

Thermodisc Steam Traps Series TD **BEAT TRAP**

The Series TD Thermodisc traps are designed for applications such as high-pressure steam drips and tracer lines, or others with light to moderate loads.

Typical applications for Thermodisc traps include:

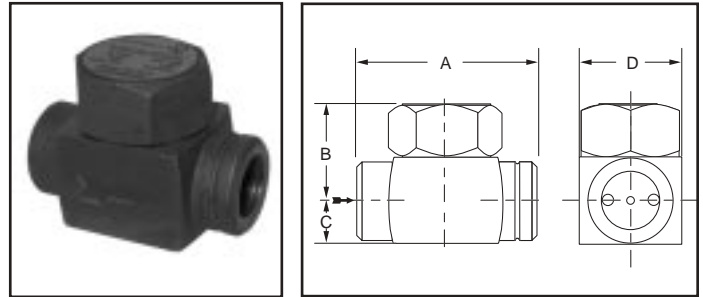
- Drip traps on steam mains and supply lines
- Tracer lines
- Laundry and kitchen equipment
- Superheated steam applications
- Outdoor installations that are subject to freezing

Series TD Thermodisc Traps

- Stainless steel construction resists both internal and external corrosion
 - Stainless steel cast body
 - Hardened stainless steel disc is the only moving part
 - Resists water hammer
- Unaffected by superheated steam
- Simplified installation
 - Traps operate in any orientation (horizontal preferred)
 - Freeze resistant when trap is piped in vertical orientation due to self-draining design
- Easy to monitor trap operation – audible discharge cycle makes checking operation simple
- Operate over wide pressure range from 2 to 600 psig (0.14 to 41.4 bar)
- Operates with back pressure up to 80% of line pressure
- Maximum Pressure – PMO/PMA 600 psi (41.4 bar)
- Maximum Temperature – TMO/TMA 800°F (426°C)

Materials of Construction	
Part	Specifications
Body	420F Stainless Steel ASTM A743 CA40F
Cap	420 Stainless Steel ASTM A743 CA40
Disc	420 Stainless Steel ASTM A743 CA40

Series TD6520 Thermodisc Trap

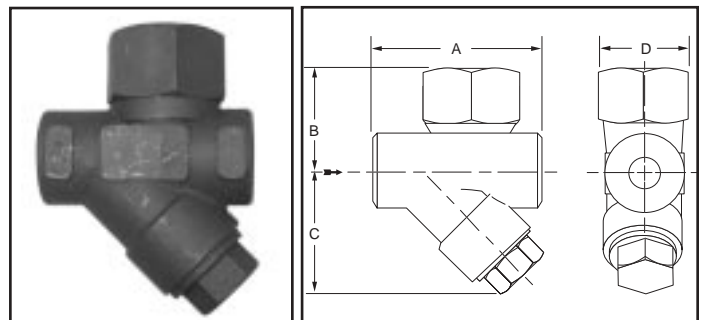


- Capacities to 4700 lbs/hr (2132 kg/hr)

Dimensions in. (mm)

Model	Size in.	A	B	C	D
TD6523	3/8	2 (51)	1 3/16 (30)	9/16 (14)	1 1/2 (38)
TD6524	1/2	2 3/4 (70)	1 3/8 (35)	5/8 (16)	1 1/2 (38)
TD6526	3/4	2 3/4 (70)	1 5/8 (41)	13/16 (21)	2 (51)
TD6528	1	3 1/4 (83)	1 15/16 (49)	15/16 (24)	2 (51)

Series TD6420 Thermodisc Trap with Integral Strainer



- Integral strainer to protect trap from contamination
- Capacities to 2200 lbs/hr (998 kg/hr)

Dimensions in. (mm)

Model	Size in.	A	B	C	D
TD6423	3/8	3 1/16 (78)	1 7/8 (48)	2 3/8 (60)	1 11/16 (43)
TD6424	1/2	3 1/16 (78)	1 7/8 (48)	2 3/8 (60)	1 11/16 (43)
TD6426	3/4	3 1/16 (78)	1 7/8 (48)	2 3/8 (60)	1 11/16 (43)
TD6428	1	3 1/4 (82)	2 5/8 (54)	2 1/2 (64)	1 11/16 (43)

Series TD  (continued)

Capacities (Gross Ratings) - at 10°F Below Saturation

Model	Size in.	Pressure Differential psig (bar)													
		2 (0.14)	5 (0.35)	10 (0.69)	25 (1.7)	50 (3.5)	75 (5.2)	100 (6.9)	150 (10.4)	200 (13.8)	250 (17.3)	300 (20.7)	400 (27.6)	500 (34.5)	600 (41.4)
Capacities in lbs./hr. (kg/hr.)															
TD6523	3/8	180 (82)	185 (84)	190 (86)	210 (95)	255 (116)	315 (143)	375 (170)	500 (227)	610 (277)	700 (318)	790 (358)	955 (433)	1105 (501)	1250 (567)
TD6524	1/2	290 (132)	310 (141)	345 (156)	440 (200)	580 (263)	710 (322)	810 (367)	995 (451)	1140 (517)	1275 (578)	1405 (637)	1630 (739)	1825 (828)	2000 (907)
TD6526	3/4	395 (179)	420 (191)	465 (211)	600 (272)	815 (370)	1000 (454)	1160 (526)	1440 (653)	1675 (760)	1895 (860)	2095 (950)	2430 (1102)	2750 (1247)	3050 (1383)
TD6528	1	620 (201)	660 (299)	730 (331)	920 (417)	1215 (551)	1490 (676)	1740 (789)	2195 (996)	2585 (1173)	2910 (1320)	3230 (1465)	3770 (1710)	4245 (1926)	4700 (2132)
TD6423	3/8			315 (143)	370 (168)	425 (193)	520 (236)	575 (261)	800 (363)	900 (408)	1080 (490)	1280 (581)	1380 (626)	1480 (671)	1650 (748)
TD6424	1/2			315 (143)	370 (168)	425 (193)	520 (236)	575 (261)	800 (363)	900 (408)	1080 (490)	1280 (581)	1380 (626)	1480 (671)	1650 (748)
TD6426	3/4			650 (295)	740 (336)	800 (363)	1000 (454)	1100 (499)	1400 (635)	1540 (699)	1630 (739)	1760 (798)	1930 (875)	2070 (939)	2200 (998)
TD6428	1			650 (295)	740 (336)	800 (363)	1000 (454)	1100 (499)	1400 (635)	1540 (699)	1630 (739)	1760 (798)	1930 (875)	2070 (939)	2200 (998)

Ordering Information

Equipped	NPT Model Number	BSPT Model Number	Size in.	NPT Part Number	BSPT Part Number	Weight lbs. (kg)
Without Strainer	TD6523	TD6523-J	3/8	405151	405159	0.8 (0.36)
	TD6524	TD6524-J	1/2	405152	405160	1.3 (0.59)
	TD6526	TD6526-J	3/4	405153	405161	2.1 (0.95)
	TD6528	TD6528-J	1	405154	405162	3.2 (1.45)
With Strainer	TD6423	TD6423-J	3/8	405155	405163	2.4 (1.1)
	TD6424	TD6424-J	1/2	405156	405164	2.4 (1.1)
	TD6426	TD6426-J	3/4	405157	405165	2.7 (1.2)
	TD6528	TD6428-J	1	405158	405166	3.3 (1.5)

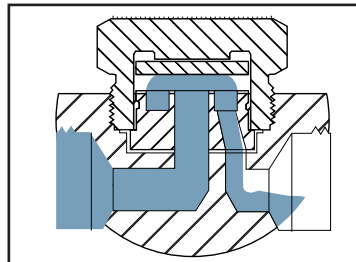
Thermodisc Steam Traps (continued)

Series TD

Operation

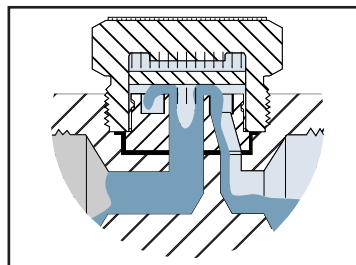
Start-Up

The disc is pushed off the seat by the inlet pressure. The impact force of the condensate hitting the disc keeps it open.



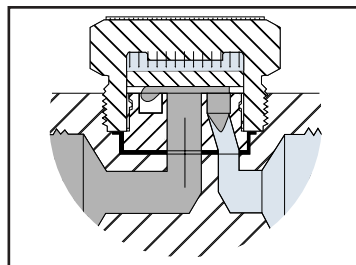
Operating

As the condensate nears saturation temperature more flash steam will appear. Some of the flash steam will escape to the area above the disc. This causes the pressure above the disc to increase and pushes the disc closer to the seat. Minimum differential pressure of 7 psig (.49 bar) is required for the trap to operate efficiently.



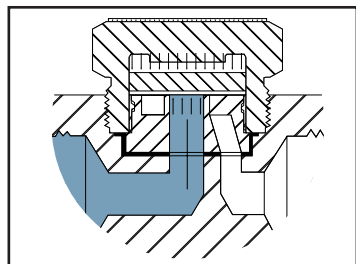
Closing

Once the condensate is discharged live steam enters the seat-disc chamber at high velocity. This high velocity causes a sudden pressure drop at the lower side of the disc and it snaps against the seat to close.



Closed

The instant the disc snaps closed on the seat the pressure above the disc is approximately the same as the upstream line pressure. Because the pressurized area above the disc is much larger than the inlet area the disc is held closed. The pressure above the disc decreases either by steam condensation or by non-condensables removed via the microbleed on the disc. When the pressure on top of the disc is low enough the disc is pushed off the seat and the process is repeated.



- Condensate
- Flash Steam
- Live Steam