



Cert. No. LRQ 0963008

ISO 9001

# spirax sarco

TI-P143-01  
ST Issue 5

## FT46

### Stainless Steel

# Ball Float Steam Traps (DN15 to DN50)

### Description

The FT46 is an austenitic stainless steel ball float steam trap with integral automatic air venting facility. It is available with horizontal flanged connections. As an option a manually adjustable needle valve can be added for use as a steam lock release designated FT46-C. If required the cover can be drilled and tapped  $\frac{1}{8}$ " BSP or NPT for the purpose of fitting a drain cock. Body and cover castings are produced by a TÜV approved foundry.

**Standards** - This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC and carries the CE mark when so required.

**Certification** - This product is available with certification to EN 10204 2.2. As an available option certification to EN 10204 3.1.B can be supplied. **Note:** All certification/inspection requirements must be specified at the time of order placement.

### Sizes and pipe connections

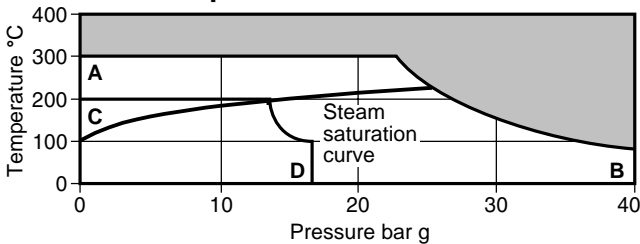
DN15, DN20, DN25, DN40 and DN50.

**Note:** Flow direction when facing the body: - DN15 to DN25 is left to right. - DN40 and DN50 is right to left.

Standard flanges are EN 1092 PN40 with face-to-face dimensions in accordance with EN 26554 (Series 1).

On request ANSI B 16.5 Class 150 and 300 flanges are also available with face-to-face dimensions in accordance with EN 26554 (Series 1). ANSI flanges are supplied with tapped (UNC) holes for flange bolts.

### Pressure / temperature limits



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

**A - B** Flanged EN 1092 PN40 and ANSI 300.

**C - D** Flanged ANSI 150.

Body design conditions	PN40
PMA Maximum allowable pressure @ 80°C	40 bar g
TMA Maximum allowable temperature @ 22 bar g	300°C
Minimum allowable temperature	0°C

PMO Maximum operating pressure for saturated steam service 25.5 bar g @ 220°C

**Note:** The DN40 and DN50 traps are limited to a PMO equal to  $\Delta$ PMX

TMO Maximum operating temperature	220°C @ 25.5 bar g
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Minimum operating temperature 0°C

**Note:** For lower operating temperatures consult Spirax Sarco

	Size	DN15, 20, 25	DN40, 50
Maximum $\Delta$ PMX differential pressure	FT46-4.5	4.5 bar	4.5 bar
	FT46-10	10 bar	10 bar
	FT46-14	14 bar	-
	FT46-21	21 bar	21 bar
	FT46-32	32 bar	25.5 bar

Designed for a maximum cold hydraulic test pressure of 60 bar g  
**Note:** With internals fitted, test pressure must not exceed  $\Delta$ PMX

**Caution:** The trap in its complete operational form must not be subjected to a pressure greater than 48 bar otherwise damage to the internal mechanism may result.

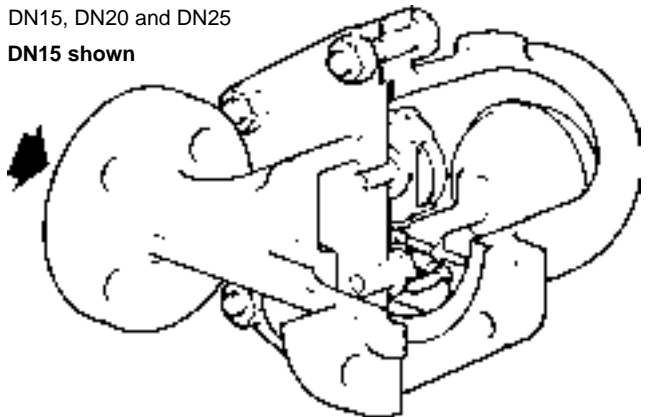
**Materials** See page 2 for the materials list.

**Capacities** See TI-S02-36 for full details.

### FT46

DN15, DN20 and DN25

DN15 shown



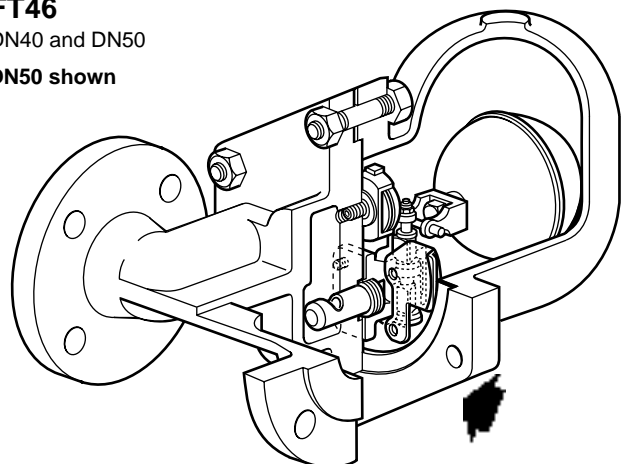
### FT46-C



### FT46

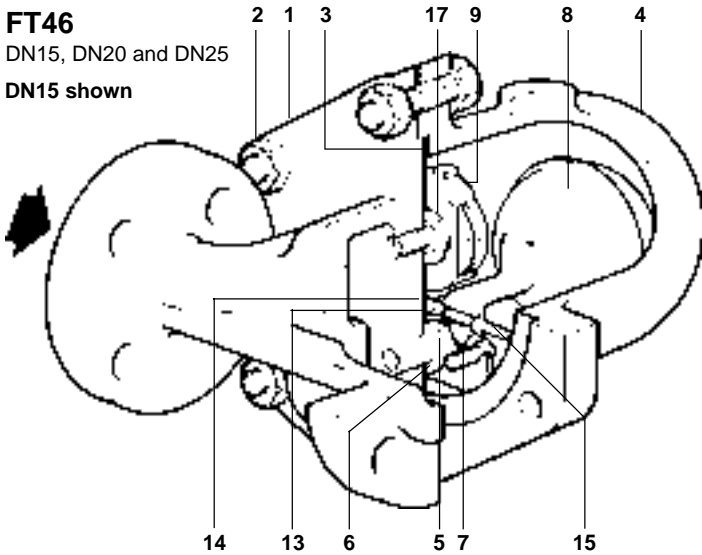
DN40 and DN50

DN50 shown

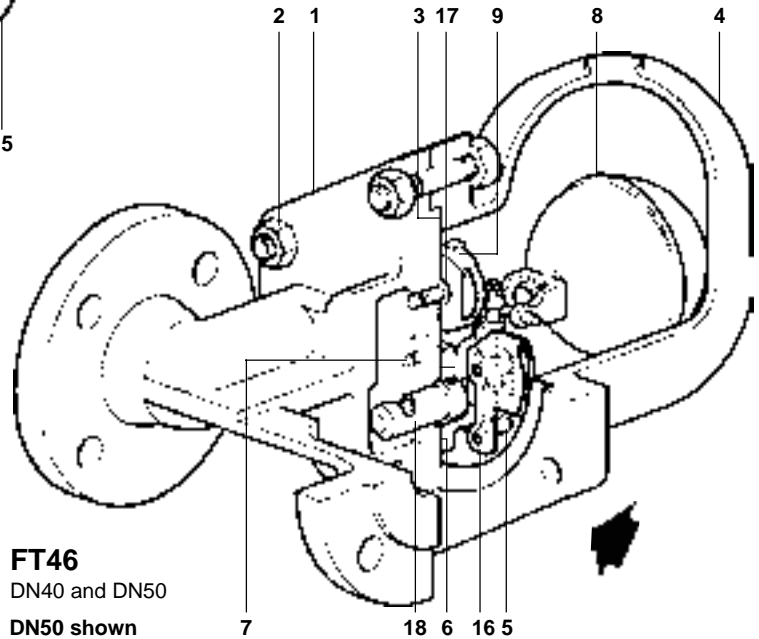
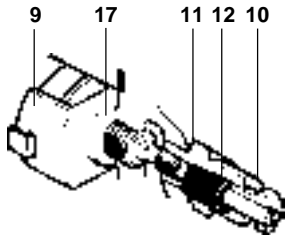


**FT46**

DN15, DN20 and DN25  
 DN15 shown



**FT46-C**



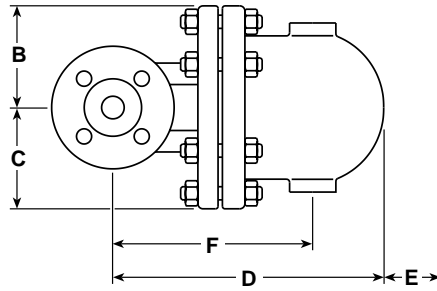
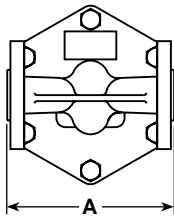
**FT46**  
 DN40 and DN50  
 DN50 shown

**Materials**

No.	Part	Material	
1	Body	Austenitic stainless steel (316)	DIN 17445 GX5 CrNiMoNb 1810 (Werkstoff Nr 1.4581)
2	Cover studs	Austenitic stainless steel	A4.80
	Cover nuts	Austenitic stainless steel	A4
3	Cover gasket	Austenitic stainless steel	BS 1449 304 S16
4	Cover	Austenitic stainless steel (316)	DIN 17445 GX5 CrNiMoNb 1810 (Werkstoff Nr 1.4581)
	Valve seat	DN15, DN20 and DN25	Stainless steel BS 970 431 S29
5	Main valve assembly	DN40 and DN50	Stainless steel BS 3146 Pt2 ANC2 BS 970 416 S37
	Valve seat gasket	DN15, DN20 and DN25	Stainless steel BS 1449 304 S11
6	Main valve assembly gasket	DN40 and DN50	Austenitic stainless steel BS 1449 304 S16
	Pivot frame assembly	Set screws	DN15, DN20 and DN25
		Stainless steel	BS 4183 18/8
7	Main valve assembly	Bolts	DN40
		Stainless steel	BS 970 304 S15
		Studs and nuts	DN50
		Stainless steel	BS 6105 A4.80
8	Ball float and lever	Stainless steel	BS 1449 304 S16
9	Air vent assembly	Stainless steel	
10	SLR assembly	Stainless steel	BS 970 303 S31
11	SLR gasket	Stainless steel	BS 1449 304 S11
12	SLR seal	Graphite	
13	Support frame	Stainless steel	BS 1449 304 S16
14	Pivot frame	Stainless steel	BS 1449 304 S16
15	Pivot pin	Stainless steel	
16	Inlet baffle	DN40 and DN50 only	Stainless steel BS 1449 304 S16
17	Air vent seat gasket	Stainless steel	BS 1449 409 S19
18	Erosion deflector	Stainless steel	BS 970 431 S29

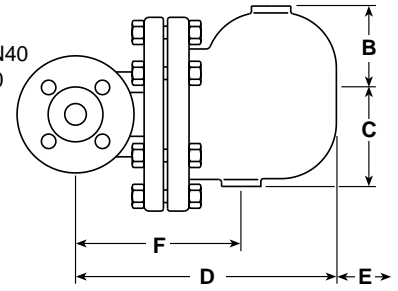
**FT46**

DN15 and DN20



**FT46**

DN25, DN40 and DN50



**Dimensions/weights (approximate) in mm and kg**

Size	A	B	C	D	E	F	Weight
DN15	150	80	80	215	120	155	10.8
DN20	150	80	80	225	120	165	10.8
DN25	160	115	85	276	170	215	15.0
DN40	230	130	115	326	200	200	33.0
DN50	230	141	123	332	200	225	43.0

Face-to-face dimensions in accordance with EN 26534 (Series 1)

**Safety information, installation and maintenance**

For full details see the Installation and Maintenance Instructions (IM-S02-30) supplied with the product.

**Installation note:**

The FT46 must be installed with the direction of flow as indicated on the body, and with the float arm in a horizontal plane so that it rises and falls vertically.

**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 DN25 FT46-21 ball float steam trap, having an austenitic stainless steel body and cover with thermostatic air vent. Connections are to be flanged to EN 1092 PN40.

**Spare parts**

The spare parts available are shown in heavy outline. Parts drawn in broken line are not supplied as spares.

**Available spares**



Main valve assembly with float (DN15, DN20, and DN25)	<b>5, 6, 7, 8, 13, 14, 15</b>
Main valve assembly (DN40 and DN50)	<b>5, 6, 7, 16, 18</b>
Ball float (DN40 and DN50)	<b>8</b>
Air vent assembly	<b>9, 17</b>
Steam lock release and air vent assembly (FT46-C)	<b>9, 10, 11, 12, 17</b>
Complete set of gaskets (packet of 3 sets)	<b>3, 6, 11, 12, 17</b>

**How to order spares**

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of trap, including pressure range and orientation i.e.: horizontal or vertical connections.

**Example:** 1 - Air vent assembly for a Spirax Sarco DN20 FT46-4.5 ball float steam trap, with horizontal connections.

**Recommended tightening torques**

Item	Size	or		N m
				
2	DN15, 20 and 25	17 A/F	M10 x 60	19 - 22
	DN40	19 A/F	M16 x 85	60 - 66
	DN50	24 A/F	M16 x 85	80 - 88
9	17 A/F		50 - 55	
5	DN15, 20 and 25	17 A/F		50 - 55
	DN15, 20 and 25		M5 x 20	2.5 - 2.8
7	DN40	10 A/F	M6 x 20	10 - 12
	DN50	13 A/F	M8 x 20	20 - 24
10	22 A/F		50 - 55	

