Free Float Steam Trap with the Lowest Energy Costs in the World

World's #1 Energy Saving Steam Trap

Features

Precision-ground Spherical Float and Three-point Seating
High sealing performance with no steam leakage.

Stainless Steel Components Ensure High Durability
The body and the valve seat use corrosion and rust-resistant stainless steel, thus maintaining the initial performance for a long time.

Built-in Bimetal Automatic Air Vent
The built-in air vent responds to temperature and prompty exhausts initial air in the piping, thus making it possible to start operating the trap immediately after the supply of steam.

SS1 Series

3-point seating and precision ground float

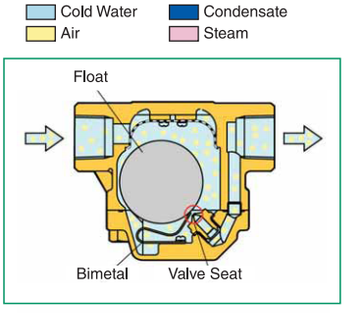
Automatic bimetal air vent

Specially designed insulating cover

Overview (Technical principles, actions, etc.)

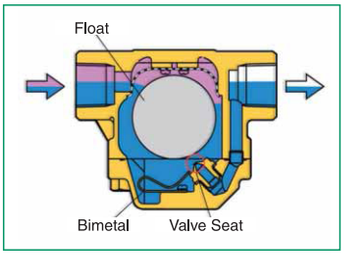
1. Start-up Air and Cold Condensate Discharge

At start-up, the system is cold, causing the bimetal air vent strip to hold the float off of the valve seat. This allows rapid discharge of air and cold condensate when steam is first supplied to the system.



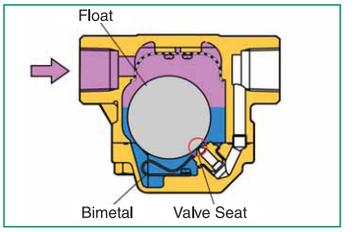
2. Condensate Discharge

If the temperature of the condensate rises above 90°C (194°F), the bimetal air vent strip allows the valve to close. The float lifts off the valve seat as condensate levels rise, discharging hot condensate.



3. Closed Position

When the condensate flow rate decreases, the lowering level of condensate causes the float to fall, resting on the valve seat. A water seal over the valve seat prevents steam loss. As the condensate flow rate changes, steps 2 and 3 will repeat in cycles.



Introductory Track Record

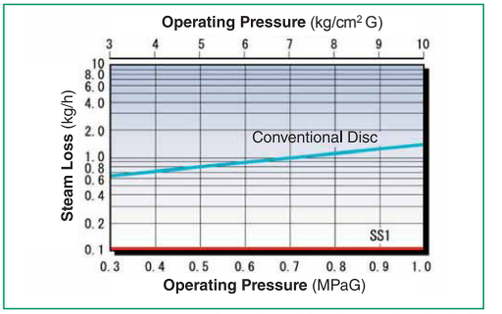
- **Introduced to large steam-using plants worldwide such as oil refineries, chemical, steel, and food.**
- **Joint-recipient, with Nippon Petroleum Refining Co. Ltd., (currently JX Nippon Oil & Energy Corporation) of the Ministry of Economy, Trade and Industry' s 2009 Energy Conservation Grand Prize for Excellent Energy Conservation "Director General Prize of Agency for Natural Resources and Energy" for reduction of leaks from approximately 100 thousand steam traps spread across seven plants, resulting in an estimated savings of 18 ML (113,000 US barrels) of crude oil per year.**

Effects

◎ **Up until now, the most commonly used steam traps are disc-type, but as the graph below shows, even a new disc-trap loses approximately 1 kg/h of steam. Additionally, while in use, each year the amount of steam loss increases. In comparison, the SS1 Series loses less than 0.1 kg/h, and keeps the loss at that level over an extended period.**

Therefore, the steam loss from 100 properly operating steam traps is 360 tons per year, or approximately 1.44 million yen. The equivalent amount of CO_2 emissions saved is approximately 70 t-CO_2/year (operating 4,000 hours/year, with steam at 4,000 yen/ton).

In reality there is also steam leakage from failed traps, that makes the effectiveness even greater.



Steam Loss (Condensate Load: 5 kg/h)

Applicable field
From local food, rubber, and cleaning factories and hospitals, to large-scale oil refineries and chemical plants

TLV International, Inc. 881 Nagasuna, Noguchi, Kakogawa, Hyogo 675-8511

Please contact us through our website. ● http://www.tlv.com