



Cert. No. LRQ 0963008

ISO 9001

spirax sarco

FT46

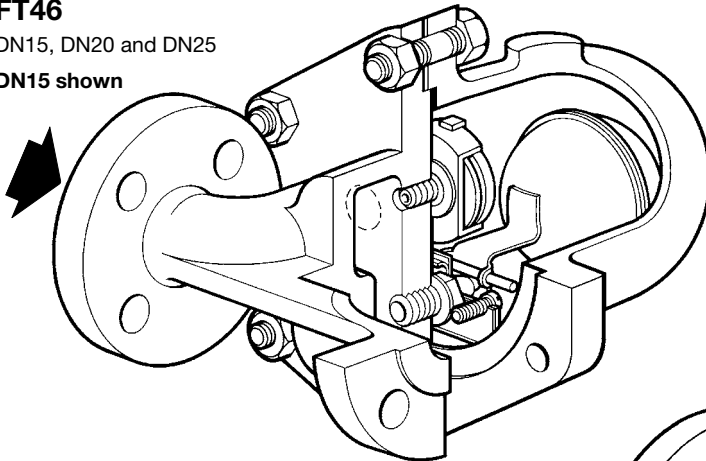
Stainless Steel

Ball Float Steam Traps (DN15 to DN50)

FT46

DN15, DN20 and DN25

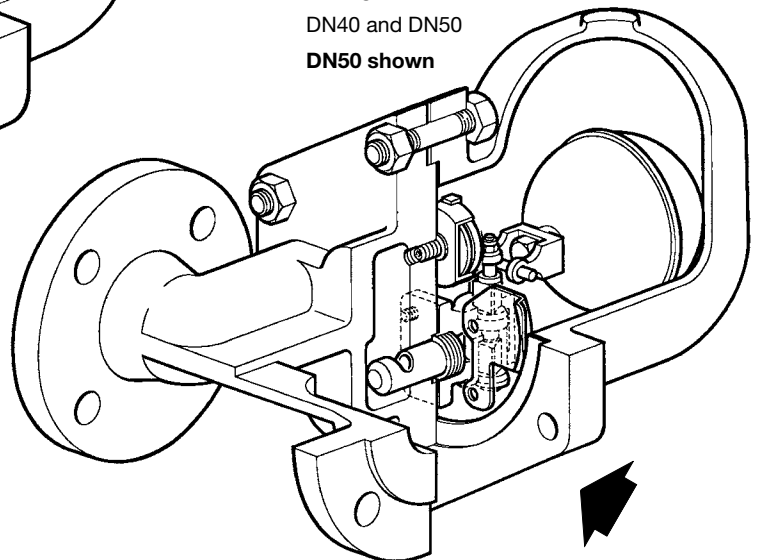
DN15 shown



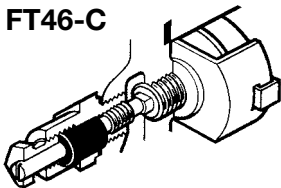
FT46

DN40 and DN50

DN50 shown



FT46-C



Description

The FT46 is an austenitic stainless steel bodied ball float steam trap having stainless steel working internals and automatic air venting facility. The body and cover castings are produced by a TÜV approved foundry. The trap is supplied with integrally flanged connections and can be maintained without disturbing the pipework. Flow direction for the horizontal trap is clearly illustrated above.

Capsule

The BP99/32 capsule which is used in the FT46 is suitable for use on 150°C superheat @ 0 bar g and 50°C superheat @ 32 bar g.

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

Optional extras

A **manually adjustable needle valve** (designated 'C' on the nomenclature i.e. **FT46-C**) can be fitted to the trap. This option provides a **steam lock release (SLR)** feature in addition to the standard air vent. For further information please consult Spirax Sarco.

The top of the cover can be drilled and tapped 3/8" BSP or NPT for the purpose of fitting a balance line if requested at the point of order.

The bottom of the cover can be drilled and tapped 3/8" BSP or NPT for the purpose of fitting a drain cock if requested at the point of order.

Sizes and pipe connections

DN15, DN20, DN25, DN40 and DN50.

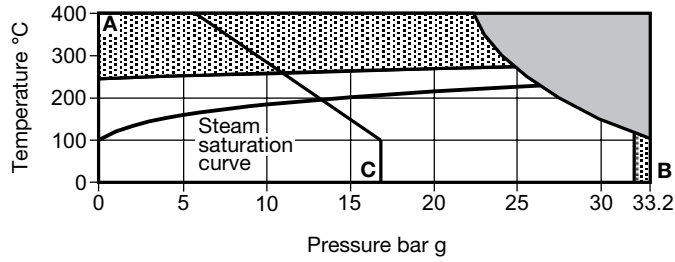
Note: Flow direction when facing the body: - DN15 to DN25 is left to right. - DN40 and DN50 is right to left.

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

On request - ASME (ANSI) B 16.5 Class 150 and 300 flanges are available with face-to-face dimensions in accordance with EN 26554 (Series 1).

Note: ASME (ANSI) flanges are supplied with tapped (UNC) holes for flange bolts.

Pressure / temperature limits



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

This product should not be used in this region as damage to the air vent may occur.

A - B Flanged EN 1092 PN40 and ASME (ANSI) 300.
A - C Flanged ASME (ANSI) 150.

Body design conditions	PN40
PMA Maximum allowable pressure	33.2 bar g @ 100°C
TMA Maximum allowable temperature	400°C @ 22.4 bar g
Minimum allowable temperature	-10°C
PMO Maximum operating pressure for saturated steam service	26.1 bar g @ 287°C
TMO Maximum operating temperature	287°C @ 26.1 bar g
Minimum operating temperature	0°C

Note: For lower operating temperatures consult Spirax Sarco

	Size	DN15, DN20, DN25	DN40, DN50
ΔPMX Maximum 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	32 bar

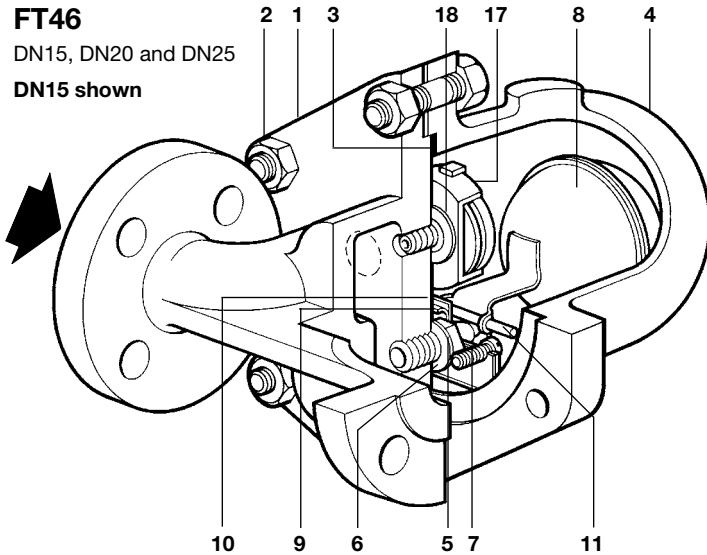
Designed for a maximum cold hydraulic test pressure:	60 bar g
Note: With internals fitted, test pressure must not exceed:	48 bar g

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.

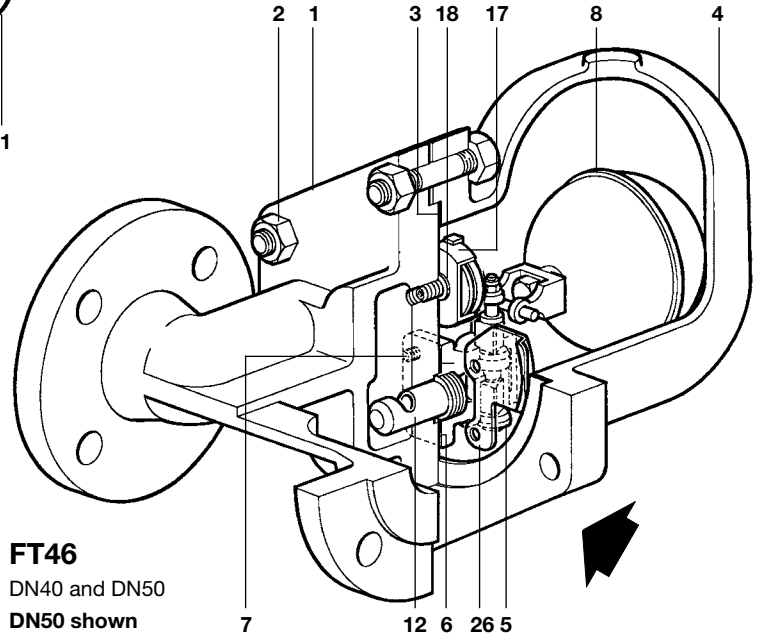
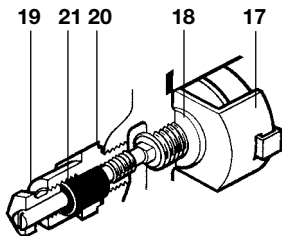
FT46

DN15, DN20 and DN25

DN15 shown



FT46C



FT46

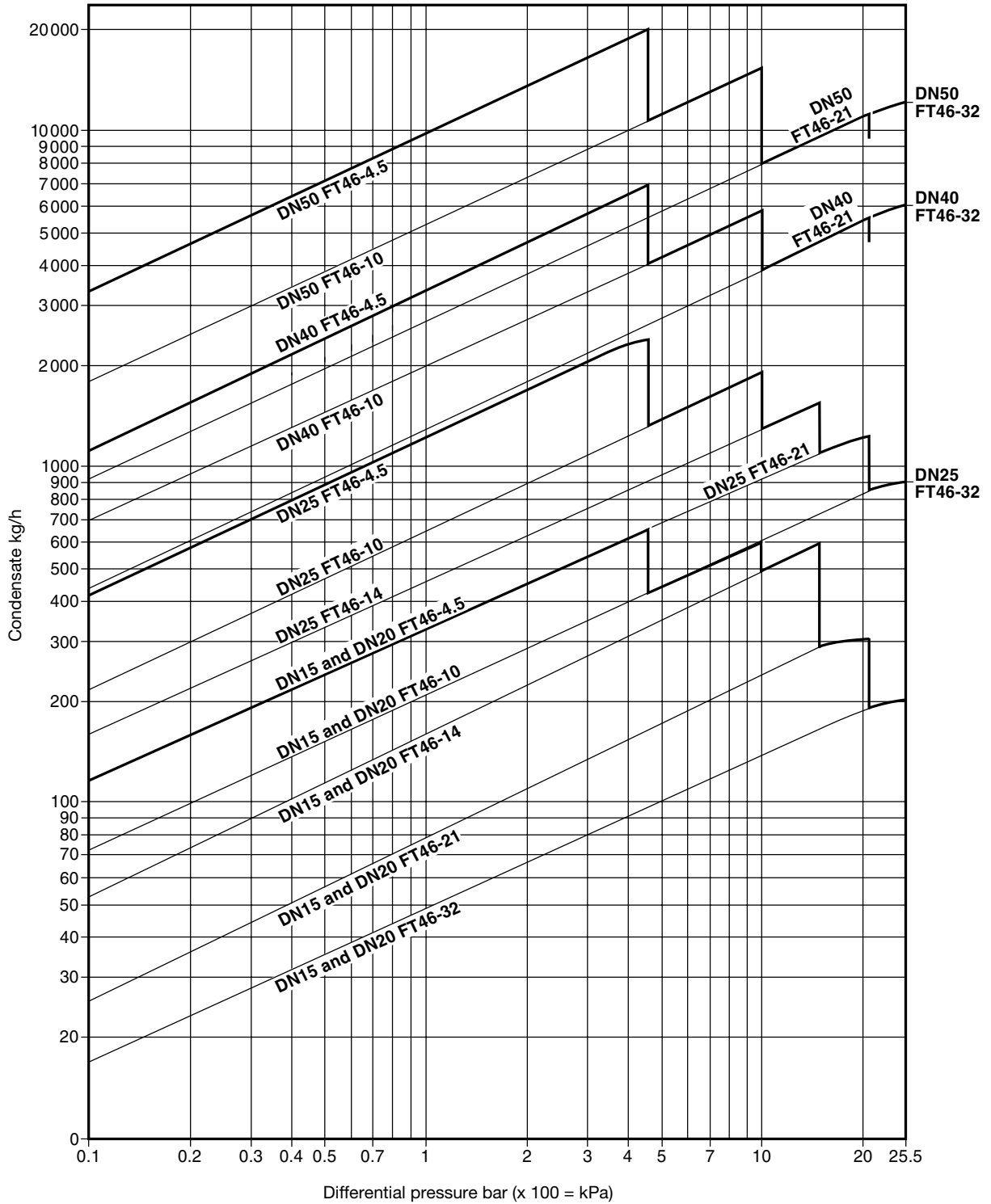
DN40 and DN50

DN50 shown

Materials

No.	Part	Material	
1	Body	Austenitic stainless steel (316)	1.4408/CF8M
2	Cover studs	Austenitic stainless steel	A2.70
	Cover nuts	Austenitic stainless steel	A4
3	Cover gasket	Reinforced exfoliated graphite	
4	Cover	Austenitic stainless steel (316)	1.4408/CF8M
	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	Reinforced exfoliated graphite
	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	Support frame	DN15, DN20 and DN25	Stainless steel BS 1449 304 S16
10	Pivot frame	DN15, DN20 and DN25	Stainless steel BS 1449 304 S16
11	Pivot pin	DN15, DN20 and DN25	Stainless steel
12	Erosion deflector	Stainless steel	BS 970 431 S29
17	Air vent assembly	Stainless steel	
18	Air vent seat gasket	Stainless steel	BS 1449 409 S19
19	SLR assembly	Stainless steel	BS 970 303 S31
20	SLR gasket	Stainless steel	BS 1449 304 S11
21	SLR seal	Graphite	
26	Inlet plate	DN40 and DN50 only	Stainless steel BS 1449 304 S16

Capacities



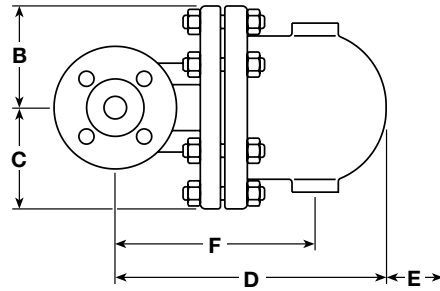
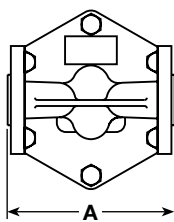
Additional cold water capacities from the thermostatic air vent under start-up conditions

Capacities shown above are based on condensate at saturation temperature. Under start-up conditions when the condensate is cold the internal thermostatic air vent will be open and provides additional capacity to the main valve. The following table gives the minimum additional cold water capacities from the air vent.

ΔP (bar)	0.5	1	2	3	4.5	7	10	14	21	32
	Minimum additional cold water capacity (kg/h)									
DN15 and DN20 up to 21 bar	450	600	780	1 040	1 140	1 350	1 530	1 750	2 300	-
DN20 32 bar only	170	250	380	520	600	780	860	1 140	1 170	1 200
DN25, DN40 and DN50 up to 21 bar	460	680	900	1 080	1 300	1 600	1 980	2 050	2 600	-
and DN50 32 bar only	90	120	350	460	600	850	900	1 020	1 200	1 300

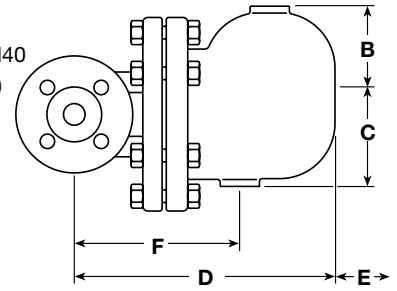
FT46

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 26554 (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 solid outline. Parts drawn in broken line are not supplied as spares.

Available spares



Main valve assembly with float (DN15, DN20, and DN25)	5, 6, 7, 8, 9, 10, 11
Main valve assembly (DN40 and DN50)	5, 6, 7, 12, 26
Ball float (DN40 and DN50)	8
Air vent assembly	17, 18
Steam lock release and air vent assembly (FT46-C)	17, 18, 19, 20, 21
Complete set of gaskets (packet of 3 sets)	3, 6, 18, 20, 21

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.

Example: 1 - Air vent assembly for a Spirax Sarco DN20 FT46-4.5 ball float steam trap.

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
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
17		17 A/F		50 - 55
19		22 A/F		50 - 55

