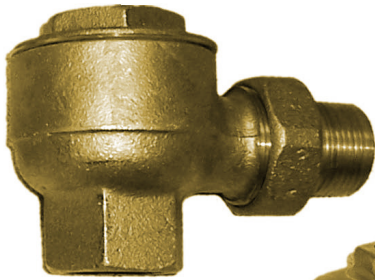


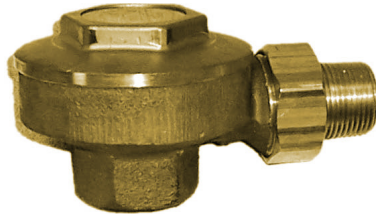
# THERMOSTATIC TRAPS

High Pressure (900-H Series)

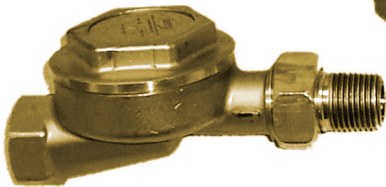
3/4" + 1" AP



1/2" AP



1/2" SW



## Technical Specifications

The Sterlco® High Pressure Thermostatic Trap operates efficiently with pressures of 5 to 125 PSI and is applicable to all types of high pressure steam systems and steam process equipment such as sterilizers, coffee urns, pipe coils, etc. Its purpose is to efficiently drain water and vent air from steam equipment and to prevent the flow of steam into return piping. Sterlco® High Pressure Traps are manufactured in three (3) sizes for handling capacities of 125 to 4,500 lbs. / hour.

## Features

- Simple, rugged construction** – The trap consists of a cast brass body and cover, replaceable stainless steel valve seat and a thermostatic expansion disc made of stainless steel. All working parts are made of non-corrosive metals especially adapted for high pressure service.
- Sensitive thermostatic action** – Sealing the thermostatic disc under high vacuum assures sensitive and positive response to temperature and pressure over trap's entire operating range. Disc corrugations are shaped to reduce hinge action at the rim of the disc and distribute disc motion.
- Minimum wear on working parts** – The valve and seat are of special long-wearing, heat treated stainless steel. The spherical valve is swiveled to assure it's seating tightly. This swivel joint prevents localized stresses on the disc and also prolongs the life of the valve and seat by preventing wear in any one spot.
- Freedom from clogging** – Sharp edge of seat and spherical shape of valve permits intimate contact between the two and leaves little area for depositing of incrustants. Large valve opening permits easy passage of water and dirt, thereby ridding trap of foreign matter which could cause clogging.
- Thorough tests** – In addition to tests made of the completed trap, each thermostatic disc is checked by an automatic leak detector. Each thermostatic disc must pass a test which will detect a leak so small that in a year's time less than 1/100 of an ounce of thermostatic fluid could escape. All traps are 100% test operated before leaving the factory.
- Minimum maintenance** – Permanent adjustment for correct operation is built into each Sterlco® trap. Stop shoulder in trap cover permits disc assembly to be screwed in a predetermined distance. This distance provides the proper amount of clearance between the valve and seat for free drainage of condensate and also enables the valve to seat squarely and tightly when in a closed position. If, under unusual conditions, it is necessary to replace a thermostatic element, even then no adjustment is necessary.

## Operation

Fluid in the thermostatic disc of the trap is partially vaporized by the heat of steam and an internal pressure is developed which overcomes the surrounding steam pressure. This expands the member and carries the valve toward its seat with a positive force. The Sterlco® thermostatic trap quickly adjusts itself to a position determined by the temperature and pressure conditions encountered and permits either a continuous or an intermittent flow of water and air from the process equipment being trapped at the rate required for highest heating efficiency.

## Selection

### Definition of "Temperature Drop"

Due to the great variation in temperature and pressure encountered in high pressure steam equipment, trap capacities vary according to conditions at the location of each trap. For example, a thermostatic trap at one location may have to handle large volumes of condensate whereas a trap at a different location may have to handle very little. In addition to the volume of condensate, temperature must also be considered. The temperature of the condensate entering the trap as compared to the temperature of the steam in the equipment is generally termed the "temperature drop".

### Using "Temperature Drop" to determine trap capacity

Under ordinary conditions connections ahead of the trap are short and consequently the temperature drop is small. Under other conditions connections require the condensate to flow through long lengths of piping without contact with steam; then the temperature drop may be large. With a large "temperature drop", a higher trap capacity will result.

The following tables are organized for easy selection of the proper trap according to approximate temperature drop. For capacities based on continuous discharge under average operating conditions (approximately 5°F temperature drop), consult Table No. 1. For special requirements such as government specifications where a temperature drop of 30°F to 40°F is expected, use Table No. 2. (This table is in accordance with the requirements of Specification 45T2B of the Navy department on Class II high pressure thermostatic traps.)

**Table No. 1 - Temperature Drop, approx 5°F.**

Model	Capacity (lbs. condensate per hour)				
	Pressure Differential (PSI)				
	5	25	35	50	100
950-AH	125	255	445	560	840
953-AH	195	565	700	880	1300
915-AH	290	790	980	1200	1780

**Table No. 2 - Temperature Drop, 30°F to 40°F.**

Model	Capacity (lbs. condensate per hour)			
	Pressure Differential (PSI)			
	25	35	50	100
950-AH	1200	1550	1950	2600
953-AH	1800	2200	2600	3500
915-AH	2500	2900	3400	4500

## Dimensions & Weights

Model	Tapping	Pattern	Capacity (lbs. condensate per hour)					Ship Weight lbs.
			Working Pressure (lbs. per sq. in.)					
			A	B	C	D	E	
950-AH	1/2	AP	3-1/8	1-3/8	2-5/8	2-3/4	-	2
970-SH	1/2	SW	3-1/4	1/2	2-1/2	2-3/4	1-3/4	2-1/8
953-AH	3/4	AP	3-1/4	1-9/16	3-1/2	2-3/4	-	2-3/4
915-AH	1	AP	3-1/2	1-3/4	3-9/16	2-3/4	-	3

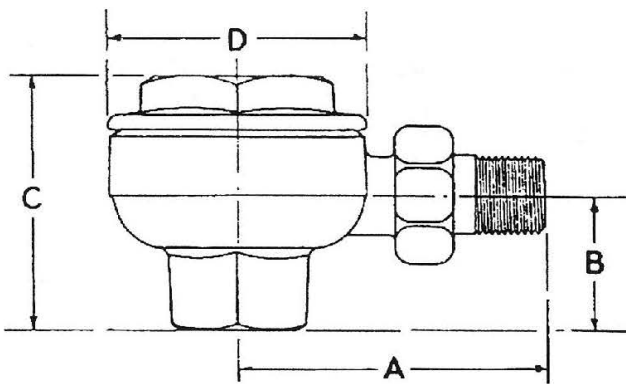


Figure 1. 950-AH AP Trap

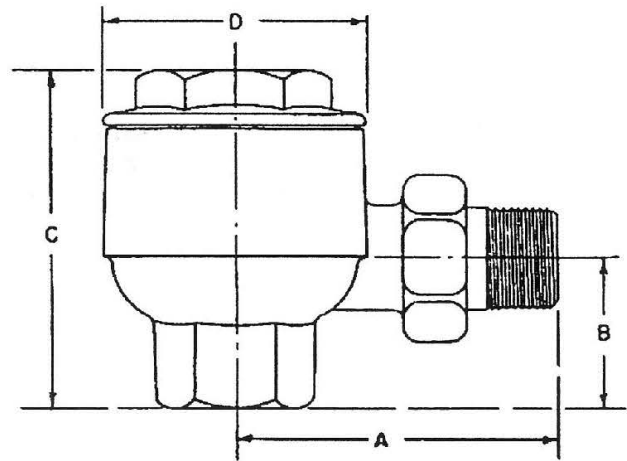


Figure 2. 953-AH AP Trap, 915-AH AP Trap

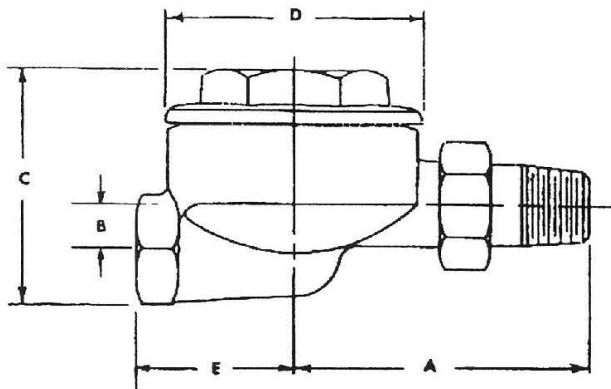


Figure 3. 970-SH SW Trap

Meeting the standards of



## Typical Specification

The contractor shall furnish and install as specified in the plans and in accordance with the manufacturer's instructions \_\_\_\_\_ (size: 1/2", 3/4" or 1") \_\_\_\_\_ (configurations: 950-AH AP, 953-AH AP, 915-AH AP or 970-SH SW) Sterlco® \_\_\_\_\_ Model 950-AH, 953-AH, 915-AH or 970-SH High Pressure Trap, which has a capacity rating of \_\_\_\_\_ lbs./hr. @ \_\_\_\_\_ PSI differential. The trap body and cover shall be made of cast brass, replaceable stainless steel valve seat and thermostatic expansion disc made of stainless steel. All other parts shall be made of non-corrosive materials adapted for high pressure service.