Steam Traps
Bi-Metallic Steam Trap

BM300 Series
Bi-Metallic

Model	**BM300 (Repairable)**
Sizes	**1/2", 3/4, 1"**
Connections	**NPT, Socket Weld, Butt Weld, Flanged**
Body Material	**Forged Carbon Steel**
PMO Max. Operating Pressure	**320 PSIG**
TMO Max. Operating Temperature	**750ºF**
Max. Differential Pressure	**320 PSI**
PMA Max. Allowable Pressure	**740 PSIG @ 100ºF**
TMA Max. Allowable Temperature	**750ºF @ 505 PSIG**

Typical Applications

DRIP, TRACING: The **BM300** is a Medium Capacity Bi-metallic steam trap which is ideal as a drip trap on superheated steam mains and steam supply lines, as well as saturated steam lines and steam tracing applications. Bi-metallic traps subcool condensate before opening, making them extremely energy efficient and highly resistant to steam loss. The Body is made from Forged Carbon Steel and trap internals are fully repairable while the trap body remains in-line.

Thermostatic traps are small, lightweight and have excellent air discharging capabilities allowing it to also be used as a low-capacity air vent. Discharging air at start-up allows steam to quickly enter the system. Contains an extremely strong and robust bimetal element which is highly resistant to waterhammer. The hardened plug is back-seated to function as an internal check valve. Standard subcool is 25°F but is also field-adjustable.

How It Works

This thermostatically-actuated trap contains a bi-metallic thermal element that expands when heated and contracts when cooled to **25˚F** (average) 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 bi-metallic element and seat can be easily removed and replaced in minutes with the trap body still in-line
- Excellent at discharging air, which allows steam to enter quickly; extremely important during start-up
- Rugged stainless steel bi-metal element resists shock from waterhammer
- Freeze-proof when trap is installed in a vertical orientation allowing for complete condensate drainage
- Hardened stainless steel seat for extended service life
- Includes integral strainer with optional blowdown valve Standard factory-set subcool is 25°F but is also field-adjustable for optimum performance and energy savings

Sample Specification

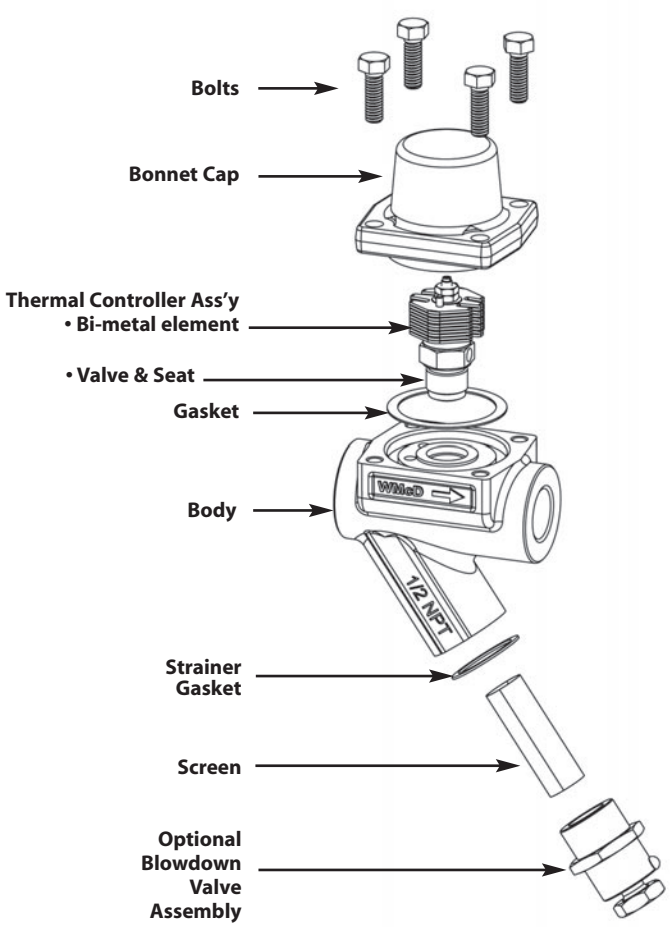
The steam trap shall be of thermostatic bi-metal type with forged carbon steel body, stainless steel thermal element, and integral strainer. Trap must be in-line repairable with a bolt-on cover. Seat and valve to be hardened stainless steel.

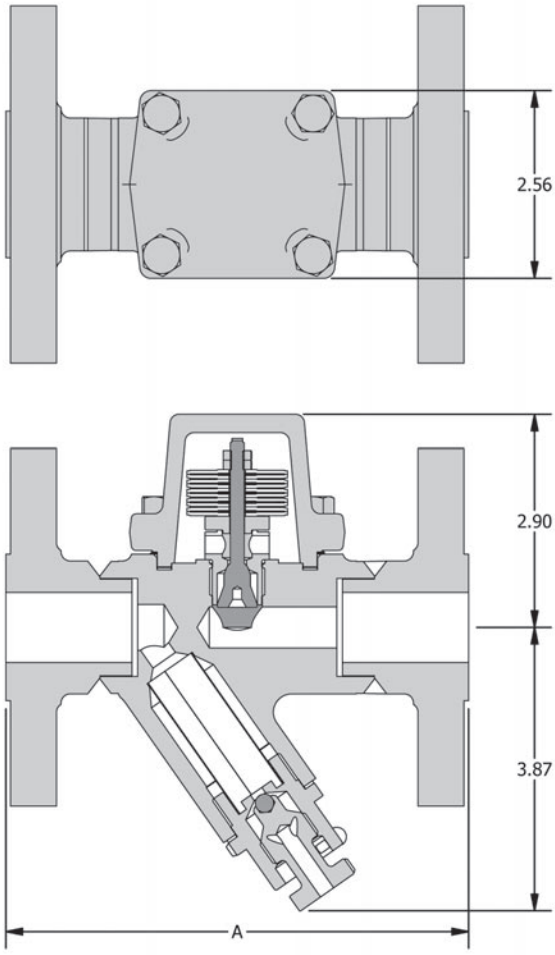
Installation and Maintenance

Trap can be installed in any orientation. Internal seating surfaces and bi-metal may be accessed for cleaning or repair, if needed, while the product remains in-line. Repair is done by removing the cover and replacing the thermal controller assembly.

Size/Connection NPT	Model Code	PMO PSIG	Weight lbs
Steam Trap with Internal Strainer			
1/2" NPT	**BM300S-12-N**	320	6
3/4" NPT	**BM300S-13-N**	320	6
1" NPT	**BM300S-14-N**	320	6
1/2" SW	**BM300S-12-SW**	320	6
3/4" SW	**BM300S-13-SW**	320	6
1" SW	**BM300S-14-SW**	320	6
1/2" BW	**BM300S-12-BW**	320	6
3/4" BW	**BM300S-13-BW**	320	6
1" BW	**BM300S-14-BW**	320	6
1/2" 150# FLG	**BM300S-12-F150**	320	8
3/4" 150# FLG	**BM300S-13-F150**	320	9
1" 150# FLG	**BM300S-14-F150**	320	10
1/2" 300# FLG	**BM300S-12-F300**	320	9
3/4" 300# FLG	**BM300S-13-F300**	320	11
1" 300# FLG	**BM300S-14-F300**	320	12
Steam Trap with Internal Strainer & Blowdown Valve			
1/2" NPT	**BM300SB-12-N**	320	6
3/4" NPT	**BM300SB-13-N**	320	6
1" NPT	**BM300SB-14-N**	320	6
1/2" SW	**BM300SB-12-SW**	320	6
3/4" SW	**BM300SB-13-SW**	320	6
1" SW	**BM300SB-14-SW**	320	6
1/2" BW	**BM300SB-12-BW**	320	6
3/4" BW	**BM300SB-13-BW**	320	6
1" BW	**BM300SB-14-BW**	320	6
1/2" 150# FLG	**BM300SB-12-F150**	320	8
3/4" 150# FLG	**BM300SB-13-F150**	320	9
1" 150# FLG	**BM300SB-14-F150**	320	10
1/2" 300# FLG	**BM300SB-12-F300**	320	9
3/4" 300# FLG	**BM300SB-13-F300**	320	11
1" 300# FLG	**BM300SB-14-F300**	320	12

DIMENSIONS – *inches*





MATERIALS

Body	A105 Forged Carbon Steel
Thermal Controller Assembly	
• Bi-metal Element	Stainless Steel
• Valve	Hardened Stainless Steel
• Seat	Hardened Stainless Steel
Flange	A105 Forged Carbon Steel
Gasket	Grafoil with SS Liner
Bolts	Steel, A193, GR B7
Screen	Stainless Steel, 40 Mesh
Strainer Blowdown	Copper
Flange	Stainless Steel

"A' DIMENSIONS – *inches*

Size	NPT or SW	150# FLG	300# FLG
1/2"	3.74	5.9	5.9
3/4"	3.74	5.9	5.9
1"	3.74	6.3	6.3

HOT CAPACITIES – *Condensate (lbs/hr)*

Size	Model Code	Steam Inlet Pressure (PSIG) 15	20	30	40	50	75	100	150	200	250	320
1/2", 3/4", 1"	BM300	382	429	506	570	625	735	830	980	1100	1205	1330

COLD CAPACITIES – *Condensate (lbs/hr)*

Size	Model Code	Steam Inlet Pressure (PSIG) 15	20	30	40	50	75	100	150	200	250	320
1/2", 3/4", 1"	BM300	1532	1770	2165	2500	2795	3420	3935	4810	5560	6205	7055

Note: *Hot Condensate Capacities are running loads at 25˚F below saturation. Cold Water Capacities are start-up load capabilities.*