

## THERMOSTATIC BIMETALLIC STEAM TRAP

### USR25

(DN 15 - 25 / DN 1/2" - 1")

### General Description

Thermostatic/thermodynamic bimetallic steam traps with a corrosion resistant regulator, which are unaffected by water hammer and superheat. A cover and top plug are provided with a relief vent to externally adjust the discharge temperature. These valves feature automatic deaeration. Installation possible in any position. They include an asbestos free cover gasket (graphite/AISI316), a bolted cover and a "Y"-type strainer.

During the start-up, the condensate is cold and the bimetals are flat. When the temperature starts to rise, the bimetals expand producing the progressive closure of the valve. In this way, the steam trap is able to adjust itself to changing conditions, because if the pressure rises, the higher pressure acts on the valve but at the same time the higher temperature will act on the bimetals. Its quick, automatic air venting prevents air binding. The thermostatic control assures the highest efficiency and reduces back pressure and water hammer significantly in the condensate pipelines.

### Operation

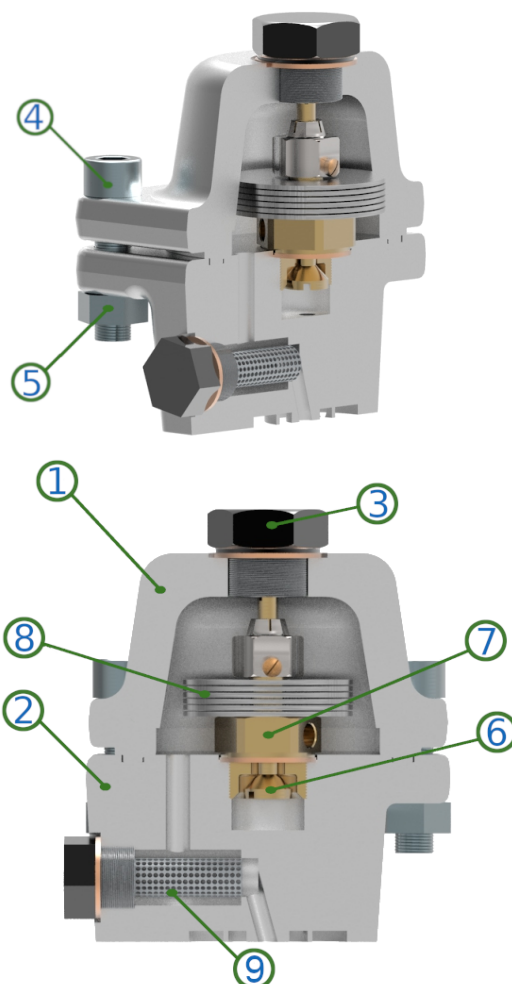
Downloading constantly adjusts itself to the amount of condensate produced in the installation. The pressure of the condensate on the valve plug opens the valve and allows its output. During the condensate discharge, the temperature raises producing bimetallic package dilatation and the progressive closure of the valve. This situation establishes a dynamic equilibrium between temperature and pressure which governs the trap in a continuous and accurate operation mode. Maintenance costs.

### Operating conditions

|                             |        |
|-----------------------------|--------|
| Max. operating pressure:    | 25 bar |
| Max. differential pressure: | 22 bar |
| Max. Temperature:           | 400°C  |

### Connections

Universal connector to be assembled on the body of the trap valve station of any standard manufacturers, TVS.



### Materials

|            |                              |
|------------|------------------------------|
| 1 Cover    | Carbon steel A105            |
| 2 Body     | Carbon steel A105            |
| 3 Top cap  | S. Steel AISI 303            |
| 4 Screw    | ASTM A193 B7                 |
| 5 Nut      | ASTM A194 2H                 |
| 6 Seat     | S. Steel AISI 420            |
| 7 Valve    | S. Steel AISI 440B           |
| 8 Bimetals | S.Steel 31/6NiCr & 18/12NiCr |
| 9 Strainer | S.Steel A182 F304            |

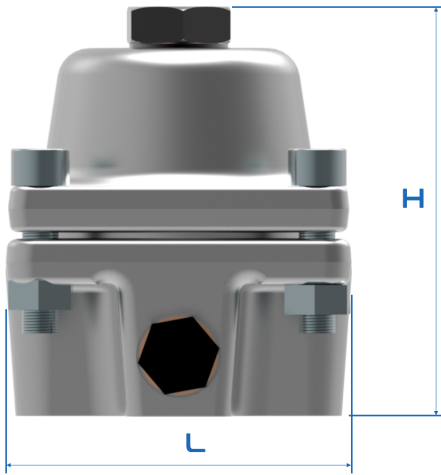
Optional : Seat and valve coated by Aluminium Titanium Nitride (ALTiN). Hardness: 90 HRC.

### Spare Parts

- Seat
- Valve
- Gasket set

## STEAM TRAP USR25

### Dimensions

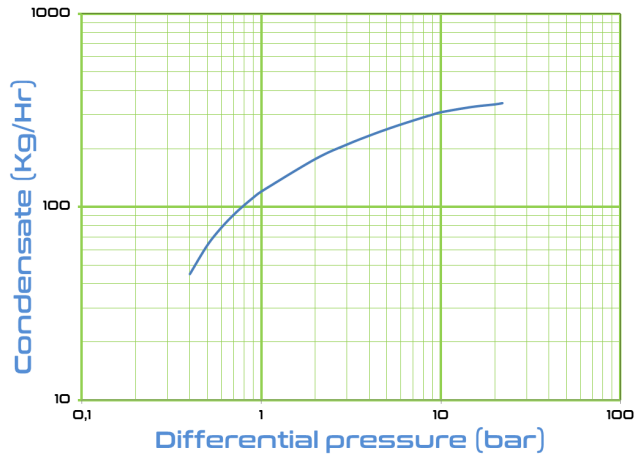


|        |     |
|--------|-----|
| H (mm) | 105 |
| L (mm) | 75  |

Minimum disassembly distance: 60mm.  
Approximate weight: 2Kg

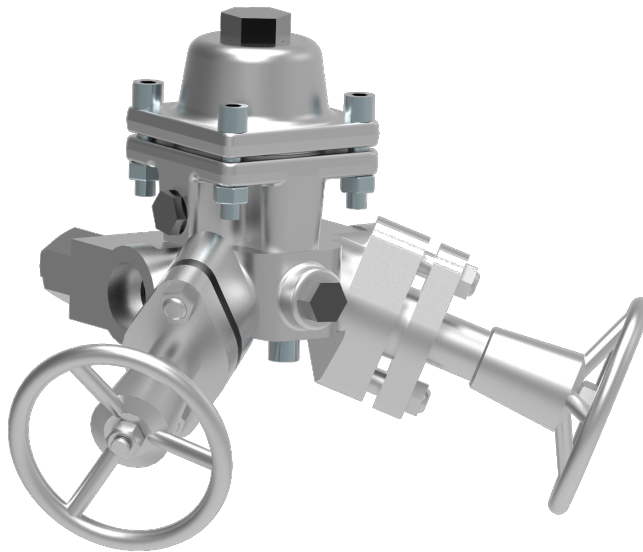
### Capacity Curve

USR25



Capacity refer to continues service.  
Cold water (Start-up) capacity will be 2.5 higher.

DATA SHEET



Produced in accordance with Article 4.3 del PED - European Pressure Equipment Directive - PED 2014/68/EU.

Technical modification reserved. Copyright BiTherm 2018.

For more information please visit web [www.bitherm-sistemas.com](http://www.bitherm-sistemas.com) or contact your Bitherm's distributor.



**Headquarters**  
BITHERM SISTEMAS S.A.  
Ulises 89  
28043 Madrid (Spain)  
Ph: (+34) 91 4004 80 87  
[ventas@bitherm-sistemas.com](mailto:ventas@bitherm-sistemas.com)

**Factory**  
PURGADORES DE CONDENSADO S.L.  
Artes y oficios 24, nave 9  
30360 La Unión, Murcia (Spain)  
Ph: (+34) 968 54 04 45  
[purgasa@bitherm.com](mailto:purgasa@bitherm.com)