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# VENTURI BALL FLOAT STEAM TRAP



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# Venturi Ball Float Steam Trap

Main function of any steam trap is to trap the steam and drain out the condensate water. In industry there are many types of steam trap like thermodynamic trap, ball float trap, inverted bucket trap & Venturi Orifice steam trap. There is huge difference in working principle of our **VENTURI BALL FLOAT** Steam trap and other steam traps.

There are mainly two issues in process plant in steam traps.

## 1. Traps Fail in Open Condition (Occur Mostly in TD Steam Trap):

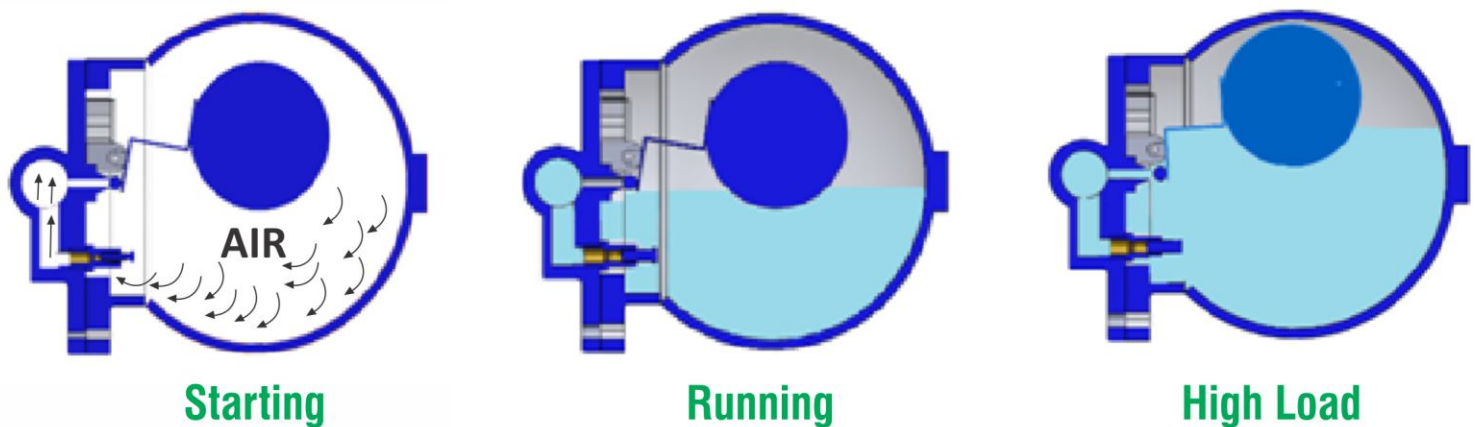
- Wasting of steam, boiler feed water and treatment chemicals.
- Also increases back pressure on all other traps so stalling the condensate in other trap which leads to increases Process time.

## 2. Traps Fail in Closed Condition So Backing up Condensate Causing (Occur Mostly in Ball Float and Bucket Steam Trap) :

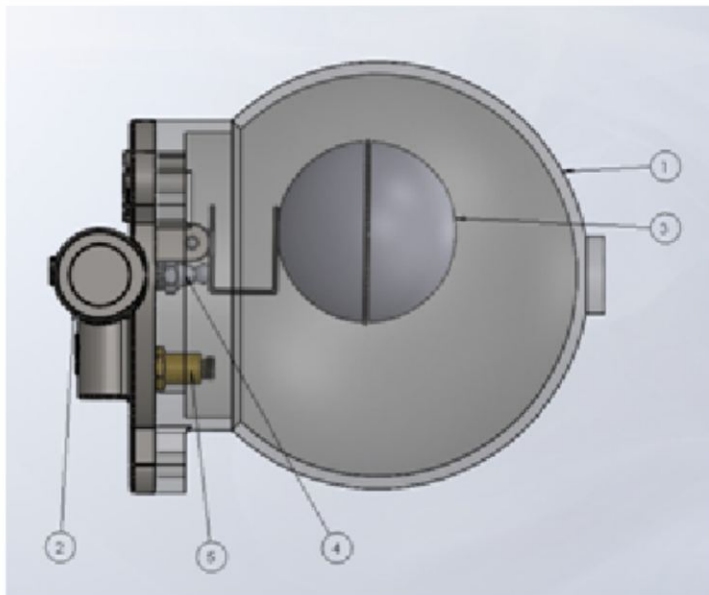
- Open bypass so loss of steam.
- Required Plant shut down and loss of production.
- Water hammering in steam system and so plant damaged.

**Note :** In ball float trap which are with SLR (without thermostatic vent) there are permanent steam loss through SLR. All these problems are eliminated in our Venturi ball float Steam trap due to there are Venturi and ball float two orifice are in working.

## Working Principle :



In venturi ball float Steam Trap (Applied for patent) there are two orifice working to remove condensate load. One is Venturi orifice which is adjust as per client condensate load and pressure at inlet of trap and second is ball float valve orifice. Venturi orifice nozzle is sized to handle 100% of the condensate load produced by a particular application. Normally Venturi orifice is in working condition, ball Float orifice is in closed condition. Some time at starting of process and low pressure condition there are ball float orifice is open and remove excess water from system. So this Venturi ball float steam trap can cope up efficiently the condensate load at start up, normal running and pick load condition.



- 1) Casing (Investment Casting WCB/SS304)
- 2) Cover plate (Investment Casting WCB/SS304)
- 3) SS316 Ball Float
- 4) SS316 Ball Float Nozzle
- 5) Venturi orifice with filter

## Technical Specification :

### BODY DESIGN CONDITIONS

- Maximum Operating Pressure (Kg/cm<sup>2</sup>) - 8
- Maximum operating temperature (0c) - 170
- Hyd. Test (Kg/cm<sup>2</sup>) - 16

## Design Features :

- Built in Air Vent for Quick Start up.
- Two Orifice Mechanism Control Condensate Flow at All Levels.
- Robust and Compact Construction
- Ease of Installation.

### Available in

Available in 15NB, 25NB, 40NB & 50NB

## Advantages and Benefits :

- No SLR So No Steam Wastage Due To Miss Setting of SLR. **(Payback Period One-Two Month Only)**
- Permanent Steam Savings About 10 to 45%.
- Increased Heat Transfer Typically 10%.
- Unaffected By Thermal Shock or Water Hammer so Increasing Plant Life.
- Low Cost Compare To Thermostatic Vent Steam Trap
- Two Orifice Mechanism Control Condensate Flow at All Level.
- Built In Vent For Quick Start Up So Fast Warm Up of Machine/system.
- CO<sub>2</sub> Emissions are Reduced Through Reducing Steam Consumption and Boiler Fuel Usage.
- Save Water and Water Treatment Chemicals.

## Application :

### System :

Tracing Line, Radiator, Cylinder, Dryer, Heat Exchanger, Vessels, Jacketing, Oven, Heating Tank Etc.

### Industries :

Dairy, Fertilizers, Hotels, Hospitals, Pharma, Textile, Automobile, Petro Chemical, Paper Mill, Sugar Mill, Processing Unit, Chemical.

**Note :** We aggressively protect our intellectual properties for our innovation. Patent application has been filed for this innovative product and all intellectual property rights belongs to us. Any imitation or copying of this will be liable for litigation in future.

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