

SYO Steam Trap Advantages

Maintenance Aspects

- **No Failure**
 - No operating parts, No break, wear and failure
- **Easy Repair and Maintenance**
- **No Erosion**
 - wear resistance
 - heat treatment for corrosion resistance
- **Semipermanent to use**

Energy & Cost Savings

- **Permanent Energy Savings**
 - 10 to 30% steam savings through SYO traps
- **Short Payback Period**
 - short-term investment returns from one to two years
- **Reduced boiler fuel costs**

Installation Advantages

- **Compact Size**
- **Stainless Steel**
- **Various fitting types**

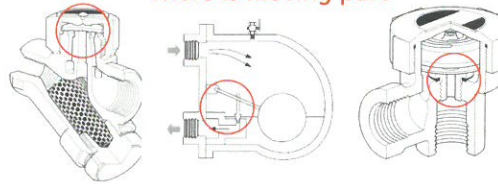


SYO Service

- 5-year performance guarantee
- Correct sizing is assured
- Each SYO Trap is purpose built
- Full records and traceability
- Each trap is fully commissioned
- Commissioning is included in the price of the trap

Problems with Mechanical Traps

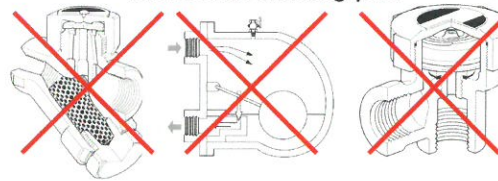
There is moving part



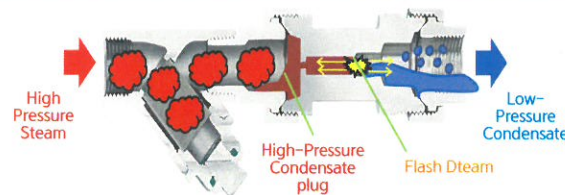
- **10% average annual failure rate**
 - Higher on superheated and high pressure system
- **Unpredictable life cycle**
 - Failures undetected without constant surveys
- **Thousands of traps and difficult access**
 - Constant maintenance required
- **Low priority**
 - And therefore often ignored until the process is affected

Functional Characteristics of SYO

There is no moving part



Working Principle of SYO

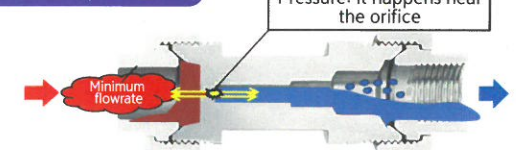


- Maintain **high pressure** at the front of orifice and **low pressure** at the back (lowest differential pressure 0.5)
- **Hot condensate water** moves from the **high pressure** zone at the front to the venturi throat at the **low pressure** side through the orifice
- **Hot condensate** momentarily vaporizes as the throat has a larger space and is under the **low pressure** → **Flash Steam**

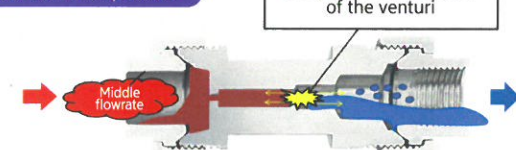
Variable load of SYO Steam Trap

- **Operation under various loads**
 - Effectively responding the temperature changes in the four seasons
- **Venturi Structure**
 - Preventing flash steam from expanded and releasing condensate to throat
- **Formation of Local Back Pressure**
 - Flash steam loss protection, condensate plug maintenance and condensate flow control

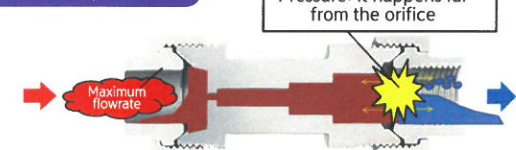
Minimum Load
at a Hot Temperature



Middle Load
at a Normal Temperature



Maximum Load
at a Cold Temperature



Test Codes of SYO Steam Trap

- | | |
|------------------------|-----------------------|
| • Wear Resistance | ASTM G99 |
| • Corrosion Resistance | KS D 1652 & KS D 0223 |
| • Impact Strength | KS B 0810 |
| • Hardness | KS B 0805 |
| • Steam Loss Rate | S B ISO 7841 |

► We provide the test results when order our products.