



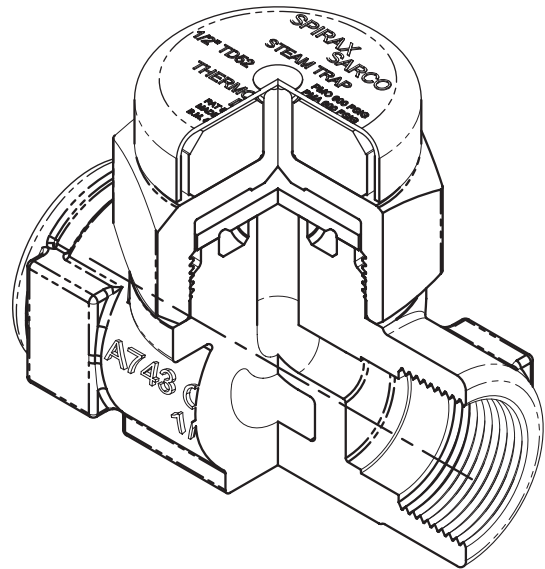
# Thermodynamic Steam Trap TDT Tracer Trap

## Description

The Thermodynamic steam trap cycles periodically to discharge condensate at a subcooled temperature.

It is unaffected by waterhammer or superheat. Specifically designed as a tracing trap.

<b>Model</b>	<b>TDT</b>
<b>PMO</b>	150 psi g (10.3 bar g)
<b>Sizes</b>	1/2"
<b>Connections</b>	NPT
<b>Construction</b>	Stainless steel



## Typical applications

Tracer lines and application where subcooling condensate is desired.

## Limiting operating conditions

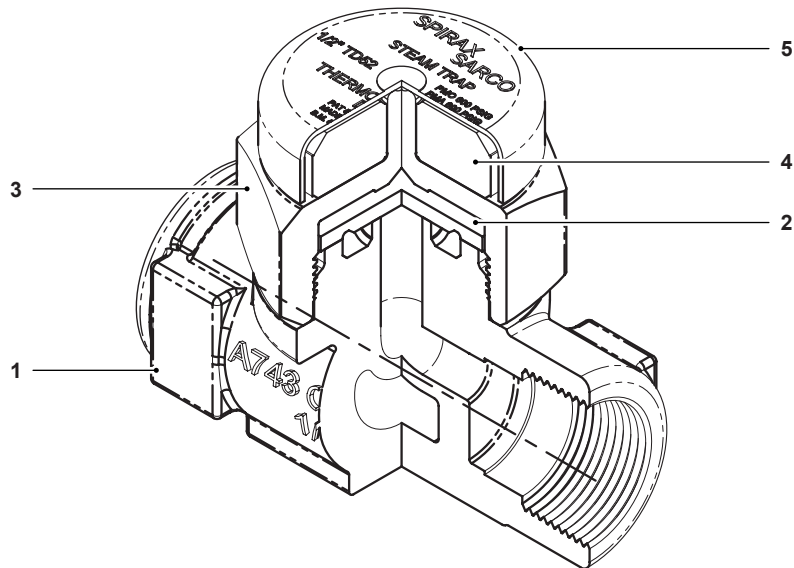
PMO	Maximum operating pressure	150 psi g	(10 bar g)
	Maximum operating temperature (at all operating pressures)	800 °F	(427 °C)
	Minimum pressure for satisfactory operation is	5 psi g	(0.34 bar g).

Maximum back pressure should not exceed 80% of the inlet pressure under any conditions of operation, otherwise the trap may not shut.

## Pressure shell design conditions

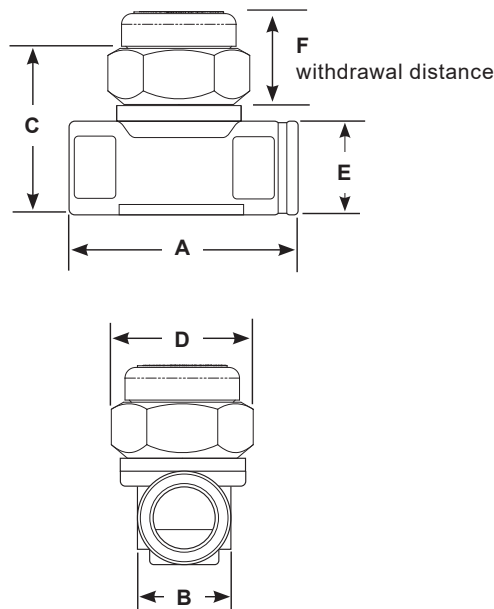
PMA	Maximum allowable pressure	600 psi g/up to 800 °F	(41 bar g/up to 427 °C)
TMA	Maximum allowable temperature	800 °F/0-600 psi g	(427 °C/0-41 bar g)

## Materials



No.	Part	Material	
1	Body	Stainless steel (with ENP)	ASTM A743 GR. CA40
2	Disc	Stainless steel	AISI 420
3	Cap	Stainless steel (with ENP)	ASTM A743 GR. CA40
4	Insulator	Ceramic	
5	Nameplate Cover	Stainless steel	Type 304

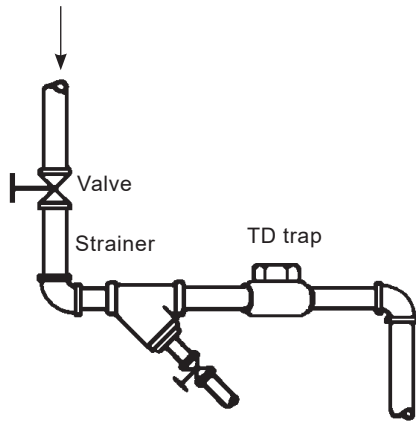
## Dimensions/weights (approximate) in inches (mm) and lbs (kg)



Type	A	B	C	D	E	F	Weight
1/2" TD52L	2.7 (68.6)	1.24 (31.5)	2.5 (63.5)	1.7 (43.2)	1.2 (30.5)	.4 (10.2)	1.2 lbs (.54 kg)

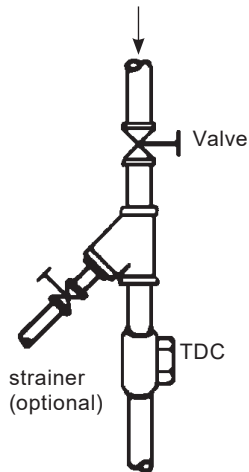
## Recommended installation

From equipment being drained



## Freeze resistant installation

From equipment being drained



## Capacities

Pressure psi g	Pressure bar g	Cold Water lb/hr. (kg/hr)	Hot condensate lb/hr. (kg/hr)
10	0.69	440 (200)	75 (34)
20	1.4	550 (249)	100 (45)
30	2.1	630 (286)	100 (45)
50	3.4	830 (376)	100 (45)
75	5.2	1000 (454)	100 (45)
100	6.9	1190 (540)	100 (45)
125	8.6	1340 (608)	100 (45)
150	10.3	1445 (655)	100 (45)

Condensate flow	Average operating subcool below saturation
< 50 lb/hr (23 kg/hr)	34 °F (1 °C)
< 100 lb/hr. (45 kg/hr)	50 °F (10 °C)

Typical tracer output for  
100ft @ 40 °F (30.5 m @ 4 °C)  
product temperature

Pressure psi g (bar g)	3/8" nom. .50 OD	1/2" nom. .625 OD	3/4" nom. .875 OD	1" nom. 1.125 OD
15 (1)	15	18	25	33
25 (1.7)	16	20	28	36
50 (3.4)	19	23	32	42
100 (6.9)	22	28	39	50
150 (10)	25	31	44	56

## Sample specification

Steam trap shall be all stainless steel Thermodynamic disc type with connections on a common center line, which will operate in any position. Integral seat design with hardened disc and seating surfaces. Trap to have integral insulating cap.

## Maintenance

This product can be maintained without disturbing the piping connections. Complete isolation of the trap from both supply and return line is required before any servicing is performed.

The trap should be disassembled periodically for inspection and cleaning of the disc and seat.

The only wearing parts of the trap are the disc and seat rings, which should be inspected and cleaned periodically. Slight wear can often be corrected by resurfacing on a lapping plate.

## Caution

Only perform maintenance after trap has been isolated.

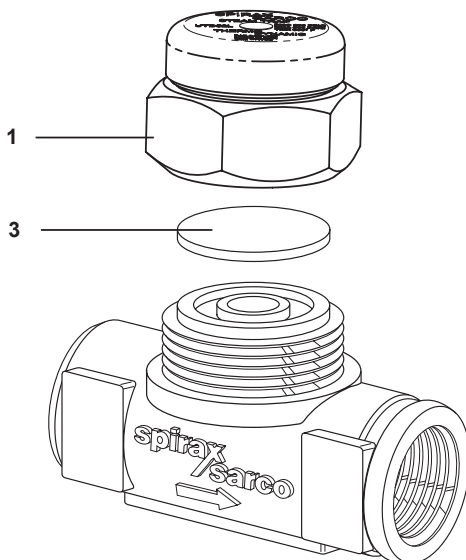
Complete installation and maintenance instructions are given in IMI 2.516, which accompanies the product.

## Installation

The preferred installation is in the horizontal position as close as possible to equipment being drained. Install strainer (20 mesh) upstream and full port isolating valves upstream and downstream of trap. Piping to and from the trap should be at least equal to or one size larger than trap connection. Do not weld pipe connection to trap. Body material is not suitable for welding.

For freeze resistant installations, all drains must be pitched toward the trap for gravity flow. Trap must be installed vertically, discharging downward. Discharge piping must be self-draining.

## Spare parts



Disc	3
Cap Assembly	1