

## STEAM TRAPS

## WT3000

## Thermostatic Steam Trap (Repairable)

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



## TYPICAL APPLICATIONS

**PROCESS:** The **WT3000** thermostatic steam trap is used for industrial process applications. Their compact size, all stainless steel construction, excellent air handling capability and wide operating pressure range make them a great choice for most process applications. Thermostatic traps are far superior to bucket traps and thermodynamic disc traps in their ability to remove air from the system.

## HOW IT WORKS

The thermostatic trap contains a welded stainless steel thermal element that expands when heated and contracts when cooled. When air and 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 have excellent air handling capability allowing air to be discharged rapidly and steam to enter the system quickly during start up
- Welded stainless steel thermal element that resists shock from water hammer
- Freezeproof 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

Isolation valves should be installed with trap. Trap can be installed in any position.

## MAINTENANCE

If the trap fails, remove the cover and replace the internal working components. Repair kit includes thermal element, seat and gasket. For full maintenance details see Installation and Maintenance Manual.

## OPTIONS

Strainer, blowdown valve, and steam lock release.

**S** = Strainer (**WT3001S**)

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

**SLR** = Steam lock release

### Fail-closed Bellows

**Special Bellows** For additional sub-cooling of condensate (down to 43°F below saturated steam temperature)

*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 is required to satisfy the condensate load. (Select steam inlet pressure, follow column down to correct capacity (lbs/hr) block) 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)

Add **S** to end of the model code if a Strainer is required

Add **SB** to end of the model code if a Strainer & Blowdown Valve is required

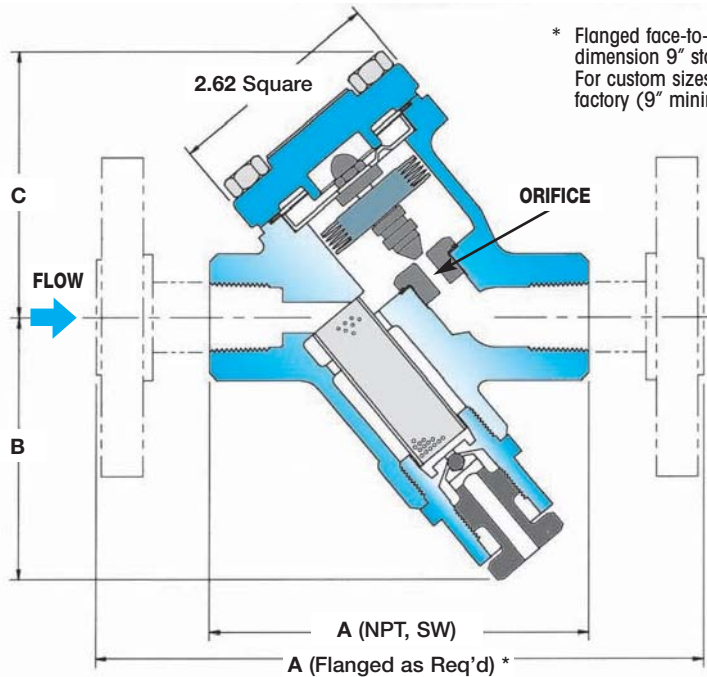
Examples:

**3/4" WT3003S** 3/4" connections with strainer, 5/16" orifice

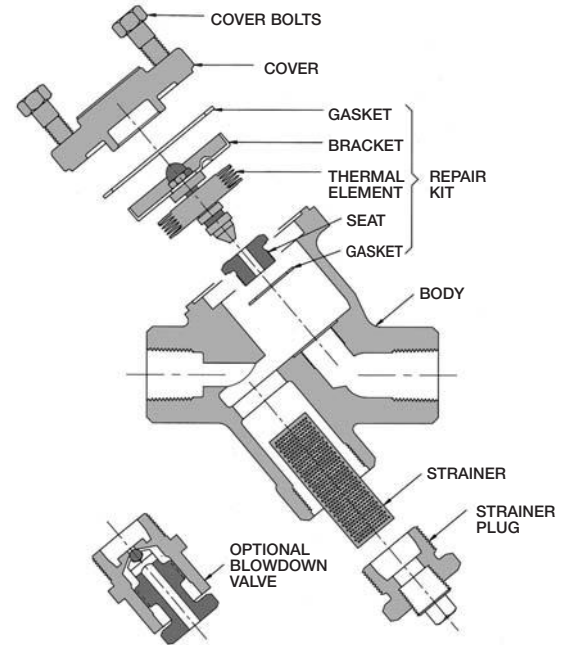
**1/2" WT3001SB** 1/2" connections with strainer and blowdown valve, 3/16" orifice

# WT3000

## Thermostatic Steam Trap



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



DIMENSIONS & WEIGHTS – inches/pounds					
Size	Connection	A	B	C	Weight (lbs)
<b>Series WT3000, WT3000S (Strainer)</b>					
1/2"	NPT, SW	4.5	2.57	3.13	4.5
3/4"	NPT, SW	4.5	2.57	3.13	4.5
<b>Series WT3000SB (Strainer &amp; Blowdown Valve)</b>					
1/2"	NPT, SW	4.5	3.2	3.13	4.5
3/4"	NPT, SW	4.5	3.2	3.13	4.5

S = Strainer only      SB = Strainer and Blowdown

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
Screen*	0.046 Perforated Stainless Steel AISI 304
Blowdown Valve*	Stainless Steel AISI 303

\* Screen and blowdown valve are optional

CAPACITIES – Condensate (lbs/hr)																		
Model	Pipe Size	Orifice Size	Steam Inlet Pressure (PSIG)															
			5	10	20	50	100	125	150	200	250	300	350	400	450	500	600	650
WT3001	1/2", 3/4"	3/16"	441	625	882	1391	1827	1969	2095	2305	2483	2636	2777	2903	3019	3129	3323	3413
WT3003		5/16"	903	1271	1811	2861	3754	4043	4300	4730	5093	5413	5702	5959	6195	6421	6820	7004

Notes: 1) 5/16" orifice size is standard and is normally used on process equipment.  
 2) 3/16" orifice size is offered for reduced capacity.  
 3) 5/64" low capacity orifice is available upon request.

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