

Steam Traps

Thermostatic Steam Trap

(Repairable)

WT3000
Thermostatic

Model	WT3000 (Repairable)
Sizes	1/2", 3/4"
Connections	NPT, SW, FLG
Body Material	Stainless Steel
Options	Strainer, Blowdown Valve
PMO Max. Operating Pressure	650 PSIG
TMO Max. Operating Temperature	Saturated Steam Temp.
PMA Max. Allowable Pressure	906 PSIG @ 100°F
TMA Max. Allowable Temperature	750°F @ 725 PSIG



Typical Applications

DRIP, TRACING, PROCESS: The **WT3000** is a general purpose medium capacity thermostatic trap that can be used for steam tracing; as a drip trap on steam mains and steam supply lines; as well as for process applications. All internal working components can be replaced while the trap body remains in-line. Thermostatic traps are small, light weight, operate over a wide pressure range, and have excellent air handling capabilities. Discharging air at start-up allows steam to quickly enter the system. All stainless steel construction and integral strainer option make the WT3000 an excellent choice for a variety of applications. Contains an extremely strong and rugged precision welded Stainless Steel thermal element which is highly resistant to waterhammer.

How It Works

This thermostatic trap contains a welded stainless steel thermal element that expands when heated and contracts when cooled to 5°F below saturated steam temperature. When air or sub-cooled condensate are present, the trap is in the open discharge position. When steam reaches the trap, the element expands and closes off tightly.

Features

- The thermal element and seat can be easily removed and replaced in minutes with the trap body still in-line
- Operates at steam pressures up to 650 PSIG
- Thermostatic traps are excellent at discharging air, which allows steam to enter quickly; extremely important during start-up
- Welded stainless steel thermal element resists shock from waterhammer
- Freeze-proof when trap is installed in a vertical orientation allowing for complete condensate drainage
- Body is produced from stainless steel investment casting
- Hardened stainless steel seat for extended service life
- Available with integral strainer and blowdown valve

Sample Specification

The steam trap shall be of a thermostatic type with stainless steel body, thermal element and internal strainer. Trap must be in-line repairable with a bolt-on type cover that is sealed with a spiral wound Stainless Steel AISI 316 gasket. Seat and valve to be hardened stainless steel.

Installation and Maintenance

Trap can be installed in any orientation. All internal working components are extremely easy to replace and can be performed while the trap body remains connected in-line. Repair kit includes ALL parts to fully rebuild the steam trap including thermal element, seat and gasket. The WT3000S model comes with an optional strainer. WT3000SB comes with optional blowdown valve for flushing dirt and scale from strainer.

Helpful Selection Information

Two orifice sizes are available: The 3/16" orifice should be used on all drip and tracing applications as well as small process applications with lower condensate loads. The 5/16" orifice is available to be used on process applications if additional capacity is required.

Options

Strainer, blowdown valve, steam lock release and special bellows available.

S = Strainer (**WT3001S**)

SB = Strainer and blowdown valve (**WT3001SB**)

SLR = Steam lock release

Special Bellows Option; available upon request:

- Fail-closed Bellows (standard bellows fails in open position)
- 43°F Sub-cool Bellows (Note: Standard bellows are designed for approximately 5°F sub-cool temperature)

How to Size / Order

Refer to the Capacity Chart to determine which model, the WT3001 or WT3003 is required to satisfy the condensate load based on steam inlet pressure.

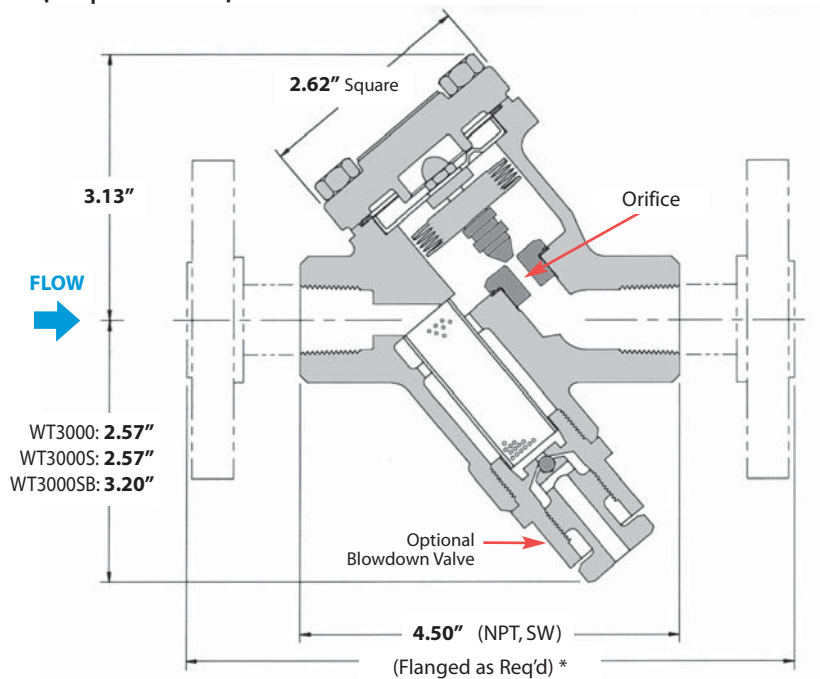
Example:

Application: 3754 lbs/hr at 100 PSIG steam inlet pressure
Size/Model: **WT3003S**, 5/16" orifice with strainer,
Specify size & connections (NPT, SW, FLG)

Example Model Codes:

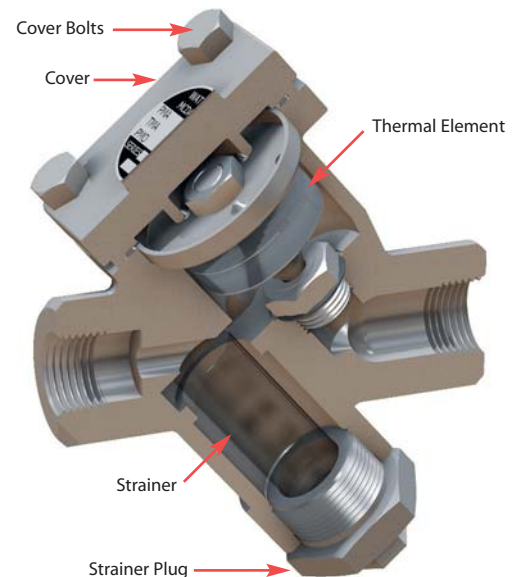
WT3003S-13-N 3/4" NPT with strainer, and 5/16" orifice.

WT3001SB-12-N 1/2" NPT with strainer and blowdown valve, 3/16" orifice



Weight: 4.5 lbs.

* Flanged face-to-face dimension 9" standard.
For custom sizes consult factory (9" minimum).



Size/Connection*	Model Code	Orifice Size	Description
1/2" NPT	WT3001-12-N	3/16"	No Strainer
3/4" NPT	WT3001-13-N	3/16"	No Strainer
1/2" NPT	WT3001S-12-N	3/16"	Strainer
3/4" NPT	WT3001S-13-N	3/16"	Strainer
1/2" NPT	WT3001SB-12-N	3/16"	Strainer & Blowdown
3/4" NPT	WT3001SB-13-N	3/16"	Strainer & Blowdown
1/2" NPT	WT3003-12-N	5/16"	No Strainer
3/4" NPT	WT3003-13-N	5/16"	No Strainer
1/2" NPT	WT3003S-12-N	5/16"	Strainer
3/4" NPT	WT3003S-13-N	5/16"	Strainer
1/2" NPT	WT3003SB-12-N	5/16"	Strainer & Blowdown
3/4" NPT	WT3003SB-13-N	5/16"	Strainer & Blowdown

* For Socket Weld Connection change **N** to **SW**

MATERIALS

Cover & Body	Stainless Steel, AISI 316L
Thermal Element	Stainless Steel, AISI 300
Valve & Seat	Stainless Steel, AISI 416
Cover Gasket	Stainless Steel, AISI 316
Seat Gasket	Stainless Steel, AISI 316
Cover Bolts	Steel, ASTM A193 GR B7 Nickel Plated
Strainer*	0.046 Perforated Stainless Steel AISI 304
Blowdown Valve*	Stainless Steel AISI 303

* Strainer and blowdown valve are optional

CAPACITIES — Condensate (lbs/hr)

Model	Orifice Size	Steam Inlet Pressure (PSIG)														
		5	10	20	50	100	125	150	200	250	300	350	400	500	600	650
WT3001	3/16"	441	625	882	1391	1827	1969	2095	2305	2483	2636	2777	2903	3129	3323	3413
WT3003	5/16"	903	1271	1811	2861	3754	4043	4300	4730	5093	5413	5702	5959	6421	6820	7004

Back Pressure as Percentage of Inlet Pressure	10	20	25	30	40	50	60	70	80	90
Percentage Decrease in Trap Capacity	0	0	0	2	5	12	20	30	40	55