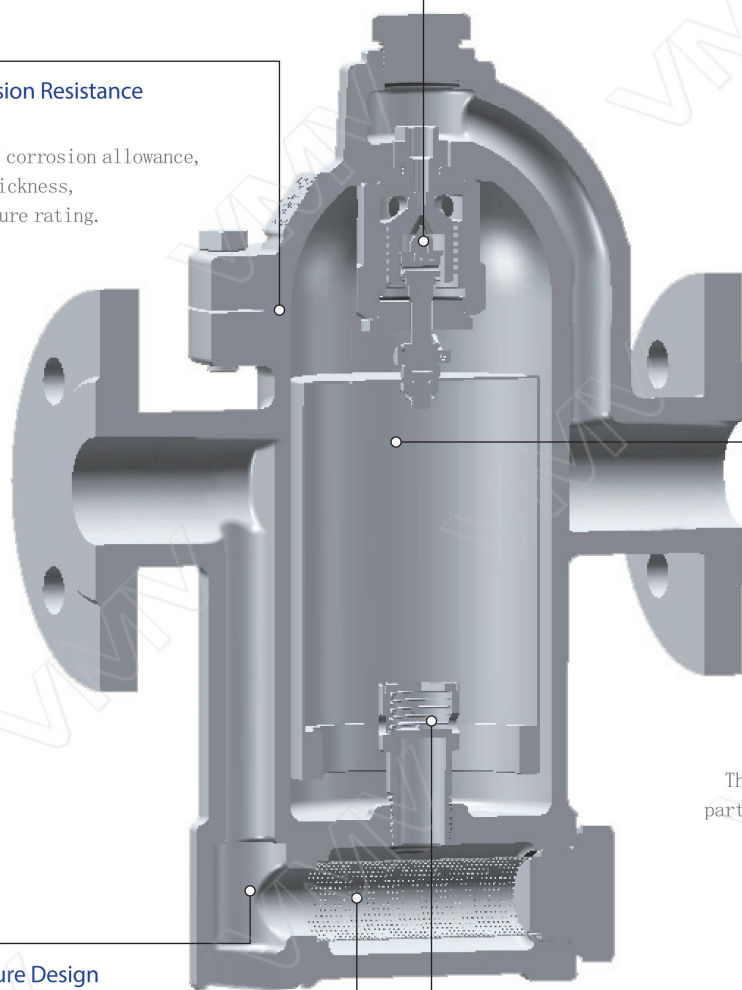
The technical advantages of VMV Steam traps are: unique and reasonable structure + high-precision internals!

High Strength Corrosion Resistance

Using WCB material, full consideration of corrosion allowance, minimum shell wall thickness, pressure and temperature rating.

Flexible Pilot Closing System

High-precision flexible pilot closing system guides the main valve to open and close.



Stainless Steel Bucket Exhaust Structure

There are small holes in the upper part of the bucket to remove air and other non-condensable gases to prevent steam lock.

None-leakage Structure Design

U. shaped flow channel design ensures that the inside of the valve body is in a water-sealed state, and there is no original steam leakage.

Built-in Filtering Device

Effectively prevent pipeline impurities from entering the valve to ensure the proper operation of the trap.

Built-in Check Valve

Prevent water hammer from damaging internal parts and also apply to superheated steam environment.

Pilot-operated Inverted Bucket Steam Trap

Structural Features

VMV Inverted Bucket Steam Trap has been designed in full consideration of shell strength and pressure temperature grade, casting processability, tightness of valve core valve seat closure, impact caused by water vapor mixing, and the strength of the valve cover cushion affected by low temperature environment, etc.

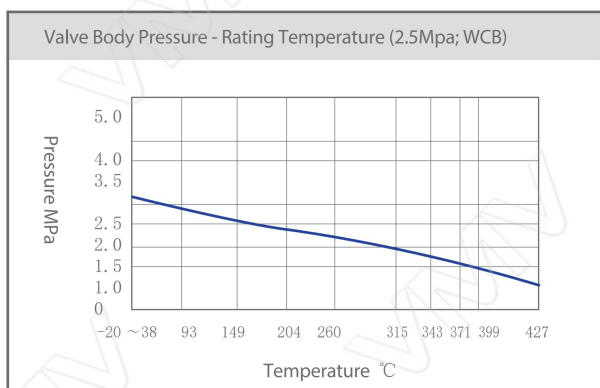
The Pilot-operated inverted bucket steam trap relies on the density difference between steam and condensate to work. When the bucket is full of condensed water and non-condensable gas, the vent on the upper part of the bucket removes the non-condensable gas. The bucket loses buoyancy and drives the valve core to move down. The trap opens to drain. When steam enters the bucket after draining, the bucket floats and drives the valve. The core closes the trap.

The biggest advantage of the pilot inverted bucket trap is small size, large displacement, high back pressure rate, long life, reliable action, convenient maintenance with no original steam leakage.



The pilot inverted bucket steam trap is made of ASTM216 WCB cast steel, some adopt A105 valve cover, the internal material is stainless steel, with built-in filter.

- Nominal pressure: PN25;
- Maximum allowable temperature: 425 °C;
- Maximum working pressure: 1.6MPa;
- Maximum working temperature: 400 °C;
- Connection method: threaded RC or flange (GB/T 9115.1-2000; HG/T20615-2009; HG/T20592-2009, etc.).

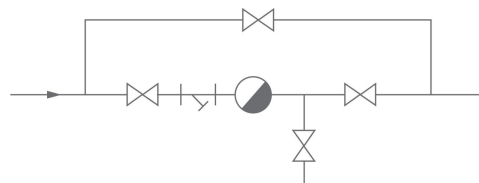


Pilot-operated inverted bucket steam trap selection and installation

Pilot-operated inverted bucket steam trap is for intermittent drainage, with a subcooling degree of 5-10° C and a back pressure rate of more than 85% (back-end pipeline pressure/steam pressure). It is suitable for pipelines and small equipment to remove condensate and back pressure to recover condensate. Generally, the safety factor is 2-3 times when selecting models, and 5-8 times for air separation units and drying cylinders.

The condensed water volume and pressure difference of steam equipment are important indicators for model selection. The displacement of the same model of steam trap increases with the pressure difference increases. Check the displacement curve in detail.

Special reminder: Please don't mistake it for a large-diameter trap with a large displacement.



The pilot inverted bucket steam trap is installed horizontally at the bottom of the pipeline or equipment. The basic configuration of the trap is shown on the right.

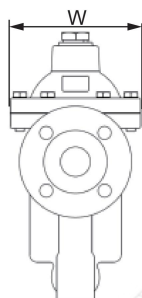
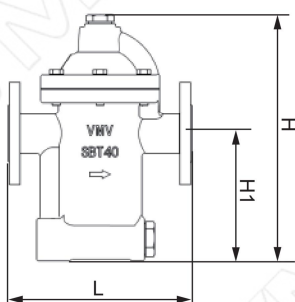
In order to prevent water hammer after the water vapor in the pipeline is mixed, a check valve must be built in.

SBT40

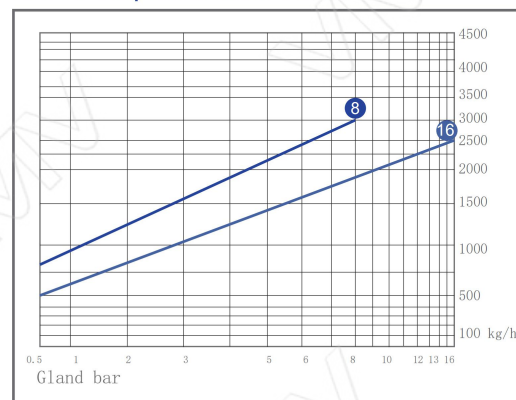
Pilot-operated Inverted Bucket Steam Trap

Structural features

1. The working principle of the pilot inverted bucket steam trap is to rely on the difference in vapor and liquid density, and the pilot valve is opened to guide the main valve to open.
2. The valve body and bonnet are made of cast steel.
3. All internal parts are made of stainless steel, and the wear allowance has been fully considered in the design of movable parts, which improves the service life of the trap.
4. U-shaped runner design to achieve water sealing effect without leaking steam.
5. The patented flexible closing system has no steam leakage.
6. Equipped with a water-proof device so that the fluid entering the valve body will not produce water-hammer.
7. Built-in check valve is suitable for superheated steam environment.
8. Built-in filter makes the trap work in a clean environment.
9. Choose different displacement curves according to the pressure.
10. The back pressure rate is as high as 90%.
11. After stopping, the screw plug can drain the condensed water to prevent damage to the trap due to freezing at low temperature.



SBT40 Displacement Curve



Applications

1. Medium and large heat exchangers and kettles.
2. Heating equipment such as medium and large coil air and concentration.
3. Medium and large heaters such as reboiler and distillation tower.

Material

Cap	A105
Valve Body	WCB
Seat	Stainless Steel
Disc	Stainless Steel
Other Internals	Stainless Steel

Data Size Table

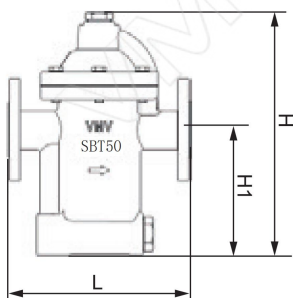
Type	Conn	DN	PN	Working Pressure MPa	Temperature°C Pressure MPa	Diameter (mm)				U.W Kg
						L	H	H1	W	
SBT 40T	Thread	25-32	25	0.05-1.6	400/1.57	210	360	187	174	16.5
SBT 40W	SW	25-32	25	0.05-1.6	400/1.57	210	360	187	174	16.5
SBT 40F	RF	25-50	25	0.05-1.6	400/1.57	270	360	187	174	21

SBT50

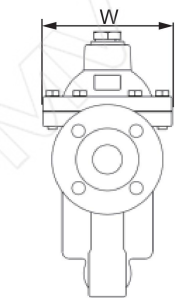
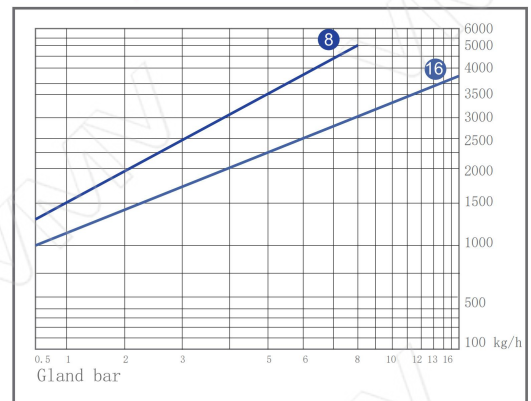
Pilot-operated Inverted Bucket Steam Trap

Structural features

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7. Built-in check valve is suitable for superheated steam environment.
8. Built-in filter makes the trap work in a clean environment.
9. Choose different displacement curves according to the pressure.
10. The back pressure rate is as high as 90%.
11. After stopping, the screw plug can drain the condensed water to prevent damage to the trap due to freezing at low temperature.



SBT50 Displacement Curve



Applications

1. Medium and large heat exchangers and kettles.
2. Heating equipment such as medium and large coil air and concentration.
3. Medium and large heaters such as reboiler and distillation tower.

Material

Cap	A105
Valve Body	WCB
Seat	Stainless Steel
Disc	Stainless Steel
Other Internals	Stainless Steel

Data Size Table

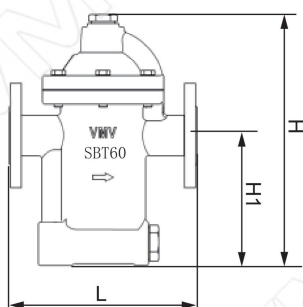
Type	Conn	DN	PN	Working Pressure MPa	Temperature°C Pressure MPa	Diameter (mm)				U.W Kg
						L	H	H1	W	
SBT 50W	SW	25-32	25	0.05-1.6	400/1.57	260	410	210	220	27.5
SBT 50F	RF	25-50	25	0.05-1.6	400/1.57	320	410	210	220	33

SBT60

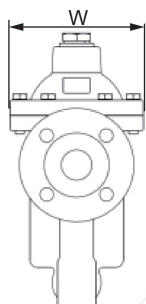
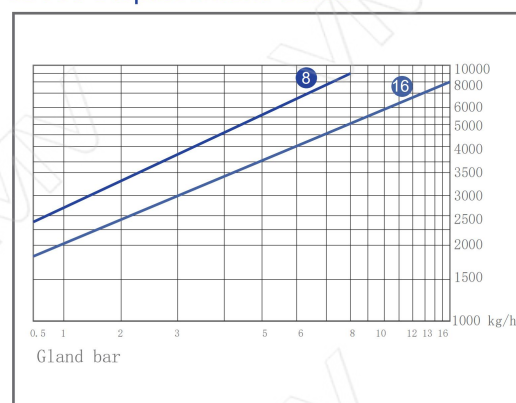
Pilot-operated Inverted Bucket Steam Trap

Structural features

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3. All internal parts are made of stainless steel, and the wear allowance has been fully considered in the design of movable parts, which improves the service life of the trap.
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5. The patented flexible closing system has no steam leakage.
6. Equipped with a water-proof device so that the fluid entering the valve body will not produce water-hammer.
7. Built-in check valve is suitable for superheated steam environment.
8. Built-in filter makes the trap work in a clean environment.
9. Choose different displacement curves according to the pressure.
10. The back pressure rate is as high as 90%.
11. After stopping, the screw plug can drain the condensed water to prevent damage to the trap due to freezing at low temperature.



SBT60 Displacement Curve



Applications

1. Medium and large heat exchangers and kettles.
2. Heating equipment such as medium and large coil air and concentration.
3. Medium and large heaters such as reboiler and distillation tower.

Material

Cap	A105
Valve Body	WCB
Seat	Stainless Steel
Disc	Stainless Steel
Other Internals	Stainless Steel

Data Size Table

Type	Conn	DN	PN	Working Pressure MPa	Temperature°C Pressure MPa	Diameter (mm)				U.W Kg
						L	H	H1	W	
SBT 60W	SW	25-32	25	0.05-1.6	400/1.57	260	460	260	220	27.5
SBT 60F	RF	25-50	25	0.05-1.6	400/1.57	320	460	260	220	36

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Smart Energy Conservation**



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