

THERMOSTATIC STEAM TRAPS

Bimetallic thermostatic steam traps

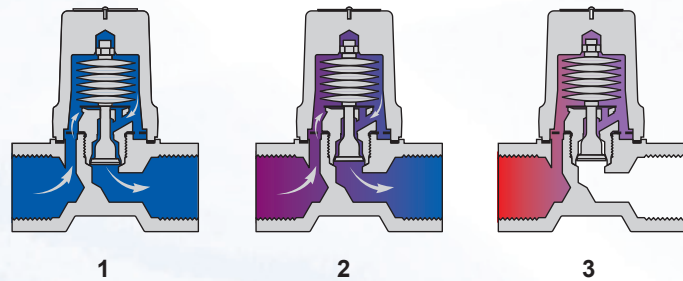
Spirax Sarco has been manufacturing bimetallic thermostatic steam traps for over 40 years. Bimetallic thermostatic steam traps are primarily used to control the release of condensate so that its sensible heat can be utilised and energy losses caused by flash steam on discharge reduced. These factors are all important in today's energy conscious world.

How a bimetallic thermostatic steam trap works

On start-up, the bimetallic element is relaxed and the valve is open. Cooled condensate, plus air, is immediately discharged (1).

Hot condensate flowing through the trap heats the bimetallic element causing it to pull the valve towards the seat (2).

As the hot condensate is discharged and approaches steam saturation temperature the bimetallic element closes the valve (3). When there is no flow through the trap the condensate surrounding the element cools causing it to relax and the upstream pressure opens the valve. Condensate is discharged and the cycle repeats.



User Benefits:

- Condensate is discharged at below steam saturation temperature, utilising sensible heat in the condensate and reducing flash steam losses.
- Automatically discharges air and other incondensable gases to aid rapid warm-up of plant.
- The bimetal elements can work over a wide range of steam pressures without any need for on-site adjustment.
- Patented design of bimetallic element.
- Resistant to waterhammer and freezing.
- The SMC32 series has a two bolt cover design for ease of maintenance.
- Bimetal traps can work on super heated steam and be used as air vents on superheat applications.

Bimetallic Thermostatic Carbon and Alloy Steel Steam Traps SM & HP Series

Model		Connections	Flow Pattern	Body Material	Pressure (PSIG)	½"	¾"	1"	Strainer
	SMC32	NPT, SW, ANSI 150 ANSI 300	Horizontal or Vertical	Carbon Steel	465	•	•	•	Standard
	SMC32Y								
	HP45	SW, BW	Horizontal	Alloy Steel	652	•	•	•	
	HP80				1160				
	HP100				1450				
	HP150				2175				
	HP210				3045				

The liquid expansion trap was Spirax Sarco's original steam trap back in 1910. Unlike conventional steam traps which discharge condensate close to saturation liquid expansion trap discharge at temperatures below 212 °F and in many cases are adjustable. They either use a liquid filled bellows or a wax filled capsule for actuating the valve head. This specialized type of trap is often used for freeze protection of steam, water, or condensate lines. The adjustable units can be used for temperature control of storage tanks, kettles, and vats. They are very efficient since they allow for the use sensible as well latent heat from the steam.

Liquid Expansion Cast Iron, Bronze, and Stainless Steel Traps

Model		Connections	Flow Pattern	Body Material	Pressure (PSIG)	½"	¾"	Adjustable Temperature	Temperature Setting Ranges °F
	CL-6	NPT	Horizontal	Cast Iron	125	•		YES	170-212
	CH-6				300			YES	145-195 110-160 75-125
	No 8	NPT	Horizontal	Bronze	250	•		YES	140-212
	Freezton III	NPT	Vertical	Stainless Steel	200	•		NO	32-40