

# DT310 Series



THERMODYNAMIC DISC STEAM TRAP - ISO9001 Certified -



### Specifications

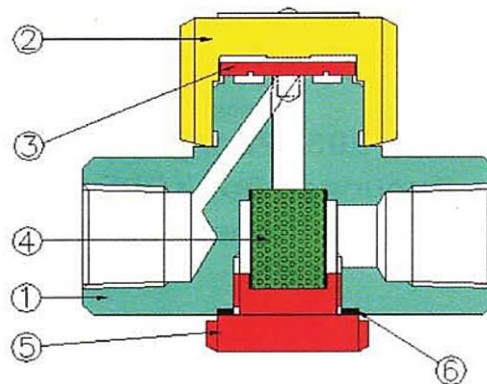
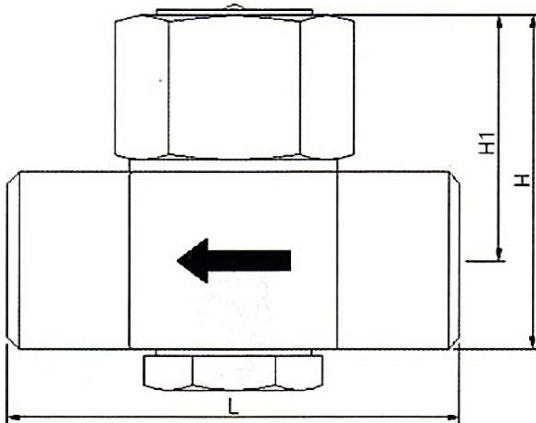
- 300 psi @ 425° F Max.
- NPT Screwed Ends
- Sizes: 3/8", 1/2", 3/4", 1"

### Features

- 100% Leak & Pressure Tested
- Stainless Steel Casting Body
- Stainless Steel Internal Components
- Integral Stainless Steel Strainer

Size	L	H	H1	Weight
1"	3"	3-1/4"	2-1/8"	2.04 lbs
3/4"	3"	3"	1-7/8"	1.93 lbs
1/2"	3"	2-5/8"	1-7/8"	1.49 lbs
3/8"	3"	2-5/8"	1-3/4"	1.65 lbs

Ref#	Description
1	Stainless Steel Body
2	Stainless Steel Cap
3	Stainless Steel Disc
4	Stainless Steel Screen
5	Stainless Steel Screen Cap
6	Copper Gasket



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Ver.2110

### How it works

In the beginning the incoming pressure raises the disc, so the cool condensate and air is discharged from the inner ring under the disc, and out through the outlets.

As hot condensate flows through the inlet passage into the chamber under the disc, the pressure drops and releases flash steam moving at high velocity. This high velocity creates a low pressure under the disc, making the disc to get closer to its seat.

The flash steam pressure builds up inside the chamber above the disc, forcing it down against the incoming condensate until it seats on the inner and outer rings, and so closing the valve. Now the flash steam is trapped in the upper chamber and the pressure above the disc is the same as the pressure being applied under the disc from the inner ring. Although the pressure above and below the disc is the same, the top of the disc is subject to a greater force than the underside, since it has a greater surface area. When flash steam condenses, the trapped pressure in the upper chamber falls, so the disc is raised by the now higher condensate pressure and the cycle repeats.

### Disadvantages

Will not work well on very low differential due to the velocity of flow under the disc is insufficient for lower pressure to occur. Inlet pressure needs to build up slowly so the steam trap can discharge a large amount of air on start up. If pressure builds up too fast, it will cause high velocity air to shut the trap in the same way as steam, causing "air-bind". Discharge of trap can be noisy, preventing the use of a thermodynamic trap in some locations (hospital, theater).

### Installation

Install the thermodynamic steam trap in upright position (horizontally) to function properly. It is strongly suggested to install a strainer (Duco® DS-200) on the inlet and a swing check valve (Duco® DC-400) on the outlet.

### Maintenance

The only moving part that has to be cleaned is the disc. Open the cap on top of the steam trap and the disc is sitting freely on its seat. Clean the disc and any debris or dirt inside the chamber.

For the models with an integral strainer, uncrew the plug on the bottom side of the steam trap to gain access to the strainer. Clean strainer and re-insert the strainer and tighten back the plug.

### Features

Compact, simple and lightweight

Not affected by water hammer

Not damaged by freezing

Stainless steel construction offers resistance to corrosive condensate

Easy maintenance without removing trap from line

Audible clicking sound when trap operates

NPT threaded connections