



## YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B302, B303, B318 AND B320

Energy-efficient Steam Traps for Drip and Tracing applications



B318



B320



B302



B303

### FEATURES

- Simple and robust.
- Modulating discharge.
- Discharges condensate below steam temperature.
- Excellent air discharge.
- Operates on superheated steam.
- Unaffected by water hammer and vibrations.
- Built-in strainer.

### GENERAL APPLICATION

Steam applications where condensate sensible heat can be recovered, steam tracing lines, drip points, storage tank coils, steam air venting, etc.

### TECHNICAL DATA

Technology:	Bimetallic
Sizes:	1/2" - 2" (DN 15 - DN 50)
Temperature:	Max. 842 F° [450 C°]
Pressure rating:	Max 2030 psig / 140 bar
Capacity:	Max 18.739 lb/hr / 8500 kg/hr
Connections:	Female screwed (BSP or NPT), Flanged, Socket Weld, Butt Weld
Materials:	Steel, Chrome Moly

# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B302, B303, B318 AND B320

---

## CONTENTS

---

Bimetallic Steam Traps and Air Eliminators B302	
½" - 1" (DN 15 - DN 25) .....	3
Bimetallic Steam Traps and Air Eliminators B303	
½" - 1" (DN 15 - DN 25) .....	5
Bimetallic Steam Traps and Air Eliminators B303	
1½" - 2" (DN 40 - DN 50) .....	7
Bimetallic Steam Traps and Air Eliminators B318	
½" - 1" (DN 15 - DN 25) .....	9
Bimetallic Steam Traps and Air Eliminators B320	
½" - 1" (DN 15 - DN 25) .....	11

# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B302 STEEL (1/2" - 1"; DN 15 - DN 25)

## BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS B302

### General Application

B302 series bimetallic steam traps and air eliminators are simple and robust traps, recommended for steam applications where condensate sensible heat can be recovered, steam tracing lines, drip points, storage tank coils, steam air venting, etc. The use of condensate sensible heat reduces the steam consumption. Connections are female screwed or flanged.

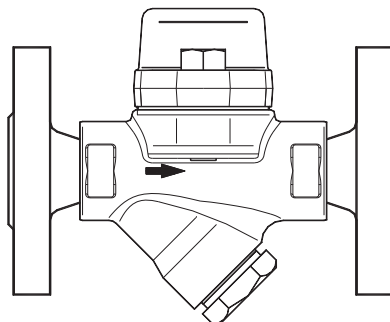
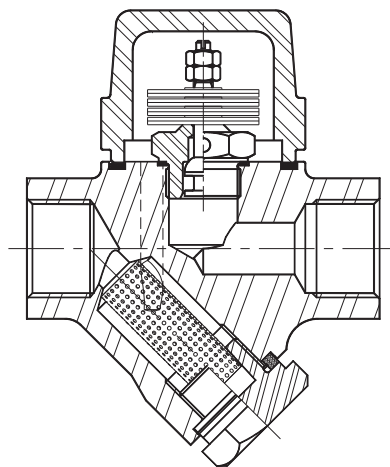
### Features

- Modulating discharge.
- Discharges condensate below steam temperature.
- Excellent air discharge.
- Operates on superheated steam.
- Unaffected by water hammer and vibrations.
- Built-in strainer.

### Technical Data

Options: Blowdown valve  
 Use: Saturated and superheated steam

Available Models: B302  
 Sizes: 1/2" - 1" (DN 15 - DN 25)  
 Connections: Female screwed BSP or NPT  
 Flanged EN1092-1 PN40 or ANSI  
 Installation: Horizontal installation recommended; can be installed in any position  
 See installation and maintenance instructions



### BODY LIMITING CONDITIONS

Flanged PN40 / ANSI 300*		Flanged ANSI 150**		Related Temp.	
Allowable Pressure		Allowable Pressure			
psi	bar	psi	bar	°F	°C
580	40.0	280	19.3	122	50
508	35.0	229	15.8	302	150
441	30.4	175	12.1	482	250
400	27.6	148	10.2	572	300

### NOTES

Max. Operating Pressure (PMO): 247 psi (17 bar)

Max. Operating Temperature (TMO): 482°F (250°C)

\* According to EN1092-1:2007

\*\* According to EN1759-1:2004

Body limiting conditions PN40 or below, depending on the type of connection adopted. Rating PN40 for thread, SW and BW.

# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

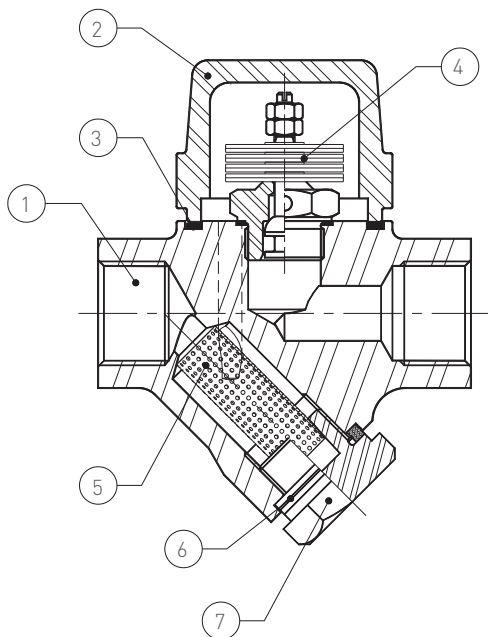
B302 STEEL (1/2" - 1"; DN 15 - DN 25)

## FLOW RATE CAPACITY in lb/hr (kg/h)

Model	Size in. (DN)	Differential Pressure																			
		psi 7.3	bar 0.5	psi 14.5	bar 1	psi 29	bar 2	psi 58	bar 4	psi 87	bar 6	psi 116	bar 8	psi 145	bar 10	psi 174	bar 12	psi 203	bar 14	psi 247	bar 17
B302	1/2" (15) - 1" (25) A	276	125	441	200	705	320	904	410	981	445	1069	485	1102	500	1190	540	1279	580	1323	600
B302	1/2" (15) - 1" (25) B	992	450	1543	700	2205	1000	2690	1220	2954	1340	3197	1450	3439	1560	3638	1650	3924	1780	4078	1850

## NOTES

- A Condensate discharge at 50°F (10°C) below saturation temperature.
- B Cold water capacity at about 68°F (20°C).



## MATERIALS

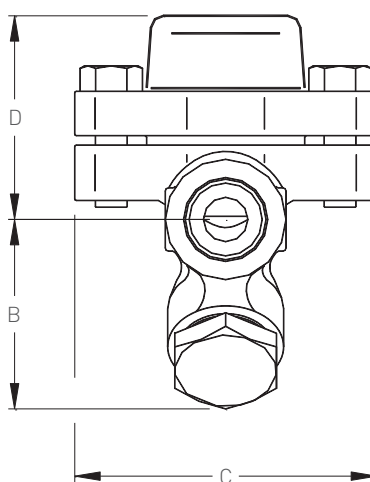
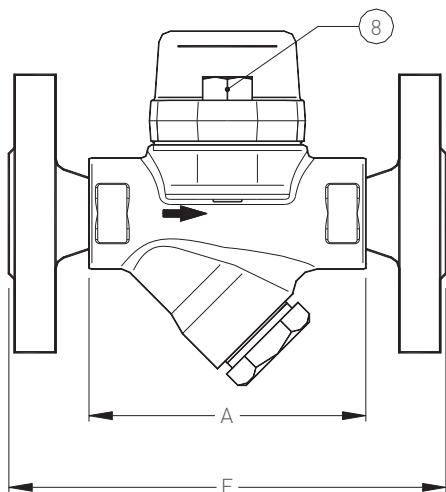
Pos. nr.	Designation	Material
1	Body	P250GH / 1.0460
2	Cover	P250GH / 1.0460
3	Gasket*	St. Steel / Graphite
4	Valve assy.*	Bimetal
5	Strainer screen*	AISI304 / 1.4301
6	Gasket*	St. Steel / Graphite
7	Cover strainer*	A 105 / 1.0432
8	Bolts	A2-70

\* Available spare parts

## DIMENSIONS inches / mm

Size in. (DN)	Screwed and SW*								EN PN16/PN40				ANSI 150				ANSI 300					
	A		B		C		D		Weight		E		Weight		E		Weight					
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm	lbs	kg	inch	mm	lbs	kg				
1/2 (15)	3.74	95	2.32	59	3.74	95	2.56	65	3.5	1.6	5.91	150	7.1	3.2	5.91	150	6.0	2.7	4.3	5.91	7.7	3.5
3/4 (20)	3.74	95	2.32	59	3.74	95	2.56	65	3.5	1.6	5.91	150	8.6	3.9	5.91	150	6.8	3.1	150	5.91	10.0	4.7
1 (25)	3.74	95	2.56	65	3.74	95	2.56	65	4.0	1.8	6.30	160	10.0	4.7	6.30	160	9.5	4.3	160	6.30	13.0	5.9

\* BW (Butt Weld) on request



# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B303 STEEL (1/2" - 1"; DN 15 - DN 25)

## BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS B303

### General Application

B303 series bimetallic steam traps and air eliminators are simple and robust traps, recommended for steam applications where condensate sensible heat can be recovered, steam tracing lines, drip points, storage tank coils, steam air venting, etc. The use of condensate sensible heat reduces the steam consumption. Connections are female screwed or flanged.

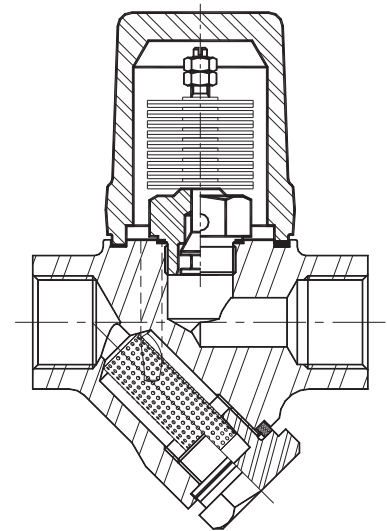
### Features

- Modulating discharge.
- Discharges condensate below steam temperature.
- Excellent air discharge.
- Operates on superheated steam.
- Unaffected by water hammer and vibrations.
- Built-in strainer.

### Technical Data

Options: Blowdown valve  
 Use: Saturated and superheated steam

Available Models: B303  
 Sizes: 1/2" - 1" (DN 15 - DN 25)  
 Connections: Female screwed BSP or NPT  
 Flanged EN1092-1 PN40 or ANSI  
 Installation: Horizontal installation recommended; can be installed in any position  
 See installation and maintenance instructions



### BODY LIMITING CONDITIONS

Flanged PN40 / ANSI 300*		Flanged ANSI 150**		Related Temp.	
Allowable Pressure		Allowable Pressure			
psi	bar	psi	bar	°F	°C
580	40.0	280	19.3	122	50
508	35.0	229	15.8	302	150
441	30.4	175	12.1	482	250
400	27.6	148	10.2	572	300

### NOTES

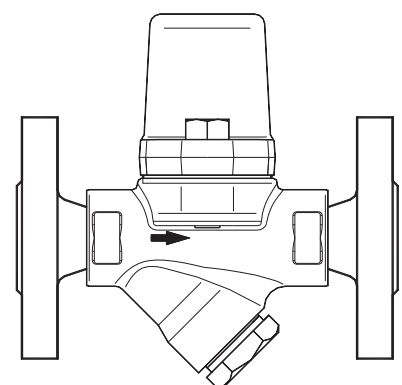
Max. Operating Pressure (PMO): 464 psi (32 bar)

Max. Operating Temperature (TMO): 572°F (300°C)

\* According to EN1092-1:2007

\*\* According to EN1759-1:2004

Body limiting conditions PN40 or below, depending on the type of connection adopted. Rating PN40 for thread, SW and BW.



# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

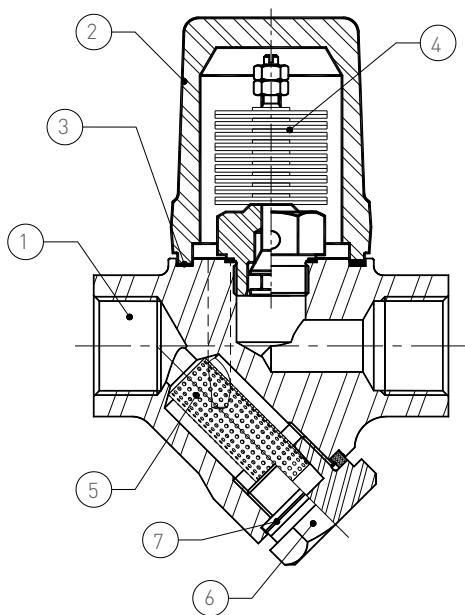
B303 STEEL (1/2" - 1"; DN 15 - DN 25)

## FLOW RATE CAPACITY in lb/hr (kg/h)

Model	Size in. (DN)	Differential Pressure																									
		psi bar		psi bar		psi bar		psi bar		psi bar		psi bar		psi bar		psi bar											
		7.3	0.5	14.5	1	29	2	58	4	87	6	145	10	174	12	203	14	232	16	261	18	290	20	363	25	464	32
B303	1/2" (15) - 1" (25)A	441	200	661	300	860	390	948	430	1124	510	1279	580	1323	600	1367	620	1455	660	1499	680	1543	700	1631	740	1786	810
B303	1/2" (15) - 1" (25)B	1543	700	2205	1000	2866	1300	3373	1530	3858	1750	4519	2050	4740	2150	4960	2250	5203	2360	5467	2480	5622	2550	6063	2750	6393	2900

## NOTES

- A Condensate discharge at 50°F (10°C) below saturation temperature.
- B Cold water capacity at about 68°F (20°C).



## MATERIALS

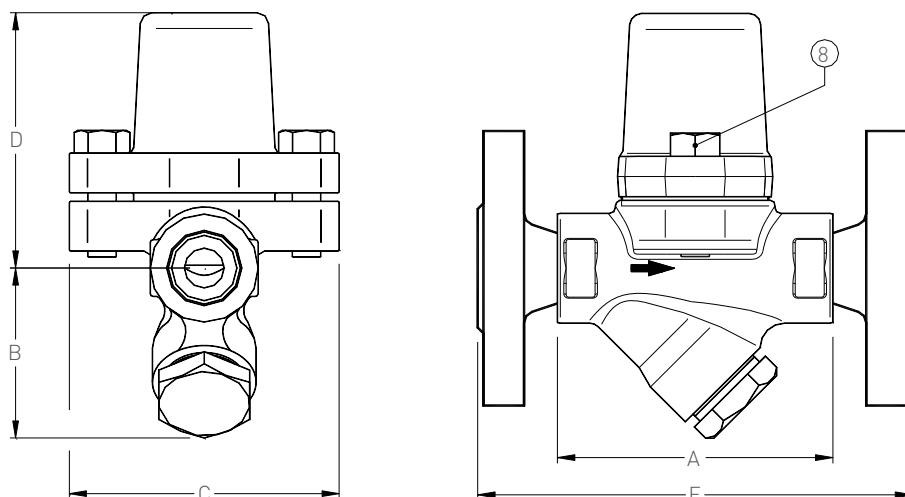
Pos. nr.	Designation	Material
1	Body	P250GH / 1.0460
2	Cover	P250GH / 1.0460
3	Gasket*	St. Steel / Graphite
4	Valve assy.*	Bimetal
5	Strainer screen*	AISI304 / 1.4301
6	Cover strainer*	A 105 / 1.0432
7	Gasket*	St. Steel / Graphite
8	Bolts	A2-70

\* Available spare parts

## DIMENSIONS inches / mm

Size in. (DN)	Screwed and SW*										EN PN16/PN40				ANSI 150				ANSI 300			
	A		B		C		D		Weight		E		Weight		E		Weight		E		Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm	lbs	kg	inch	mm	lbs	kg	inch	mm	lbs	kg
1/2 (15)	3.74	95	2.32	59	3.74	95	3.54	90	4.6	2.1	2.1	150	8.2	3.7	5.91	150	3.2	7.1	150	5.91	4.0	8.8
3/4 (20)	3.74	95	2.32	59	3.74	95	3.54	90	4.6	2.1	2.1	150	10.0	4.5	5.91	150	3.7	8.2	150	5.91	5.3	12.0
1 (25)	3.74	95	2.56	65	3.74	95	3.54	90	4.6	2.1	6.30	160	11.0	4.9	6.30	160	4.5	10.0	160	6.30	6.1	13.0

\* BW (Butt Weld) on request



# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B303 STEEL (1½" - 2"; DN 40 - DN 50)

## BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS B303

### General Application

B303 series bimetallic steam traps and air eliminators are simple and robust traps, recommended for steam applications where condensate sensible heat can be recovered, steam tracing lines, drip points, storage tank coils, steam air venting, etc. The use of condensate sensible heat reduces the steam consumption. Connections are female screwed or flanged.

### Features

- Modulating discharge.
- Discharges condensate below steam temperature.
- Excellent air discharge.
- Operates on superheated steam.
- Unaffected by water-hammer and vibrations.
- Built-in strainer.

### Technical Data

Use: Saturated and superheated steam

Available Models: B303

Sizes: 1½" - 2" (DN 40 - DN 50)

Connections: Female screwed BSP or NPT  
Flanged EN 1092-1 PN40 or ANSI B 16.11  
SW - Socket weld to ANSI B 16.11  
BW - Butt weld to ANSI B16.25

Installation: Horizontal installation  
See installation and maintenance instructions



### BODY LIMITING CONDITIONS

Flanged PN40 / ANSI 300*		Flanged ANSI 150**		Related Temp.	
Allowable Pressure		Allowable Pressure			
psi	bar	psi	bar	°F	°C
580	40.0	280	19.3	122	50
508	35.0	229	15.8	302	150
441	30.4	175	12.1	482	250
400	27.6	148	10.2	572	300

### NOTES

Max. Operating Pressure (PMO): 464 psi (32 bar)

Max. Operating Temperature (TMO): 572°F (300°C)

\* According to EN1092-1:2007

\*\* According to EN1759-1:2004

Body limiting conditions PN40 or below, depending on the type of connection adopted. Rating PN40 for thread, SW and BW.

### CE MARKING (PED - EUROPEAN DIRECTIVE 97/23/EC)

ANSI 150	PN 40 / ANSI 300	Category
-	DN 40 - DN 50	1 (CE Marked)
1½" - 2"	-	SEP

# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

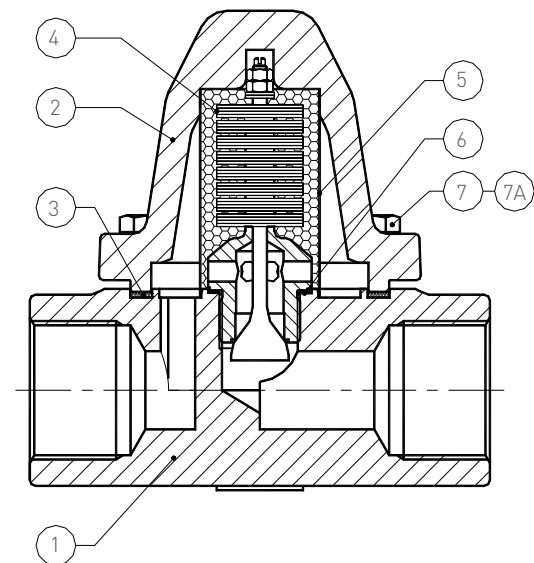
B303 STEEL (1½" - 2"; DN 40 - DN 50)

## FLOW RATE CAPACITY in lb/hr (kg/h)

Model	Size in. (DN)	Differential Pressure																							
		psi		bar		psi		bar		psi		bar		psi		bar		psi		bar					
		29	2	58	4	87	6	116	8	145	10	174	12	232	16	261	18	290	20	348	24	406	28	464	32
B303	[1½" (40) - 2" (50)]A	992	450	1080	490	1213	550	1411	640	1543	700	1609	730	1874	850	2028	920	2160	980	2315	1050	2425	1100	2535	1150
B303	[1½" (40) - 2" (50)]B	3086	1400	3307	1500	3748	1700	4299	1950	4850	2200	4850	2200	5732	2600	6173	2800	6504	2950	6944	3150	7275	3300	7716	3500

## NOTES

- A Condensate discharge at 50°F (10°C) below saturation temperature.
- B Cold water capacity at about 68°F (20°C).



## MATERIALS

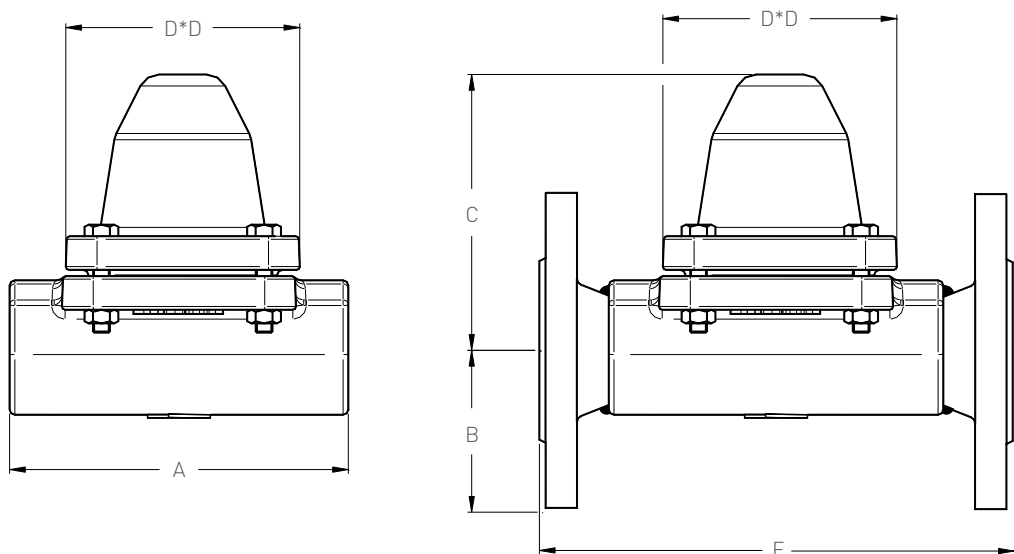
Pos. nr.	Designation	Material
1	Body	ASTM A105 / 1.0432 (Equiv.P250GH)
2	Cover	ASTM A105 / 1.0432 (Equiv.P250GH)
3	Gasket*	St. Steel / Graphite
4	Valve assembly*	Hardened St. Steel / Bimetal
5	Strainer screen*	AISI304 / 1.4301
6	Seat gasket*	Copper
7	Studs	ASTM A193 Gr.B7
7A	Nuts	ASTM A194 Gr.2H

\* Available spare parts

## DIMENSIONS inches / mm

Size in. (DN)	BW		BS-NPT-SW				EN 1092-1 PN40				ANSI 150			ANSI 300		
	A	Weight	A	C	D	Weight	B	F*	Weight	B	F*	Weight	B	F*	Weight	
in. mm	inch mm	lbs kg	inch mm	inch mm	inch mm	lbs kg	inch mm	inch mm	lbs kg	inch mm	inch mm	lbs kg	inch mm	inch mm	lbs kg	
1½ (40)	6.3 160	16 7.2	6.30 160	5.2 132	4.53 115	2.95 75	9.06 230	26 11.9	2.52 64	9.06 230	23 10.6	3.07 78	9.06 230	28 12.9		
2 (50)	6.3 160	21 9.3	9.06 230	5.2 132	4.53 115	3.27 83	9.06 230	33 14.9	2.99 76	9.06 230	32 14.5	3.27 83	9.06 230	35 16.1		

\* Different face to face dimensions on request





# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B318 CHROME MOLY (1/2" - 1"; DN 15 - DN 25)

## BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS B318

### General Application

B318 series bimetallic steam traps and air eliminators are simple and robust traps, recommended for steam applications where condensate sensible heat can be recovered, steam tracing lines, drip points, storage tank coils, steam air venting, etc. The use of condensate sensible heat reduces the steam consumption. Connections are female screwed, socket weld, butt weld or flanged.

### Features

- Modulating discharge.
- Discharges condensate below steam temperature.
- Excellent air discharge.
- Operates on superheated steam.
- Unaffected by water-hammer and vibrations.
- Built-in strainer.

### Technical Data

Use: Saturated and superheated steam

Available Models: B318

Sizes: 1/2" - 1" (DN 15 - DN 25)

Connections: Female screwed BSP or NPT  
Flanged EN 1092-1 or ANSI B 16.11  
SW - Socket Weld to ANSI B 16.11  
BW - Butt Weld to ANSI B16.25

Installation: Horizontal installation recommended; can be installed in any position  
See installation and maintenance instructions



### BODY LIMITING CONDITIONS

Flanged PN100*		Flanged ANSI 600**		Related Temp.	
Allowable Pressure		Allowable Pressure			
psi	bar	psi	bar	°F	°C
1450	100	1344	92.7	482	250
1416	97.6	1166	80.4	662	350
1276	88	982	67.7	842	450
931	64.2	808	55.7	932	500

### NOTES

\* According to EN1092-1:2007

\*\* According to EN1759-1:2004

Operating pressure: 363 psi (25 bar) to 1160 psi (80 bar)

Body limiting conditions PN100 or below, depending on the type of connection adopted. Rating PN100 for thread, SW and BW.

# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

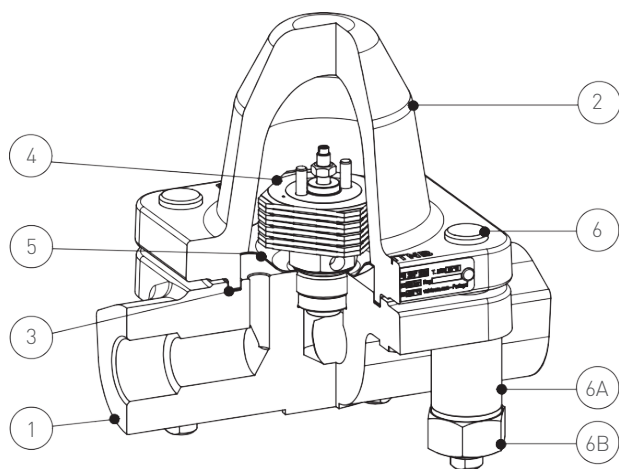
B318 CHROME MOLY (1/2" - 1"; DN 15 - DN 25)

## FLOW RATE CAPACITY in lb/hr (kg/h)

Model	Size in. (DN)	Differential Pressure																					
		psi 116	bar 8	psi 145	bar 10	psi 218	bar 15	psi 291	bar 20	psi 363	bar 25	psi 435	bar 30	psi 580	bar 40	psi 725	bar 50	psi 870	bar 60	psi 1015	bar 70	psi 1233	bar 85
B318	[1/2" (15) - 1" (25)]A	1080	490	1124	510	1323	600	1433	650	1543	700	1565	710	1742	790	1786	810	1874	850	1984	900	2006	910
B318	[1/2" (15) - 1" (25)]B	4409	2000	4850	2200	5952	2700	6614	3000	7275	3300	7937	3600	8818	4000	9921	4500	10803	4900	11685	5300	12787	5800

## NOTES

- A Condensate discharge at 50°F (10°C) below saturation temperature.
- B Cold water capacity at about 68°F (20°C).



## MATERIALS

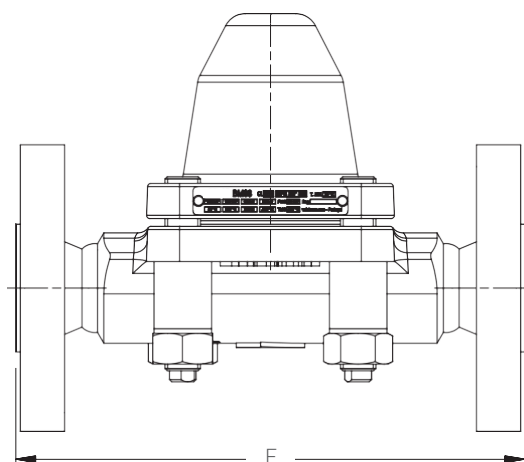
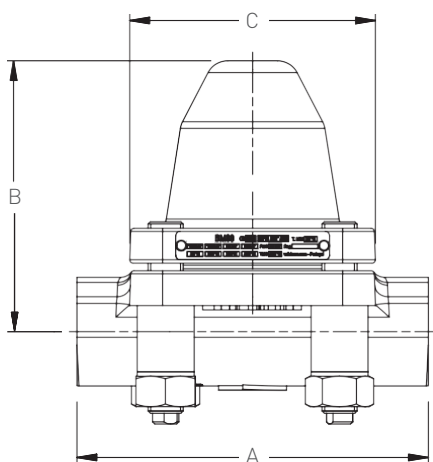
Pos. nr.	Designation	Material
1	Body	A182F22 / 1.7380 [Equiv. 10CrMo910]
2	Cover	A182F22 / 1.7380 [Equiv. 10CrMo910]
3	Gasket*	Stainless steel / Graphite
4	Bimetallic regulator*	Corrosion resistant bimetal; Stainless steel
5	Strainer	AISI 304 / 1.4301
6	Studs	A193 Gr. B16
6A	Extension sleeve	A193 Gr. B16
6B	Nuts	A194 Gr. 4

\* Available spare parts

## DIMENSIONS inches / mm

Size in. (DN)	BSP - NPT - SW - BW								EN 1092-1 PN100				ANSI 600			
	A		B		C		Weight		F*		Weight		F*		Weight	
	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm	lbs	kg	inch	mm	lbs	kg
1/2 (15)	6.3	160	4.92	125	4.41	112	14	6.3	8.27	210	16.31	7.4	9.06	230	15.87	7.2
3/4 (20)	6.3	160	4.92	125	4.41	112	13.7	6.2	9.06	230	18.52	8.4	9.06	230	16.98	7.7
1 (25)	6.3	160	4.92	125	4.41	112	13.5	6.1	9.06	230	20.06	9.1	9.06	230	17.86	8.1

\* Different face to face dimensions on request



# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

B320 CHROME MOLY (1/2" - 1"; DN 15 - DN 25)

## BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS B320

### General Application

B320 series bimetallic steam traps and air eliminators are simple and robust traps, recommended for steam applications where condensate sensible heat can be recovered, steam tracing lines, drip points, storage tank coils, steam air venting, etc. The use of condensate sensible heat reduces the steam consumption. Connections are female screwed, socket weld, butt weld or flanged.

### Features

- Modulating discharge.
- Discharges condensate below steam temperature.
- Excellent air discharge.
- Operates on superheated steam.
- Unaffected by water-hammer and vibrations.
- Built-in strainer.

### Technical Data

Use: Saturated and superheated steam

Available Models: B320

Sizes: 1/2" - 1" (DN 15 - DN 25)

Connections: Female screwed BSP or NPT  
Flanged EN 1092-1 or ANSI  
SW - Socket Weld to ANSI B 16.11  
BW - Butt Weld to ANSI B16.25

Installation: Horizontal installation recommended; can be installed in any position  
See installation and maintenance instructions



### BODY LIMITING CONDITIONS

Flanged PN 160*		Flanged ANSI 900**		Related Temp.	
Allowable Pressure		Allowable Pressure			
psi	bar	psi	bar	°F	°C
2321	160	1865	128.6	572	300
2264	156.1	1751	120.7	662	350
2044	140.9	1471	101.4	842	450
1491	102.8	808	83.4	932	550
1065	73.4	941	64.9	977	525

### NOTES

\* According to EN1092-1:2007

\*\* According to EN1759-1:2004

Maximum Operating pressure: 1595 psi (110 bar)

Body limiting conditions PN160 or below, depending on the type of connection adopted. Rating PN160 for thread, SW and BW.

# YARWAY BIMETALLIC STEAM TRAPS AND AIR ELIMINATORS

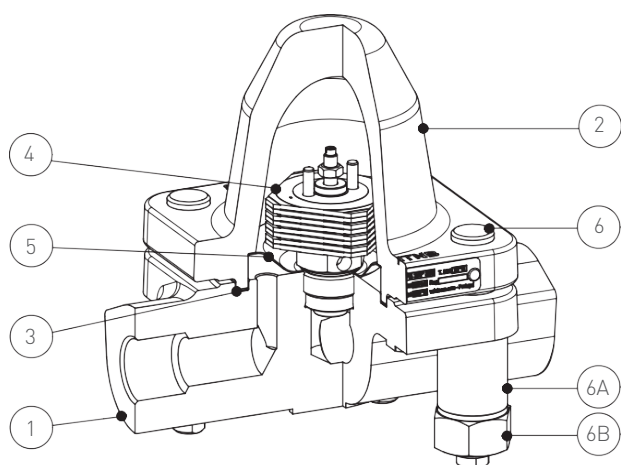
B320 CHROME MOLY (1/2" - 1"; DN 15 - DN 25)

## FLOW RATE CAPACITY in lb/hr (kg/h)

Model	Size in. (DN)	Differential Pressure																					
		psi 58	bar 4	psi 116	bar 8	psi 145	bar 10	psi 290	bar 20	psi 435	bar 30	psi 580	bar 40	psi 725	bar 50	psi 870	bar 60	psi 1305	bar 90	psi 1450	bar 100	psi 1595	bar 110
B320	[1/2" (15) - 1" (25)]A	794	360	1080	490	1124	510	1433	650	1565	710	1742	790	1786	810	1873	850	2050	930	2138	970	2183	990
B320	[1/2" (15) - 1" (25)]B	3307	1500	4409	2000	4850	2200	6613	3000	7937	3600	8818	4000	9921	4500	10803	4900	13228	6000	13669	6200	14330	6500

## NOTES

- A Condensate discharge at 50°F (10°C) below saturation temperature.
- B Cold water capacity at about 68°F (20°C).



## MATERIALS

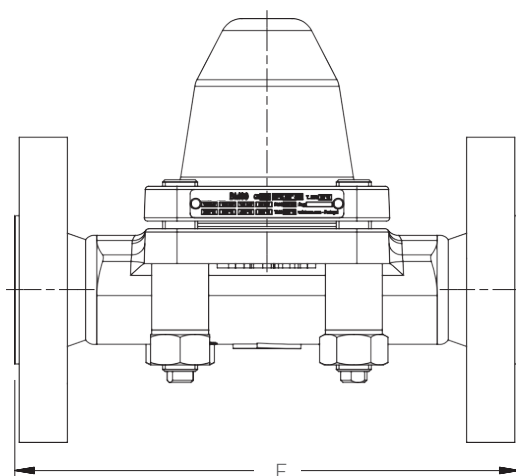
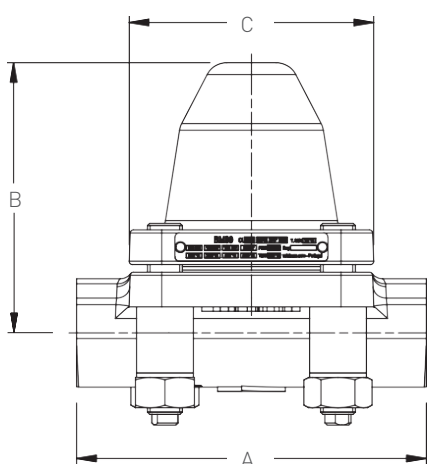
Pos. nr.	Designation	Material
1	Body	A182F22 / 1.7380 (Equiv. 10CrMo910)
2	Cover	A182F22 / 1.7380 (Equiv. 10CrMo910)
3	Gasket*	Stainless steel / Graphite
4	Bimetallic regulator*	Corrosion resistant bimetal; Stainless steel
5	Strainer	AISI304 / 1.4301
6	Studs	A193 Gr. B16
6A	Extension sleeve	A193 Gr. B16
6B	Nuts	A194 Gr. 4

\* Available spare parts

## DIMENSIONS inches / mm

Size in. (DN)	THREADED - SW - BW							EN 1092-1 PN160				ANSI 900				
	A		B		C		Weight		F*		Weight		F*		Weight	
	inch	mm	inch	mm	inch	mm	lbs	kg	inch	mm	lbs	kg	inch	mm	lbs	kg
1/2 (15)	6.3	160	4.72	125	4.53	112	14	6.3	8.27	210	16.31	7.4	9.06	230	18.08	8.2
3/4 (20)	6.3	160	4.72	125	4.53	112	13.7	6.2	----	----	----	----	9.06	230	19.40	8.8
1 (25)	6.3	160	4.72	125	4.53	112	13.5	6.1	9.06	230	20.06	9.1	10	254	22.71	10.3

\* Different face to face dimensions on request









VCTDS-08542-EN © 2019, 2022 Emerson Electric Co. All rights reserved 12/22. Yarway is a mark owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. The Emerson logo is a trademark and service mark of Emerson Electric Co. All other marks are the property of their prospective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Emerson Electric Co. does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Emerson Electric Co. product remains solely with the purchaser.

Emerson.com