

# spirax sarco

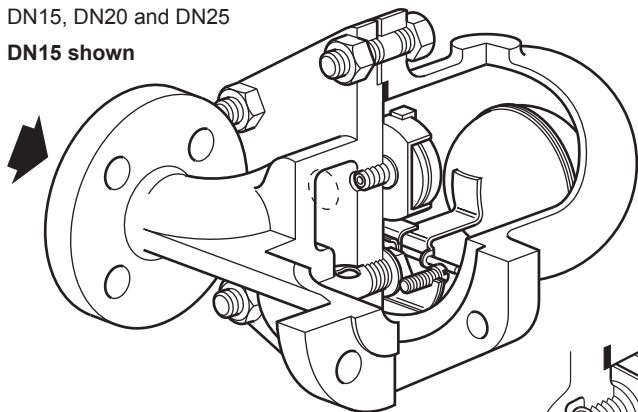
TI-S02-14  
ST Issue 14

## FT44 Carbon Steel Ball Float Steam Traps (DN15 to DN50)

### FT44

DN15, DN20 and DN25

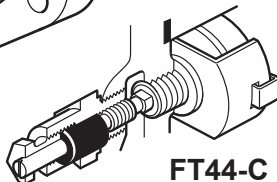
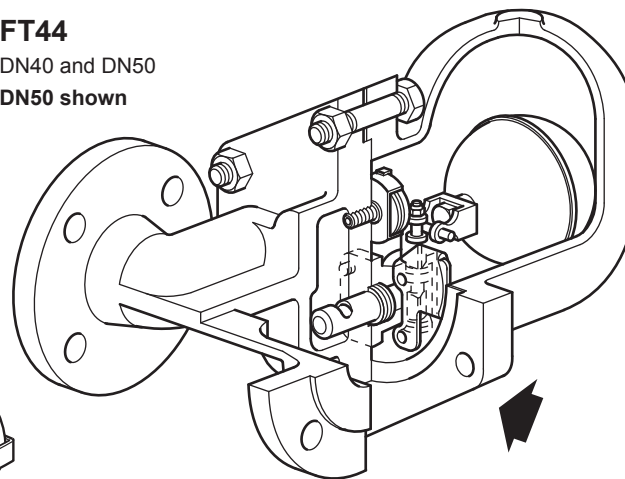
DN15 shown



### FT44

DN40 and DN50

DN50 shown



FT44-C

### Description

The FT44 is a carbon 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. Vertical flanged connections, designated FT44V, are available for all sizes. Flow direction for the horizontal trap is clearly illustrated above. For vertically orientated traps the flow is downwards only.

**Available options:** FT44 – Horizontal flow

FT44V – Vertical flow

### Capsule

The BP99/32 capsule which is used in the FT44 is suitable for use on 150°C superheat @ 0 bar g and 50°C superheat @ 32 bar g.

### Optional extras

A **manually adjustable needle valve** (designated 'C' on the nomenclature i.e. **FT44-C**) can be fitted to the **FT44 horizontal version only**.

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.

### 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.

### Sizes and pipe connections

DN15, DN20, DN25, DN40 and DN50.

**Horizontal traps:** Note the 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), ASME B 16.5 Class 150, ASME B 16.5 Class 300 and JIS/KS 20 flanges are also available with extended face-to-face dimensions.

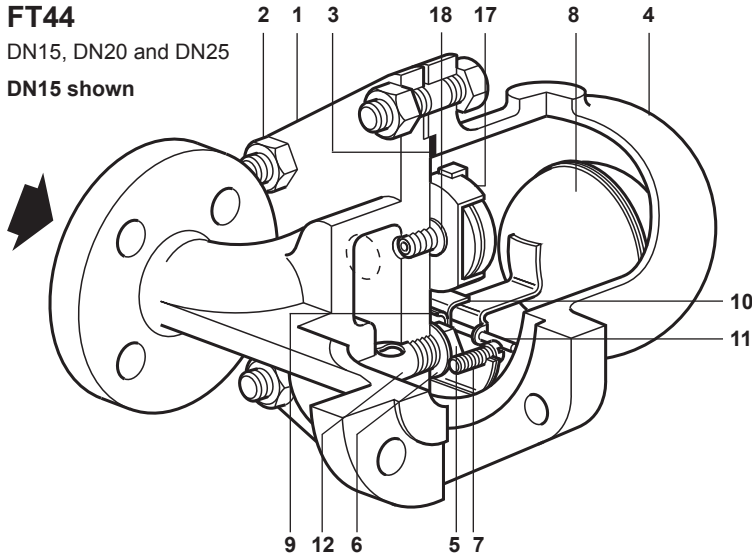
**Vertical traps:** Note that the flow direction is vertically downwards only.

Standard flanges are EN 1092 PN40 with face-to-face dimensions in accordance with EN 26554 (Series 1). ASME B 16.5 Class 150, ASME B 16.5 Class 300 and JIS/KS 20 are also available with face-to-face dimensions in accordance with EN 26554 (Series 1). ASME /JIS/KS flanges are supplied with tapped holes to receive flange bolts. ASME flanges have UNC threads and JIS /KS have metric threads.

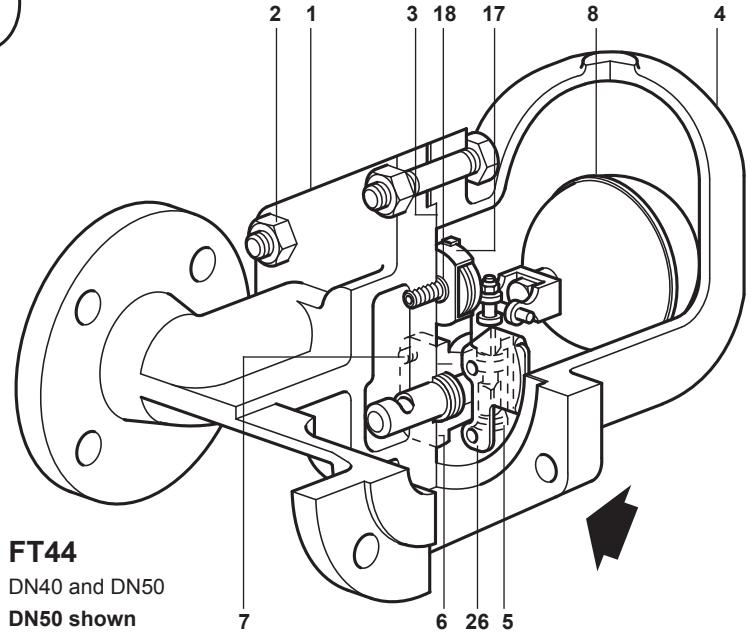
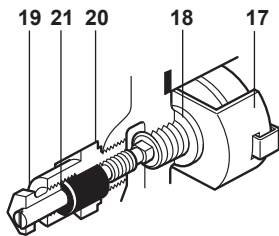
### FT44

DN15, DN20 and DN25

DN15 shown



### FT44-C



### FT44

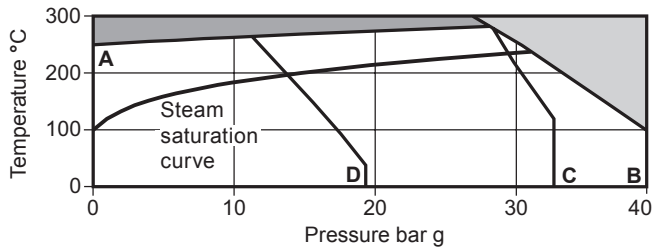
DN40 and DN50

DN50 shown

### Materials

No.	Part		Material		
1	Body		Carbon steel	1.0619+N / WCB	
	Cover studs		Steel	BS 4882 B7M	
2	Cover nuts	DN15, DN20 and DN25	Steel	EN 10269 25 Cr Mo 4	
		DN40 and DN50	Steel	BS 3692 Gr. 8	
3	Cover gasket		Reinforced exfoliated graphite		
4	Cover		Carbon steel	1.0619+N / WCB	
	Valve seat	DN15, DN20 and DN25	Stainless steel	BS 970 431 S29	
5	Main valve assembly with erosion deflector	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 screws	DN15, DN20 and DN25	Stainless steel	BS 4183 18/8	
7	Main valve assembly	Bolts	DN40	Stainless steel	BS 970 302 S25
		Studs and nuts	DN50	Stainless steel	BS 970 431 S29
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		Steel	BS 1449 CS4	
21	SLR seal		Graphite		
26	Inlet plate	DN40 and DN50 only	Stainless steel	BS 1449 304 S16	

## Pressure / temperature limits



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

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

- A - B** Flanged EN 1092 PN40 and ASME 300
- A - C** Flanged JIS/KS 2
- A - D** Flanged ASME 150.

Body design conditions		PN40
PMA	Maximum allowable pressure	40 bar g @ 100°C
TMA	Maximum allowable temperature	300°C @ 27.5 bar g
Minimum allowable temperature		-10°C
PMO	Maximum operating pressure for saturated steam service <b>Note:</b> The DN40 and DN50 traps are limited to a PMO equal to ΔPMX	32 bar g @ 239°C
TMO	Maximum operating temperature	285°C @ 28.5 bar g
Minimum operating temperature <b>Note:</b> For lower operating temperatures consult Spirax Sarco		0°C

	Size	DN15, DN20, DN25	DN40, DN50
ΔPMX Maximum differential pressure	FT44-4.5	4.5 bar	4.5 bar
	FT44-10	10 bar	10 bar
	FT44-14	14 bar	-
	FT44-21	21 bar	21 bar
	FT44-32	32 bar	32 bar

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

**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.

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

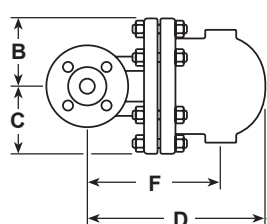
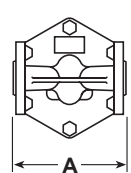
### Notes:

- Dimensions in brackets relate to vertical connections only.
- PN40 face-to-face dimensions are in accordance with EN 26554 (Series 1).

Size	PN40 A (A)	ASME 300 A (A)	ASME 150 A (A)	JIS/KS 20K A (A)	B	C	D	E	F	Weight
DN15	150 (150)	209 (150)	203 (150)	206 (150)	80	80	215	120	155	10.8
DN20	150 (150)	209 (150)	205 (150)	210 (150)	80	80	225	120	165	10.8
DN25	160 (160)	212 (160)	208 (160)	210 (160)	115	85	282	170	215	15.0
DN40	230 (230)	327 (230)	321 (230)	322 (230)	130	115	337	200	200	33.0
DN50	230 (230)	320 (230)	313 (230)	311 (230)	141	123	347	200	225	34.0

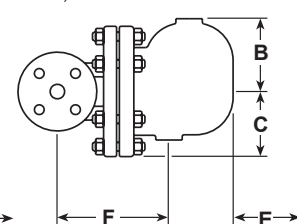
### FT44

DN15 and DN20



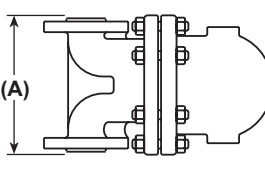
### FT44

DN25, DN40 and DN50



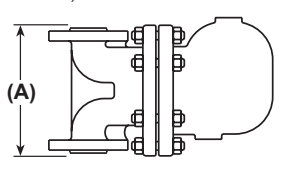
### FT44V

DN15 and DN20

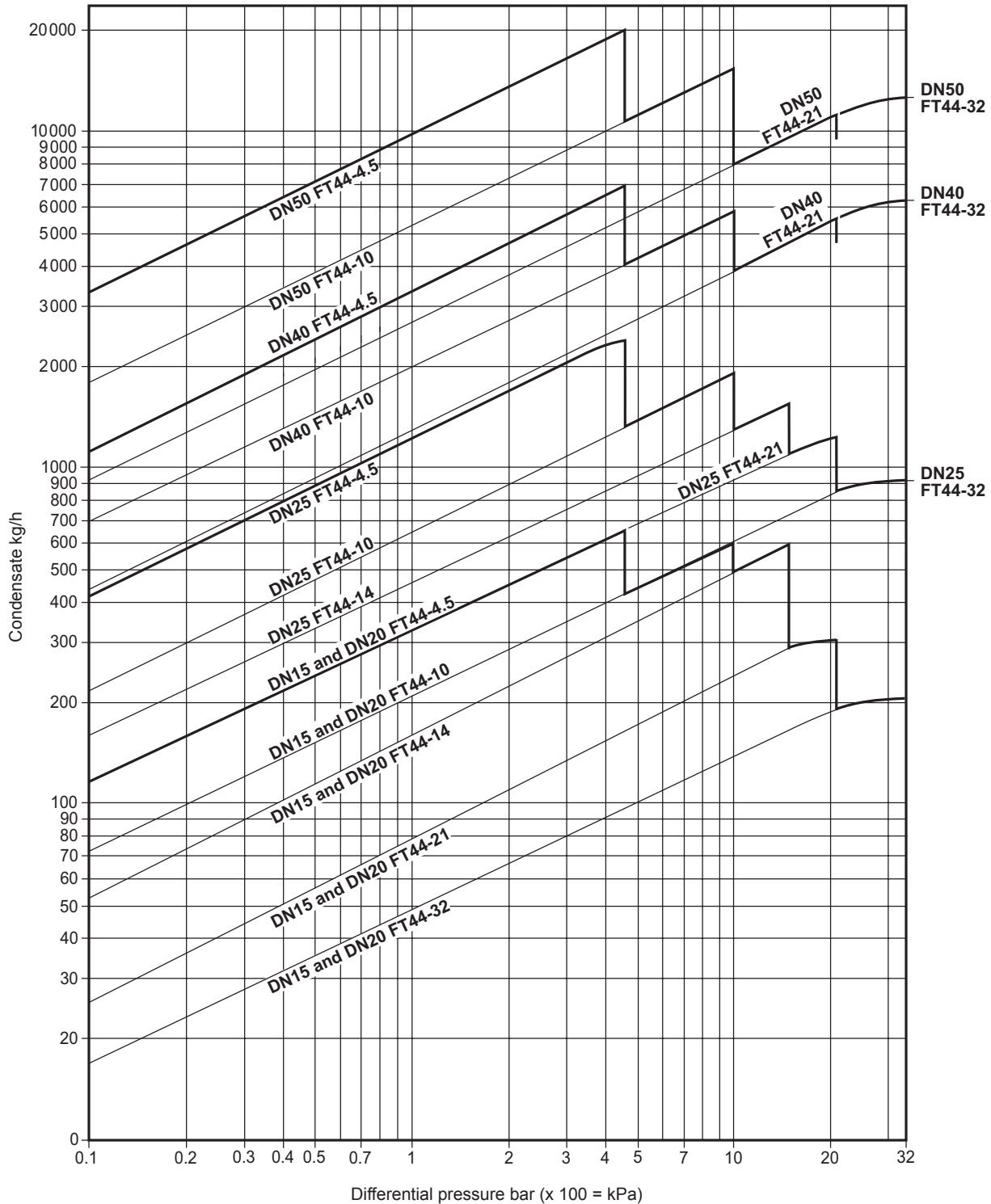


### FT44V

DN25, DN40 and DN50



## 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.

$\Delta P$ (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	-
	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	-
	32 bar only	90	120	350	460	600	850	900	1 020	1 200	1 300

## Safety information, installation and maintenance

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

### Installation note:

The FT44 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 FT44-14 ball float steam trap, flanged to EN 1092 PN40 with carbon steel body and cover and thermostatic air vent.

## 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 horizontal traps)*	5, 6, 7, 8, 9, 10, 11
Main valve assembly with integral erosion deflector (DN40 and 50)** (specify horizontal or vertical trap)	5, 6, 7, 12, 26
Main valve assembly with float and erosion deflector (DN15 and DN20 vertical traps only)	5, 6, 7, 8
Ball float (DN40 and DN50)	8
Air vent assembly	17, 18
Manually adjustable needle valve (SLR - Steam lock assembly) and air vent assembly (FT44-C)	17, 18, 19, 20, 21
Complete set of gaskets (packet of 3 sets)	3, 6, 18, 20

\* On horizontal traps the erosion deflector on the DN15, DN20 and DN25 is pressed into the body during manufacture and not available as a spare.



\*\* There is no erosion deflector on vertical traps.

### 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 - Main valve assembly for a Spirax Sarco DN40 FT44-4.5V ball float steam trap, with vertical connections.

### Recommended tightening torques

Item	Size	or		N m
				
2	DN15, DN20 and DN25	17 A/F	M10 x 60	19 - 22
	DN40	24 A/F	M16 x 85	60 - 66
	DN50	24 A/F	M16 x 85	80 - 88
5	DN15, DN20 and DN25	17 A/F		50 - 55
	DN15, DN20 and DN25		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

### Manually adjustable needle valve

