

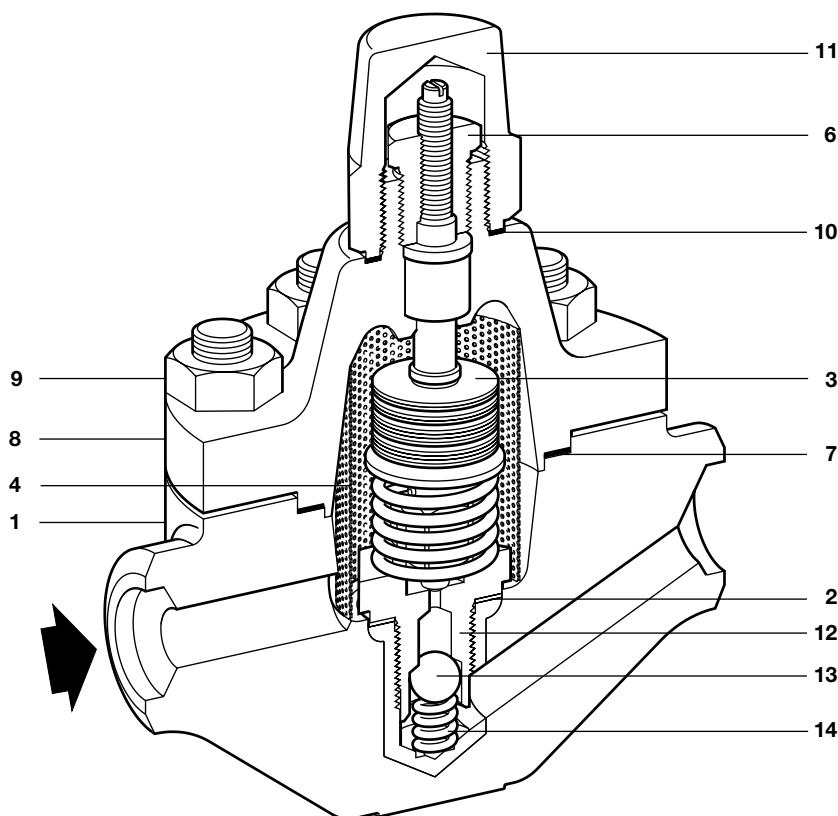


Cert. No. LRQ 0963008

ISO 9001

spirax/sarco

HP80, HP100, HP150 and HP210 Series Bimetallic Steam Traps

TI-P623-06
ST Issue 6


Description

The Spirax Sarco HP80, HP100, HP150 and HP210 bimetallic steam traps are made of forged alloy steel, and designed for draining high pressure, high temperature steam lines and processes. These steam traps, which are specially designed for HP steam, have a reinforced stainless steel insert within the body and can be repaired inline. They operate with no loss of steam, and quickly drain air, non-condensable gases and large quantities of cold water on start-up.

Normally open in the event of failure, they have a check valve, a built-in strainer screen and an external device for adjusting the discharge temperature of the condensate.

Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 97/23/EC.

Certification

These products are available with certification to EN 10204 3.1
Note: All certification/inspection requirements must be stated at the time of order placement.

Sizes and pipe connections

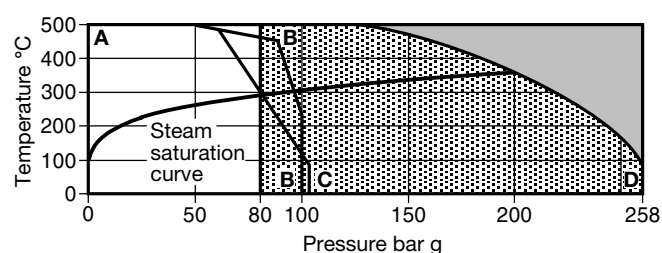
1/2", 3/4" and 1"	Socket weld to ASME (ANSI) B 16.11 or Butt weld to ASME (ANSI) B 16.25.	
DN15, DN20 and DN25	HP80 and HP100	Flanged PN63, PN100, ASME (ANSI) 600, 900 and 1500
	HP150 and HP210	Flanged ASME (ANSI) 900, 1500 and 2500

Materials

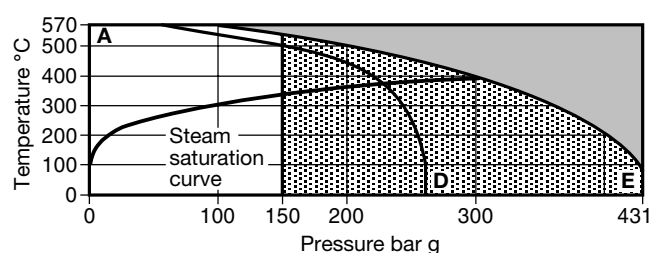
No. Part	Material	
1	Body HP80	Alloy steel ASTM A182 F11
	HP100, HP150, HP210	Alloy steel ASTM A182 F22
2	Valve seat gasket	Stainless steel
3	Bimetallic element	Stainless steel
4	Strainer screen	Stainless steel AISI 304L
5	Gland packing	Graphite (asbestos-free)
6	Locking gland nut	Stainless steel
7	Cover gasket	Spiral wound stainless steel and graphite (asbestos-free)
8	Cover HP80	Alloy steel ASTM A182 F11
	HP100, HP150, HP210	Alloy steel ASTM A182 F22
9	Cover HP80	Steel ASTM A193 Gr. B7
	stud HP100, HP150, HP210	Steel ASTM A193 Gr. B16
9	Cover HP80	Steel ASTM A194 Gr. 2H
	nut HP100, HP150, HP210	Steel ASTM A194 Gr. 4
10	Blind nut gasket	Metal, stainless steel/graphite
11	Blind nut	Steel
12	Valve seat	Stainless steel
13	Check valve	Stainless steel
14	Check valve spring	Stainless steel

Pressure/temperature limits

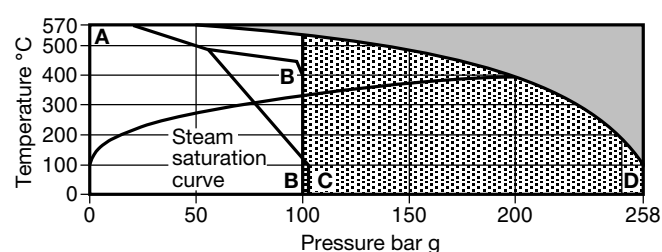
HP80



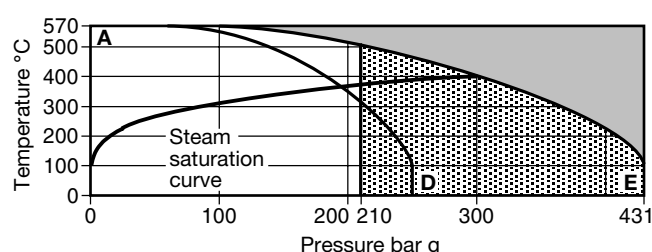
HP150



HP100



HP210



 The product **must not** be used in this region.

 The product should not be used in this region or beyond its operating range as damage to the internals may occur.

A - B Flanged PN63 and PN100.

A - C Flanged ASME (ANSI) Class 600.

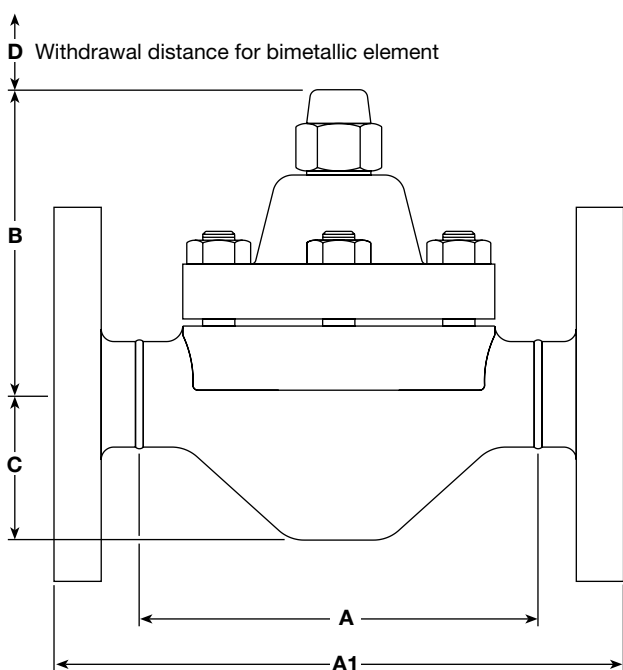
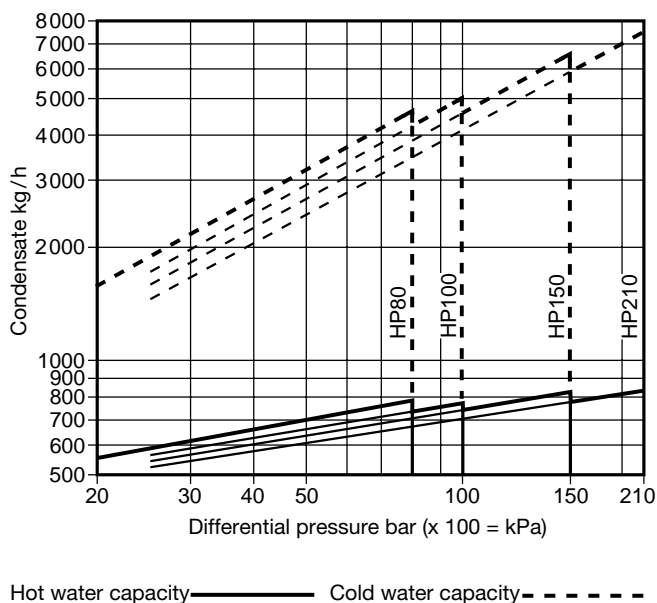
A - D Flanged ASME (ANSI) Class 900 and 1500 (socket weld and butt weld HP80 and HP100).

A - E Flanged ASME (ANSI) Class 2500 (socket weld and butt weld HP150 and HP210).

Body design conditions	HP80 and HP100	PN250, Class 1500 to ASME (ANSI) B 16.34
	HP150 and HP210	PN420, Class 2500 to ASME (ANSI) B 16.34
PMA Maximum allowable pressure	HP80 and HP100	258 bar g @ 93°C
	HP150 and HP210	431 bar g @ 93°C
TMA Maximum allowable temperature	HP80	500°C @ 126 bar g
	HP100	570°C @ 57 bar g
	HP150 and HP210	570°C @ 97 bar g
Minimum allowable temperature	HP80	-14°C
	HP100, HP150 and HP210	-22°C
PMO Maximum operating pressure	HP80	80 bar g @ 500°C
	HP100	100 bar g @ 530°C
	HP150	150 bar g @ 537°C
	HP210	210 bar g @ 525°C
TMO Maximum operating temperature	HP80	500°C @ 126 bar g
	HP100	570°C @ 57 bar g
	HP150 and HP210	570°C @ 97 bar g
Minimum inlet pressure for satisfactory operation is:	HP80	20 bar g
	HP100, HP150 and HP210	25 bar g
Minimum operating temperature	HP80, HP100, HP150, HP210	0°C
Note: For lower operating temperatures consult Spirax Sarco		
ΔPMX The backpressure for correct operation must not exceed 90% of the upstream pressure		
Designed for a maximum cold hydraulic test pressure of:	HP80 and HP100	388 bar g
	HP150 and HP210	646 bar g

Dimensions/weights (approximately) in mm and kg

Model	Connection	A	A1	B	C	D	Socket weld and Butt weld	Weight		
								Flanged		
								DN15	DN20	DN25
HP80	Socket weld and Butt weld	160	-	138	58	150	9.5	-	-	-
	PN63	-	235	138	58	150	-	12.3	12.7	13.8
	PN100	-	235	138	58	150	-	12.3	12.7	13.8
	Flanged ASME 600	-	235	138	58	150	-	11.5	12.3	12.8
	ASME 900	-	250	138	58	150	-	13.4	15.5	16.6
	ASME 1500	-	250	138	58	150	-	13.4	15.5	16.6
HP100	Socket weld and Butt weld	160	-	145	58	150	10.5	-	-	-
	PN63	-	235	145	58	150	-	13.3	14.7	14.8
	PN100	-	235	145	58	150	-	13.3	14.7	14.8
	Flanged ASME 600	-	250	145	58	150	-	12.5	13.3	13.8
	ASME 900	-	250	145	58	150	-	14.4	16.5	17.6
	ASME 1500	-	250	145	58	150	-	14.4	16.5	17.6
HP150 and HP210	Socket weld and Butt weld	210	-	168	58	150	11.5	-	-	-
	ASME 900	-	300	168	58	150	-	16.4	17.5	18.6
	ASME 1500	-	300	168	58	150	-	16.4	17.5	18.6
	ASME 2500	-	320	168	58	150	-	16.5	17.5	20.3

**Capacities****Safety information, installation and maintenance**

For full details see the Installation and Maintenance Instructions (IM-P623-04) supplied with the product.

How to order

Example: 1 off Spirax Sarco ½" HP80 bimetallic steam trap with socket weld end connections.

Spare parts

The spare parts available are detailed below. No other parts are supplied as spares.

Available spares



Bimetallic assembly kit	2, 3, 4, 7, 10, 12
Strainer screen	4
Cover gasket set (packet of 3)	7
Gasket set	2, 7, 10
Check valve assembly	13, 14

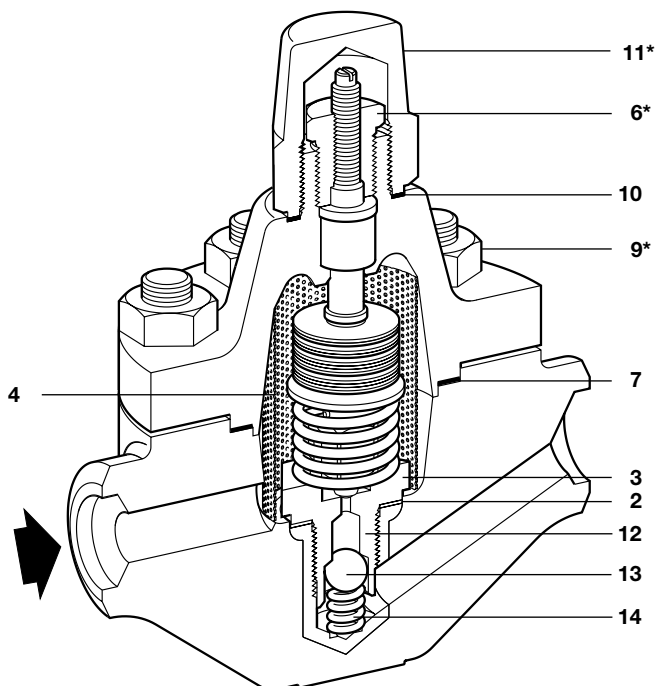
How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and model of the bimetallic steam trap.

Example: 1 - Bimetallic assembly kit for a Spirax Sarco 1" HP80 bimetallic steam trap.

Recommended tightening torques

Item	 or 	N m
3	36 A/F	120
6	21 A/F	25
9	HP80 HP100	24 A/F 24 A/F
	HP150, HP210	30 A/F
	HP80, HP100	41 A/F
11	HP150, HP210	55 A/F



* **Note:** Items 6, 9 and 11 are not available as spares.