

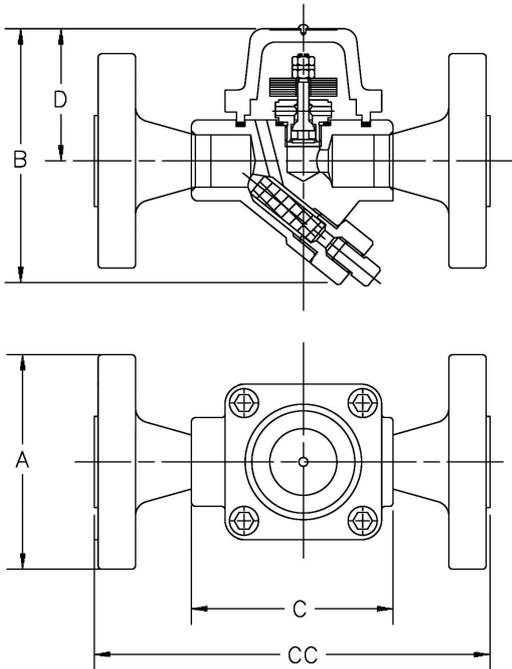


SH-300 Bimetallic Steam Trap

Carbon Steel

For Pressures to 22 bar...Capacities to 2 100 kg/h

Steam Traps



Connections

Screwed BSPT and NPT
Socketweld
Flanged DIN or ANSI (welded)

Materials

Body and cap: ASTM A105
Valve: Chrome Steel - 440C
Seat: Stainless steel - 303, Boronized
Bimetallic elements: Nickel plated

Valve Boronized

The problem of wiredrawing of valve and seat materials is well known to users of steam traps and other types of valves. Wiredrawing is a particular problem to valves and seats of bimetallic traps, which rely on bimetallic elements to operate.

To solve the problem of wiredrawing, a new thermochemical surface treatment has been developed. The basic valve material is machinable hardened chrome steel. Atoms of highly resistant material are thermochemically diffused into the valve, giving a layer of protection and a hardness of 1700 HV to the basic material. Because of this new thermochemical treatment, the surface of the valve is highly resistant to the erosive action of flashing condensate. The failure rate of Armstrong bimetallic traps due to wearing out of valve and seat material is greatly reduced.

Description

The SH-300 steam trap operates on the temperature principle using two layers of bimetallic elements that have different expansion coefficients. The stem connected to these elements moves a valve into either an open or closed position.

During start-up, the trap is cold so the elements are flat and the valve is wide open. This results in air and condensate being easily removed from the system.

In standard operation, the position of the valve depends on two parameters: first, the pressure, which will cause the valve to open; and second, the temperature, which will cause the elements to convex and the valve to close.

When no condensate is present and set temperature is reached, the force of the elements is then high enough to completely close the valve.

The SH-300 steam trap can adjust itself to changing conditions, because if the pressure rises, the higher pressure works on the valve. At the same time, the higher temperature will work on the elements.

Maximum Operating Conditions

Maximum allowable pressure (vessel design): 40 bar @ 350°C
Maximum operating pressure: 22 bar
Maximum back pressure: 99% of inlet pressure

Table ST-146-1. Model SH-300 Trap (dimensions in mm)

Model No.	SH-300
Pipe Connections	15 - 20 - 25
"B" Height (screwed & SW)	115
"A" Height (flanged PN40*)	115
"C" Face-to-Face (screwed & SW)	90 - 90 - N/A
"CC" Face-to-Face (flanged PN40*)	150 - 150 - 160
"D" \varnothing to Top	60
Weight in kg (screwed & SW)	1,9
Weight in kg (flanged PN40*)	4,3 - 4,5 - 4,7

* Other flange sizes, ratings and face-to-face dimensions are available on request. All sizes comply with the article 3.3 of the PED (97/23/EC).

Specification

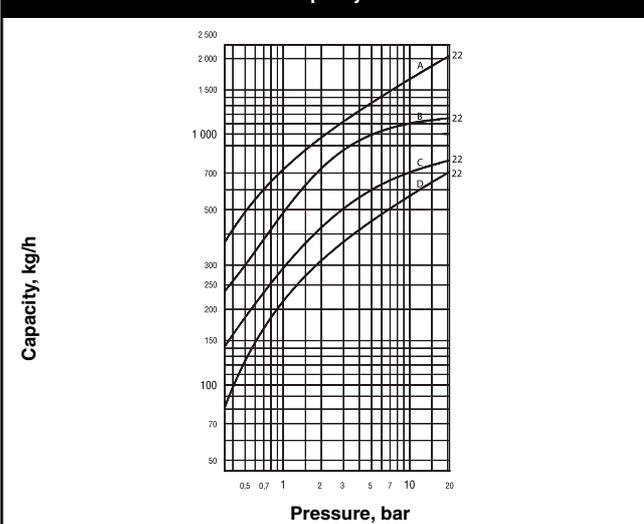
Bimetallic steam trap with valve boronized, type SH-300 in carbon steel. Maximum allowable back pressure 99% of inlet pressure.

How to Order

Specify:

- Model number
- Size and type of pipe connection.

Table ST-146-2. Model SH-300 Capacity



A = Cold Water
B = 40°C Below Saturation
C = 20°C Below Saturation
D = 10°C Below Saturation

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.