



TI-P072-01
CMGT Issue 10

HM34 Series Carbon Steel Inverted Bucket Steam Traps

Description

The HM34 is an inverted bucket steam trap manufactured in carbon steel with an internal strainer fitted as standard. It is designed for use on horizontal installations and will operate on steam pressures up to 32 bar g.

Standards

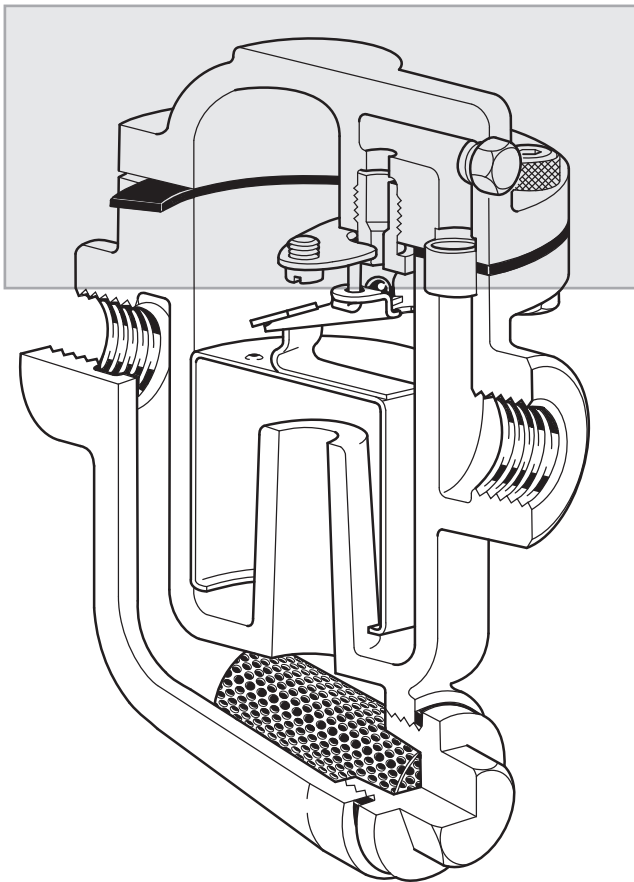
This product fully complies with the requirements of the Pressure Equipment Directive 2014/68/EU.

Certification

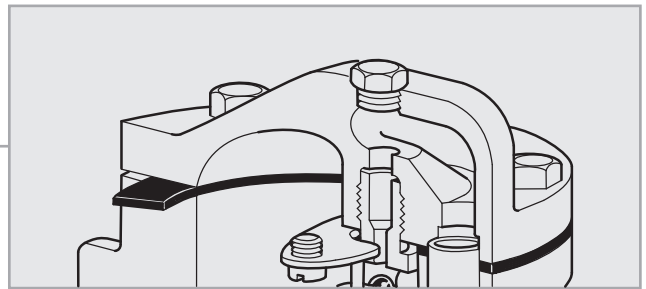
This product is available with certification to EN 10204 2.2.

Note: All certification/inspection requirements must be stated at the time of order placement.

Size 1/2" and 3/4"



Size 1"



Drawing to show difference in top connection for 1" model

Sizes and pipe connections

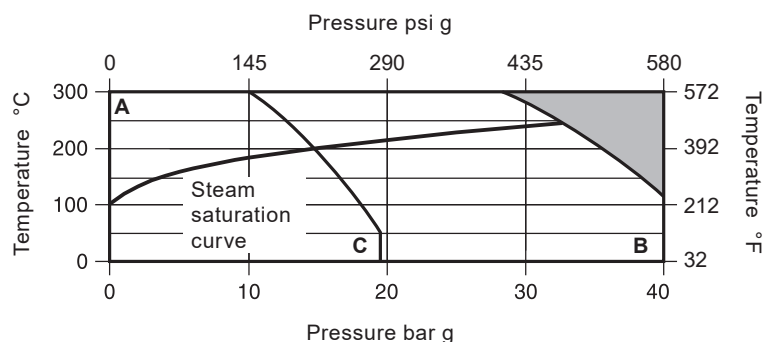
1/2", 3/4" and 1" screwed BSP T Rp (ISO 7-1) or NPT.

DN25 socket weld ends BS 3799 Class 3000.

DN15, DN20 and DN25 standard flange EN 1092 PN40.

Available on request: Flanged Class 150 and Class 300 connections.

Pressure/temperature limits (ISO 6552)



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

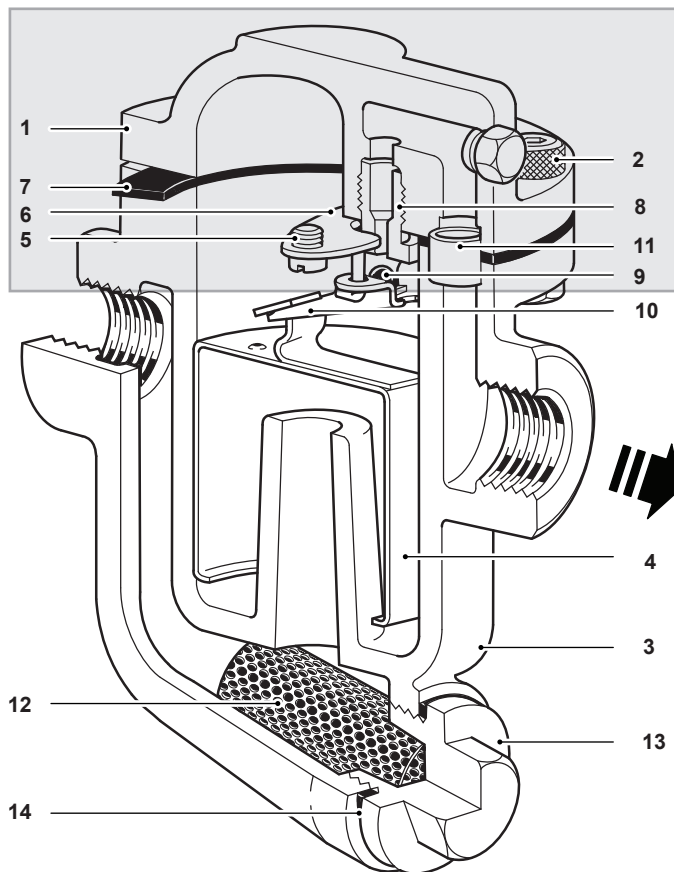
A - B Screwed, socket weld, flanged EN 1092 PN40 and Class 300.

A - C Flanged Class 150

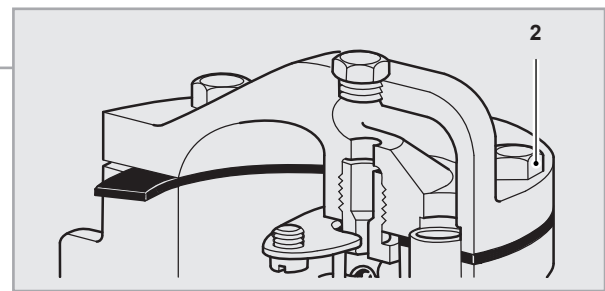
Body design conditions							PN40
PMA		Maximum allowable pressure				40 bar g @ 120 °C	580 psi g @ 248 °F
TMA		Maximum allowable temperature				300 °C	572 °F
Minimum allowable temperature						-10 °C	14 °F
PMO		Maximum operating pressure for saturated steam service				32 bar g	464 psi g
TMO		Maximum operating temperature				300 °C	572 °F
Minimum operating temperature						0 °C	32 °F
ΔPMX	Maximum differential pressure						
Size	4 bar (58 psi)	8.5 bar (123 psi)	12 bar (174 psi)	20 bar (290 psi)	32 bar (464 psi)		
DN15 - ½"	HM34/8	HM34/7	HM34/6	HM34/5	HM34/4		
DN20 - ¾"	HM34/10	HM34/8	HM34/7	HM34/6	HM34/5		
DN25 - 1"	HM34/12	HM34/10	HM34/8	HM34/6	HM34/5		
Designed for a maximum cold hydraulic test pressure of:						60 bar g	870 psi g

Materials

Size 1/2" and 3/4"



Size 1"

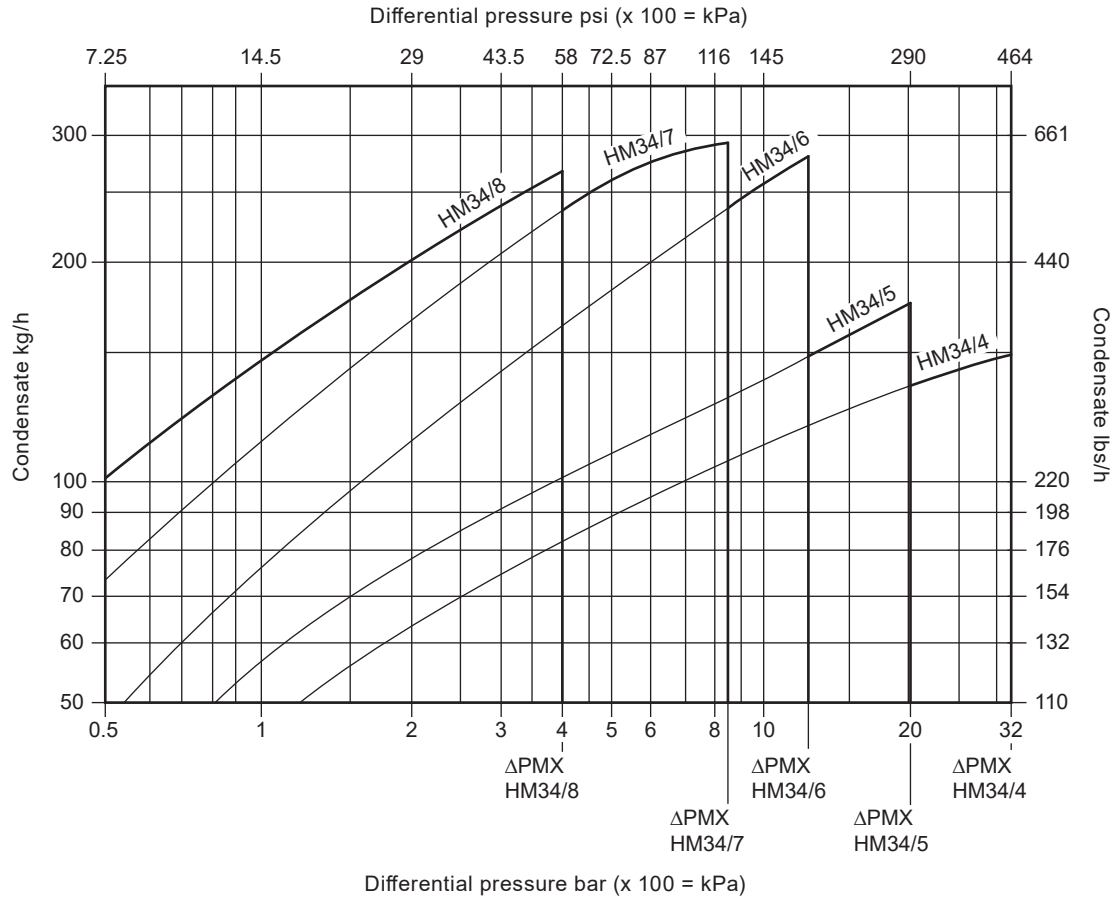


Drawing to show difference in top connection for 1" model

No. Part		Material	
1	Cover	1/2", 3/4"	Forged steel 1.0460 (C22.8)
		1"	Cast steel 1.0619 +N
	Cover screws	1/2", 3/4"	Steel BS 4168 Gr. 8.8
2	Cover bolts	1"	Steel BS 3692 Gr. 8.8
	Cover nuts	1/2", 3/4", 1"	Steel BS 3692 Gr. 8.8
3	Body		Cast steel 1.0619 +N
4	Bucket		Stainless steel BS 1449 304 S31
5	Valve guide plate screw		Stainless steel M 4.5 x 10 BS 4183 18/8
6	Valve guide plate		Stainless steel BS 1449 304 S11
7	Cover gasket		Reinforced exfoliated graphite
8	Valve seat		Stainless steel AISI 431
9	Valve		Stainless steel AISI 440B
10	Valve lever		Stainless steel BS 1449 321 S31
11	Ferrule	1/2", 3/4"	Stainless steel BS 970 321 S31
		1"	Stainless steel BS 3605 (CFS) 304 S14
12	Strainer screen		Stainless steel ASTM A240 316L
13	Strainer cap		Steel 1.0460 (C22.8)
14	Strainer gasket		Reinforced exfoliated graphite

Capacities

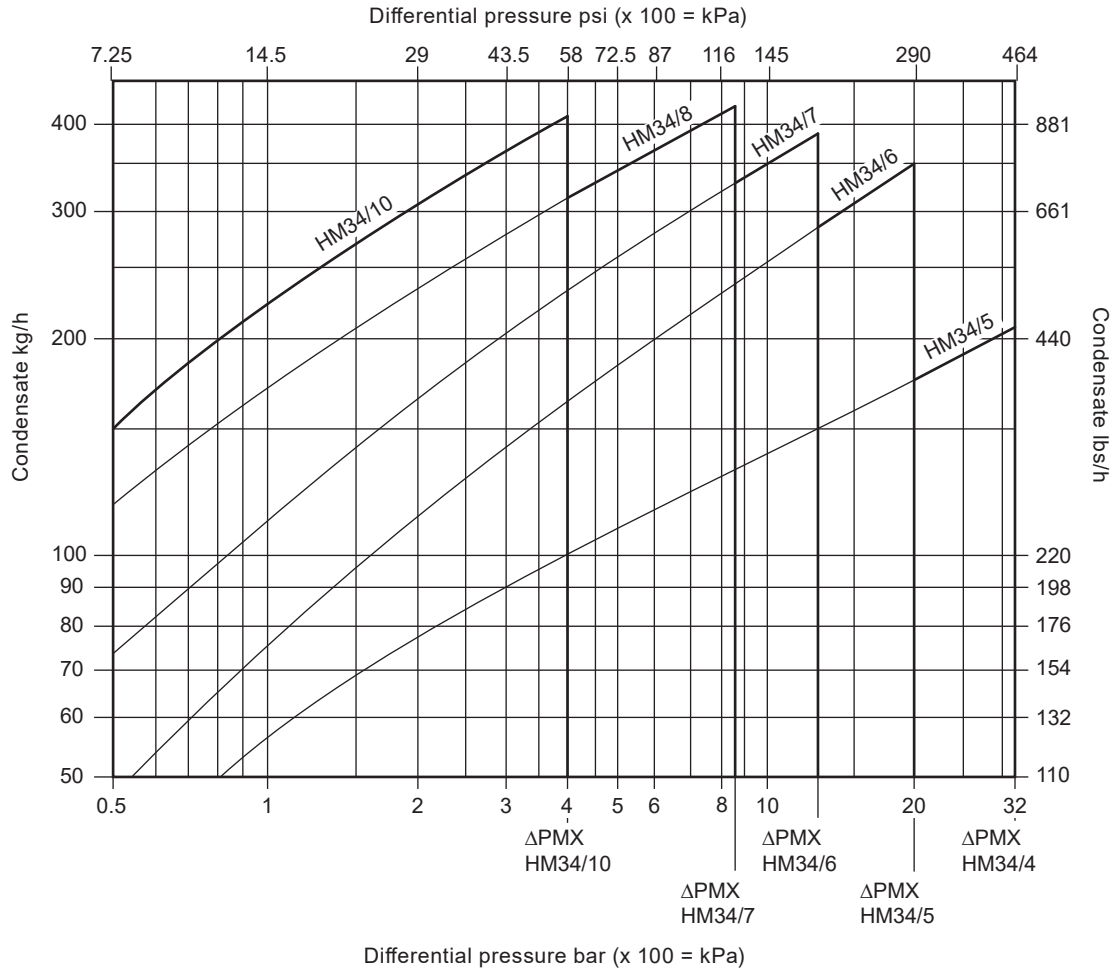
1/2"
DN15



Selection note

Traps should be selected for the most appropriate working pressure differential and not on the basis of load. For example; DN25 HM34 with a load of 80 kg/h (176.3 lbs) at 7 bar (101.5 psi) differential should be handled by an HM34/10 and not an HM34/5.

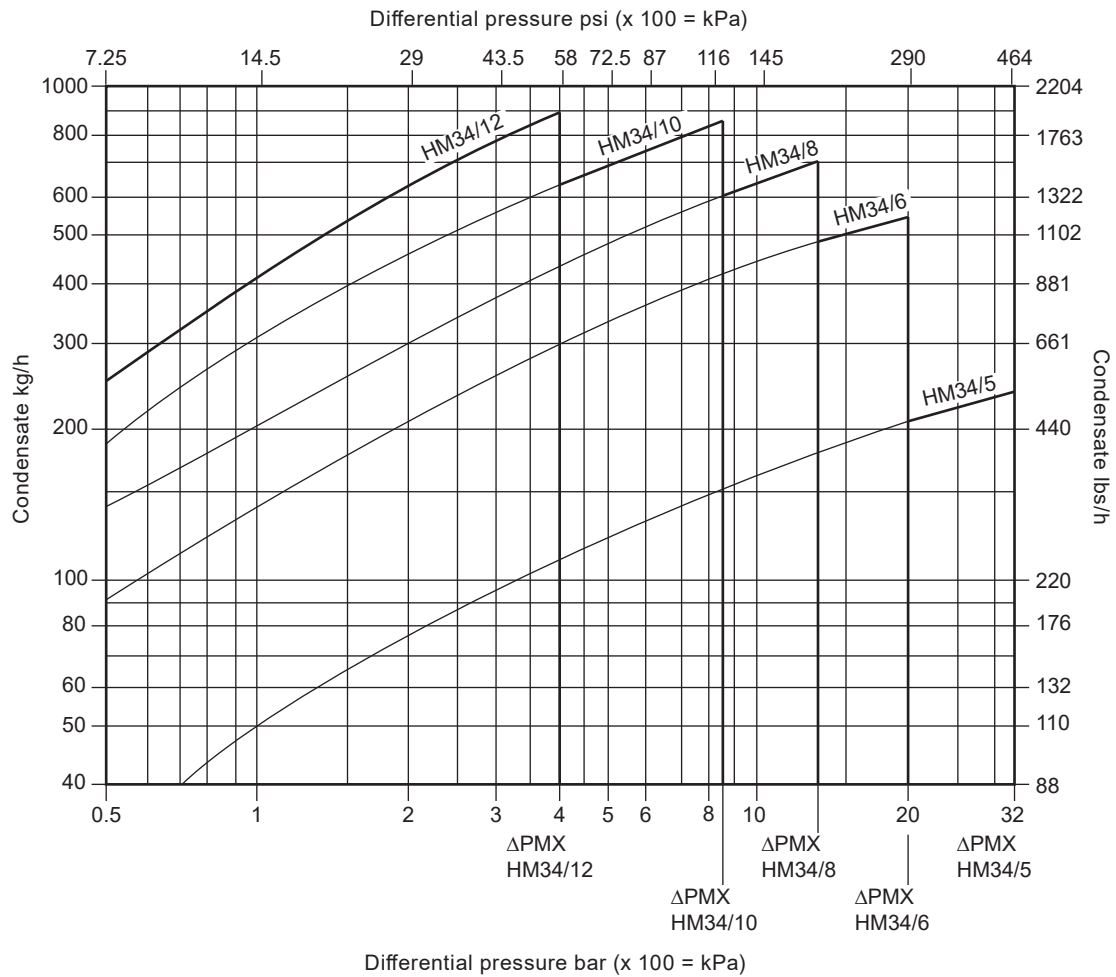
3/4"
DN20



Selection note

Traps should be selected for the most appropriate working pressure differential and not on the basis of load. For example; DN25 HM34 with a load of 80 kg/h (176.3 lbs) at 7 bar (101.5 psi) differential should be handled by an HM34/10 and not an HM34/5.

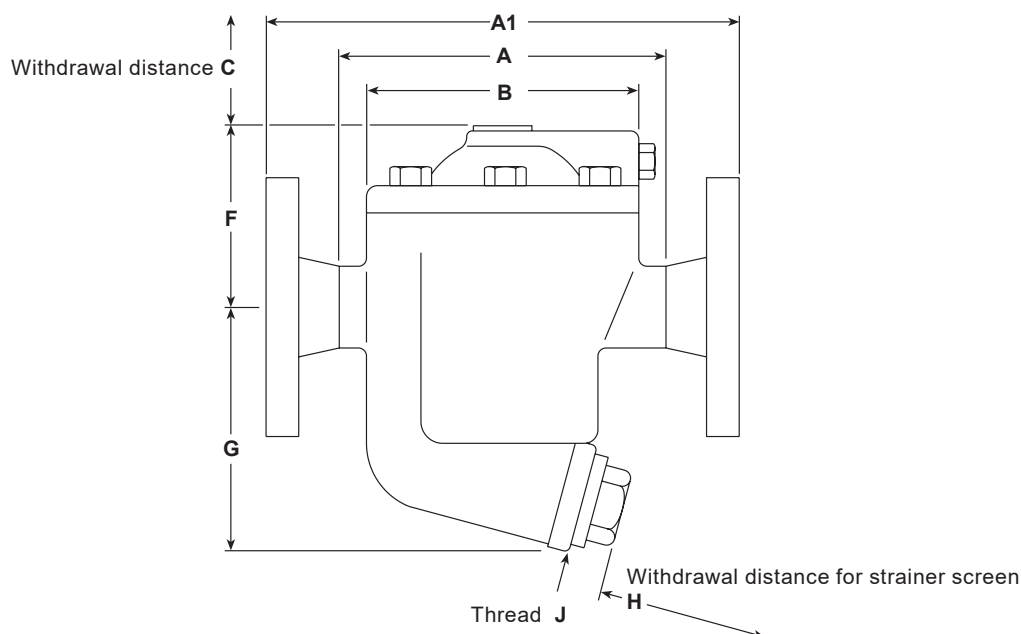
**1"
DN25**



Selection note

Traps should be selected for the most appropriate working pressure differential and not on the basis of load, For example; DN25 HM34 with a load of 80 kg/h (176.3 lbs) at 7 bar (101.5 psi) differential should be handled by an HM34/10 and not an HM34/5.

Dimensions/weights (approximate) in mm (inches) and kg (lbs)



Screwed and socket weld connections

Size	A	B	C	F	G	H	J	Weight
1/2"	120 (4.72)	105 (4.13)	100 (3.94)	67 (2.64)	89 (3.50)	65 (2.56)	M28	2.6 (5.7)
3/4"				88 (3.46)	107 (4.21)		M28	4.0 (8.8)
1"	180 (7.09)	160 (6.30)	160 (6.30)	145 (5.71)	120 (4.72)	85 (3.35)	M32	10.4 (22.9)

Flanged connections

Size	A1	B	C	F	G	H	J	Weight
DN15	210 (8.27)	105 (4.13)	100 (3.94)	67 (2.64)	89 (3.50)	65 (2.56)	M28	4.5 (9.9)
DN20				88 (3.46)	107 (4.21)		M28	7.0 (15)
DN25	230 (9.06)	160 (6.30)	160 (6.30)	145 (5.71)	120 (4.72)	85 (3.35)	M32	12.0 (26.5)

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-S03-11) supplied with the product.

Installation note

The trap must be installed with the body upright so that the bucket is rising and falling vertically. The inlet and outlet connections should be in a horizontal plane, with the trap installed below the drain point so that a water seal can be maintained around the open end of the bucket.

Disposal

This product is recyclable. No ecological hazard is anticipated with the disposal of this product providing due care is taken.

How to order

Example: 1 off Spirax Sarco 1/2" HM34/8 inverted bucket steam trap with screwed BSP T Rp (ISO 7-1) connections.

Spare parts

The spare parts available are shown in solid outline. Parts shown in a grey line are not supplied as spares.

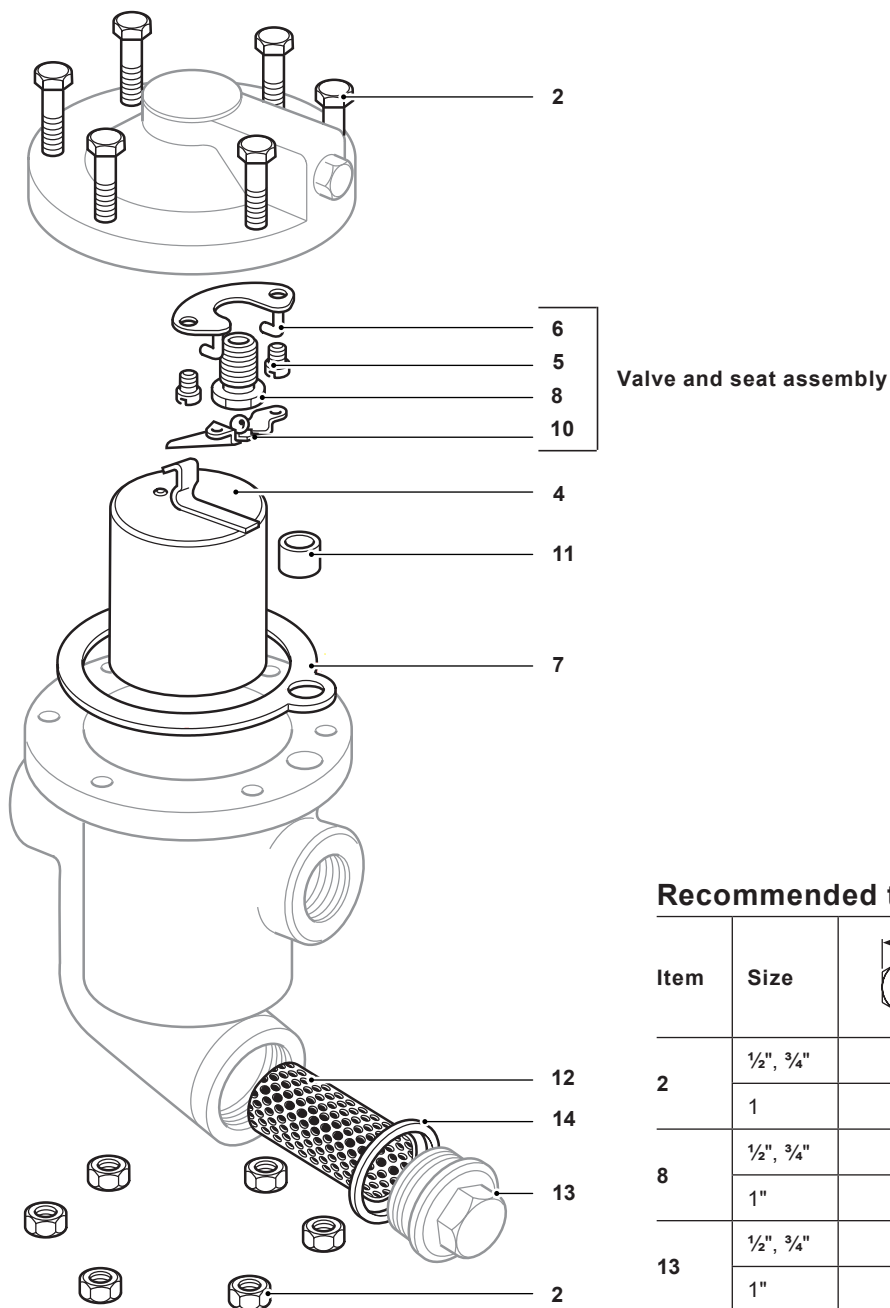
Available spares

Valve and seat assembly		5 (2 off), 6, 8, 10
Bucket		4
Cover gasket and ferrule	(packet of 3 each)	7, 11
Strainer screen		12
Strainer screen gasket	(packet of 3 each)	14
Set of cover bolts and nuts	(set of 6)	2

How to order spares

Always order spare parts by using the description given in the column headed 'Available spares' and state the size, type of trap and pressure range.

Example: 1 off Valve and seat assembly for a Spirax Sarco DN25 HM34/7 inverted bucket steam trap.



Recommended tightening torques

Item	Size	 or 	mm	N m	(lbf ft)
2	1/2", 3/4"		M8 x 30	25 - 28	(18-21)
	1"		M12 x 45	25 - 28	(18-21)
8	1/2", 3/4"	13	-	50 - 55	(37-41)
	1"	17	-	80 - 88	(59-65)
13	1/2", 3/4"	22	M28	90 - 100	(66-74)
	1"	27	M32	125 - 145	(92-107)