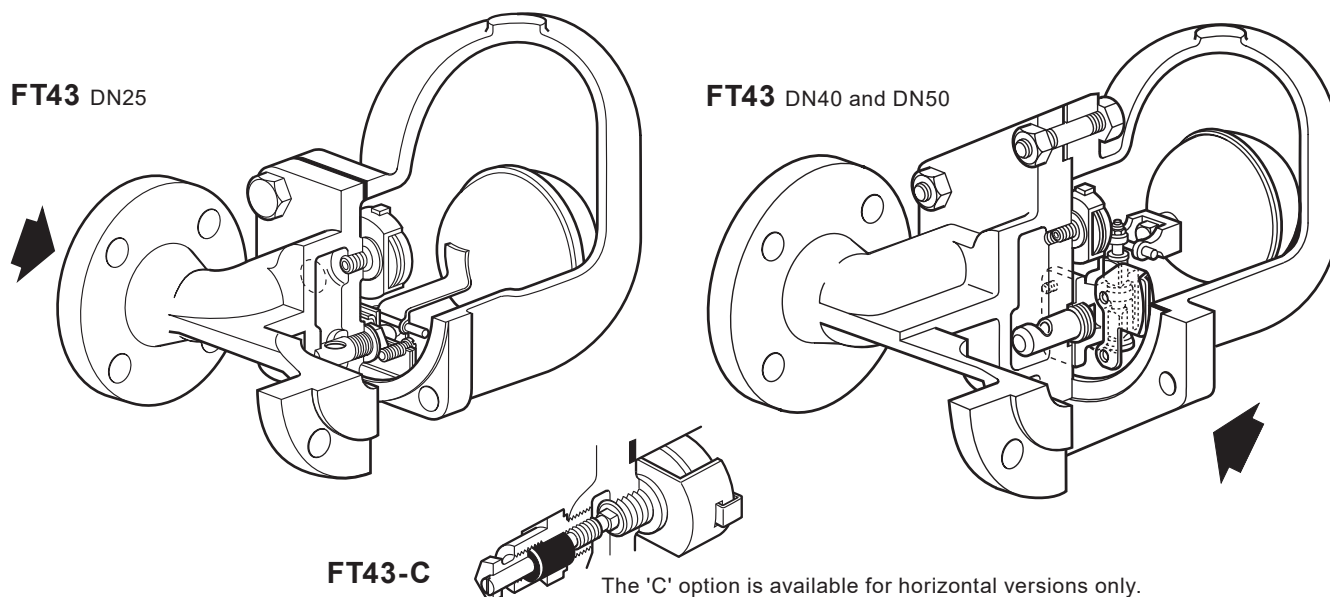


**spirax
sarco**TI-S02-21
CMGT Issue 14

FT43 Cast Iron Ball Float Steam Trap DN25 to DN50



Description

The FT43 is a cast iron bodied ball float steam trap having stainless steel working internals and automatic air venting facility. The trap is supplied with integrally flanged connections and can be maintained without disturbing the pipework. Vertical flanged connections, are available for all sizes. Flow direction for the horizontal trap is clearly illustrated below. For vertically orientated traps the flow is downwards only.

Available options

- FT43 – Horizontal flow
- FT43V – Vertical flow

Standards

This product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment (Safety) Regulations and carries the **CE** mark when so required.

Certification

This product is available with a manufacturers' Typical Test Report.

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

Optional extras

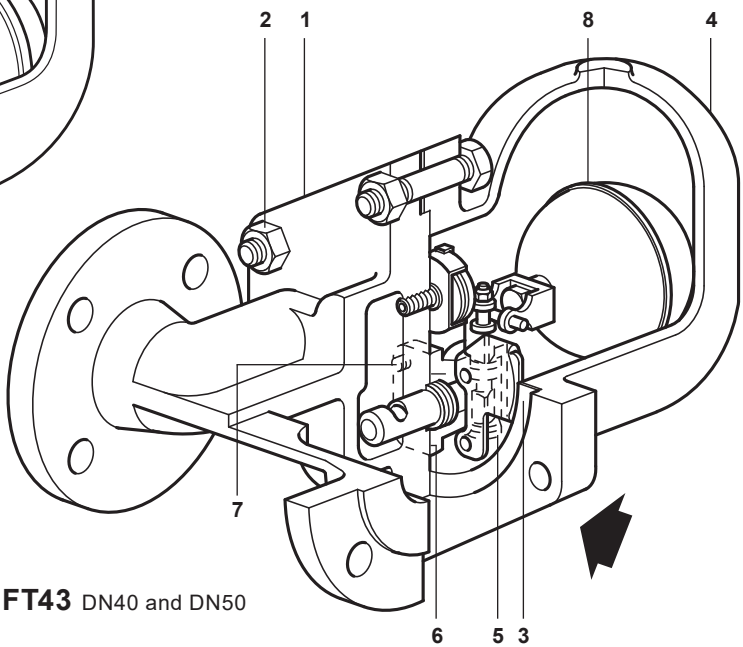
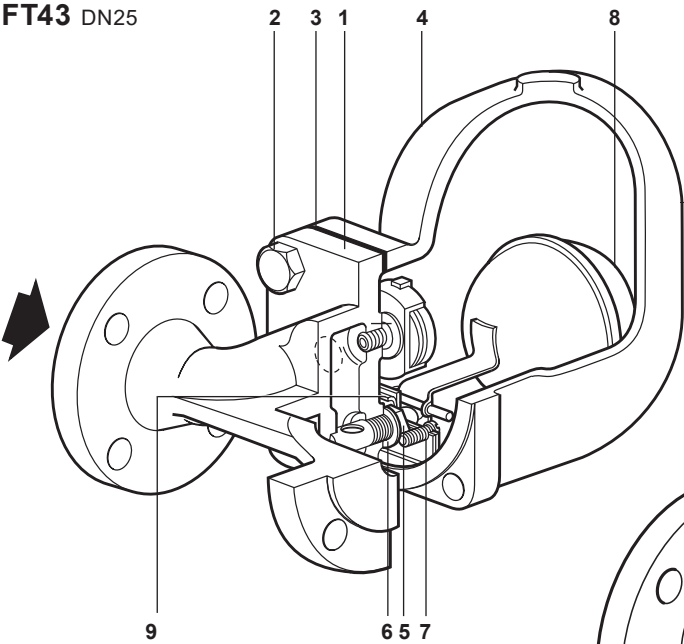
A **manually adjustable needle valve** (designated 'C' on the nomenclature i.e. FT43-C) can be fitted to the horizontal versions of FT43. This option provides a **steam lock release (SLR)** feature in addition to the standard air vent. Vertical versions can be supplied either with an SLR or an Air Vent. The 'C' version is not available upon a vertical version FT43V. For further information please consult Spirax Sarco.

The **top of the cover can be drilled and tapped $\frac{3}{8}$ " 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 $\frac{3}{8}$ " BSP or NPT** for the purpose of fitting a drain cock if requested at the point of order.

Materials

FT43 DN25



FT43 DN40 and DN50

No.	Part	Material	
1	Body	Cast iron	EN-JL 1040
	Cover bolts	DN25	Steel BS 3692 Gr. 8.8
2	Cover stud	Steel	BS 4882 - B7M
	Cover nuts	Steel	BS 3692 Gr. 8.8
3	Cover gasket	Reinforced exfoliated graphite	
4	Cover	Cast iron	EN-JL 1040
	Valve seat	DN25	Stainless steel BS 970 431 S29
5	Main valve assembly with erosion deflector	DN40, DN50	Stainless steel BS 3146 Part 2 Anc 2
	Valve seat gasket	DN25	Stainless steel BS 1449 304 S11
6	Main valve assembly gasket	DN40, DN50	Reinforced exfoliated graphite
	Pivot frame assembly bolts	DN25	Stainless steel BS 4183 18/8
7	Main valve assembly bolts	DN40	Stainless steel BS 970 304 S16
	Studs and nuts	DN50	Stainless steel BS 6105 A4.80
	Ball float and lever	DN25	Stainless steel BS 1449 304 S16
8	Ball float	DN40, DN50	Stainless steel BS 1449 304 S16
9	Support frame	Stainless steel	BS 1449 304 S16

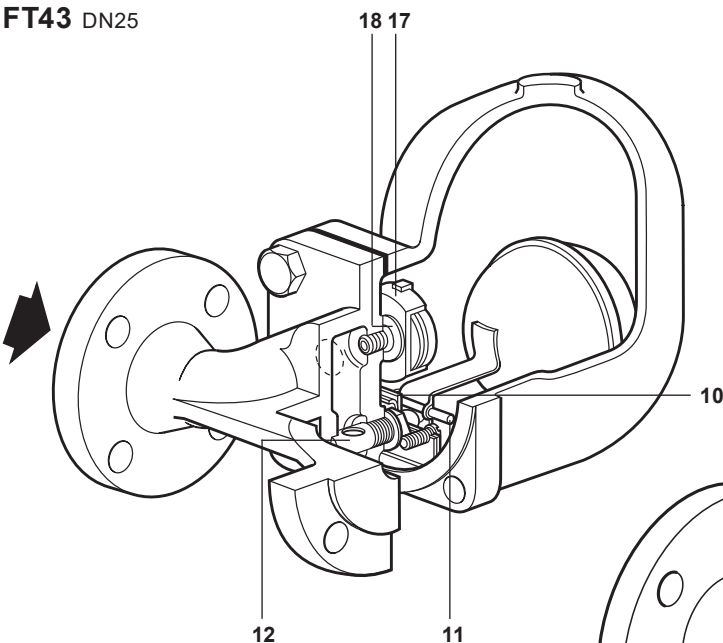
Materials continued on next page

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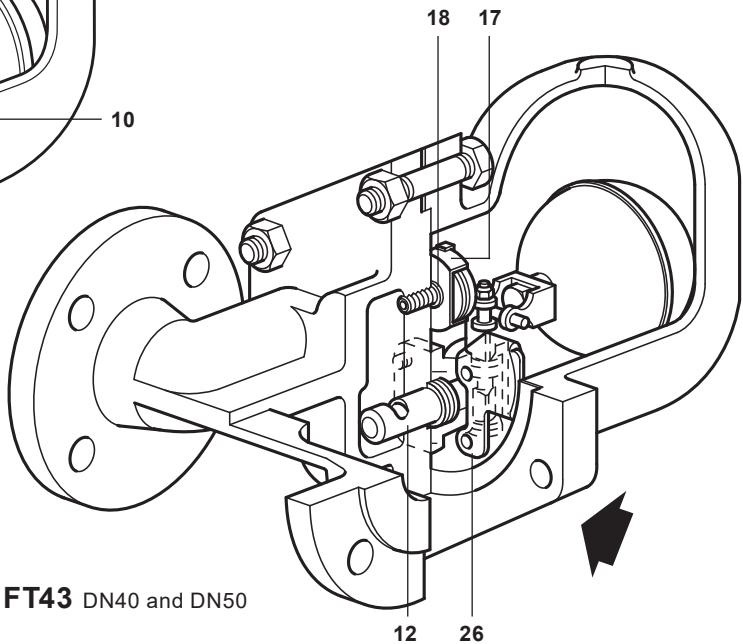
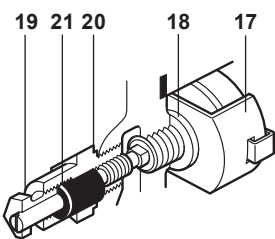
Steam traps
Ball float

Materials (continued)

FT43 DN25

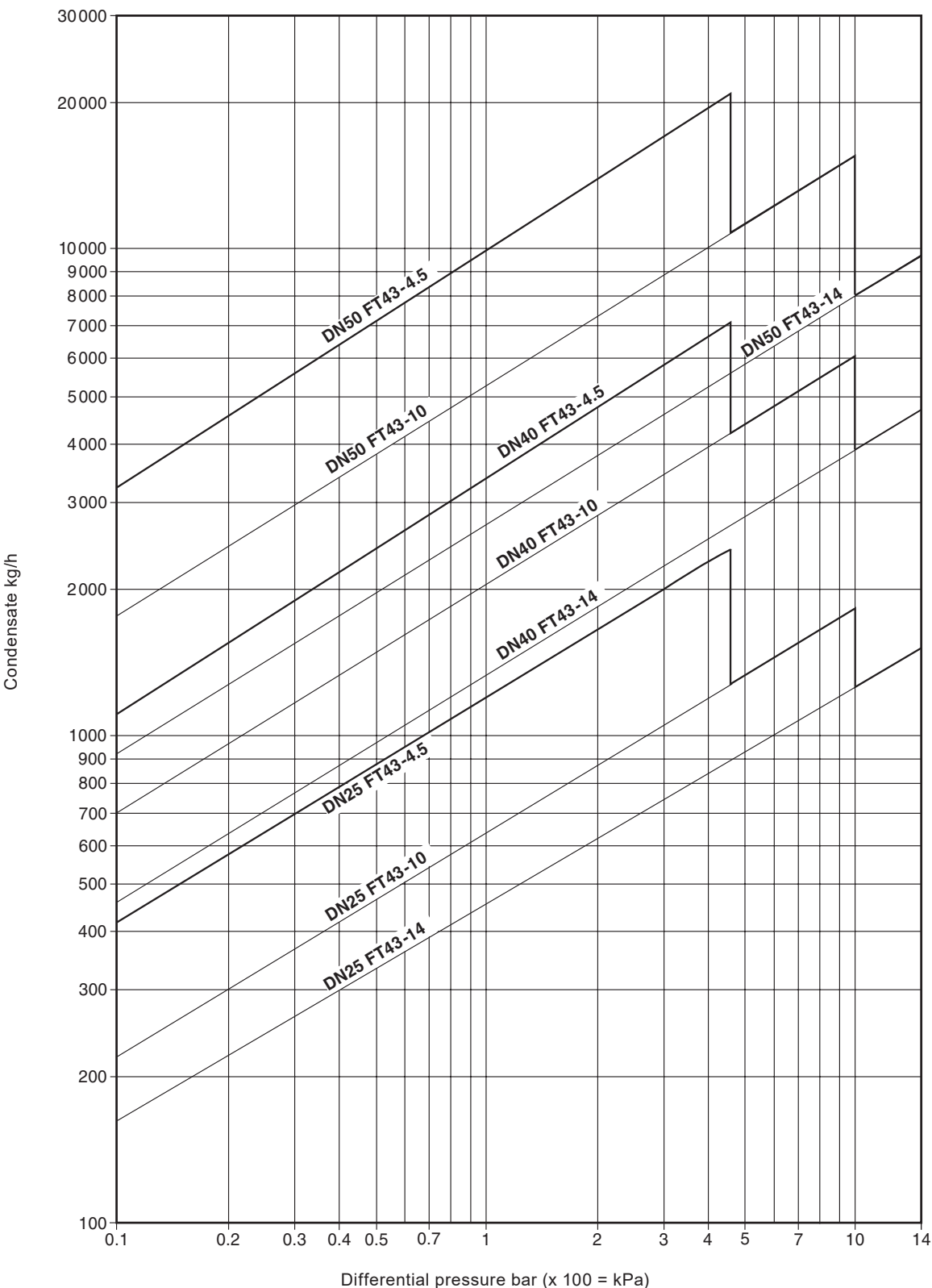


FT43-C



No.	Part	Material	
10	Pivot frame	Stainless steel	BS 1449 304 S16
11	Pivot pin	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 S21
20	SLR gasket	Mild steel	BS 1449 CS4
21	SLR seal	Graphite	
26	Inlet plate	DN40, DN50 Stainless steel	BS 1449 304 S15

Capacities



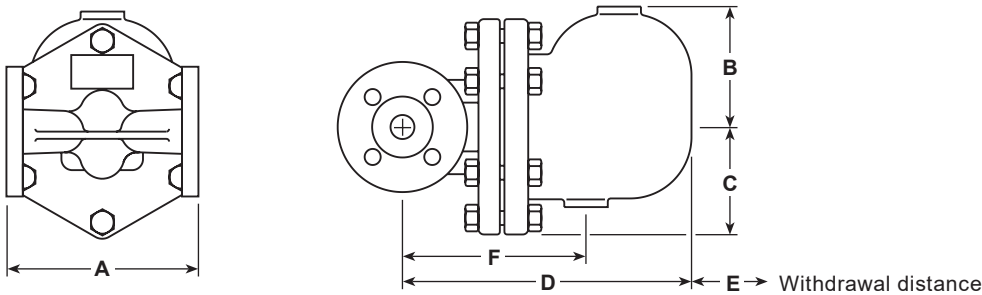
Additional cold water capacities from the thermostatic air vent under start-up conditions
Capacities shown above are based on condensate at saturation temperature. Under start-up conditions when the condensate is cold the internal thermostatic air vent will be open and provides additional capacity to 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
	Minimum additional cold water capacity (kg/h)							
DN25, DN40 and DN50	460	680	900	1 080	1 300	1 600	1 980	2 050

Steam traps
Ball float

Dimensions / weights (approximate) in mm and kg

FT43 DN40 and DN50 shown



Size	A *		B	C	D	E	F	Weight
	PN16 JIS/KS 10	ASME 125						
DN25	160	148	110	80	245	160	215	8.3
DN40	230	221	128	110	330	200	200	21.5
DN50	230	220	140	126	340	200	225	30.5

* The face-to-face dimensions for the PN16 are in accordance with ISO 6554; for other flange variants, please contact Spirax Sarco.

Safety information, installation and maintenance

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

Installation note:

The FT43 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 FT43-4.5 ball float steam trap, flanged to EN 1092 PN16 with cast iron body and cover with thermostatic air vent.

Spare parts

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

Available spares

Main valve assembly complete with ball float (DN25 horizontal traps)*	5, 6, 7, 8, 9, 10, 11
Main valve assembly with erosion deflector (DN40 and DN50) (specify horizontal or vertical trap) **	5, 6, 7, 12, 26
Ball float (DN40 and DN50)	8
Air vent assembly	17, 18
Manually adjustable needle valve and air vent assembly	17, 18, 19, 20, 21
Complete set of gaskets (packet of 3)	3, 6, 20

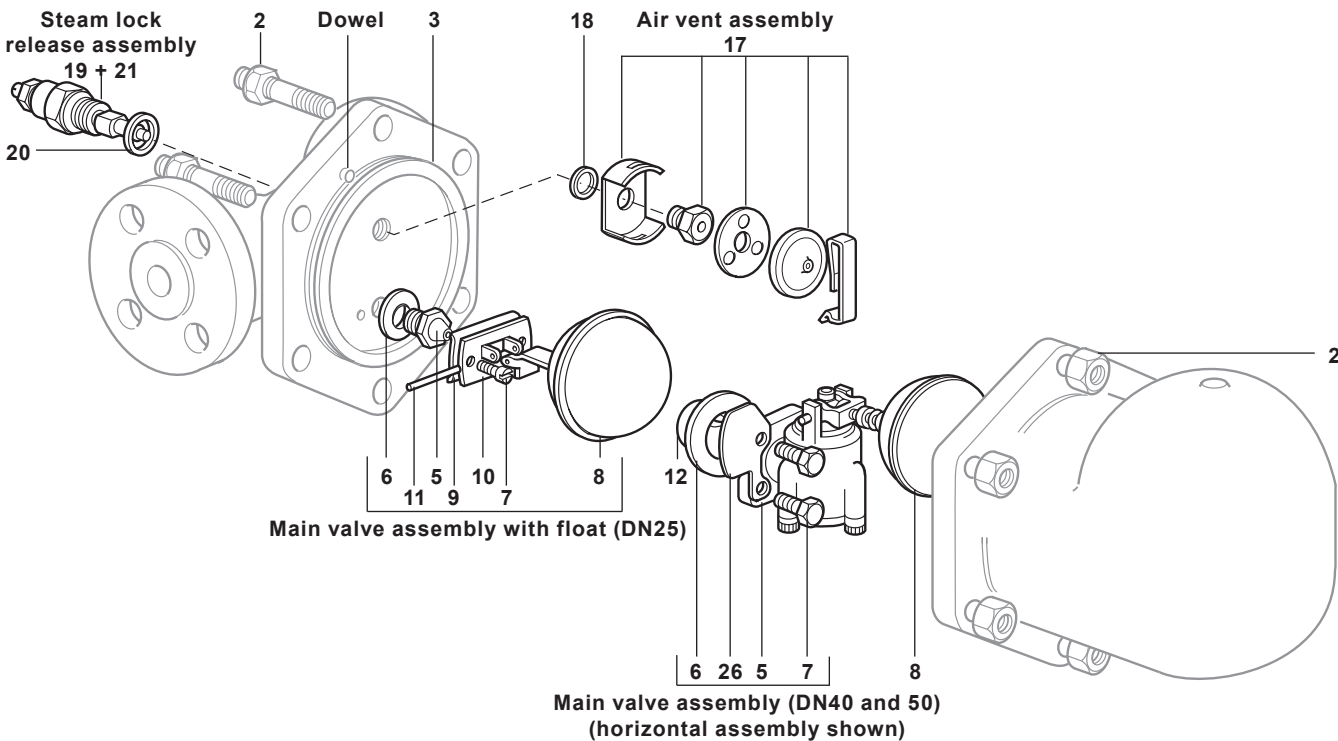
* On horizontal traps the erosion deflector on the DN25 is pressed into the body during manufacture and not available as a spare.

** 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 - Air vent assembly for a Spirax Sarco DN25 FT43-4.5 ball float steam trap, with horizontal connections.



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Recommended tightening torques

Item	Part		or mm		N m
2	DN25	17 A/F	M10 x 30		29 - 33
	DN40	19 A/F	M12 x 60		60 - 66
	DN50	24 A/F	M16 x 70		80 - 88
5	DN25				50 - 50
	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

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Steam traps
Ball float

8.5

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spirax
sarcoTI-S02-22
CMGT Issue 10**FT43****Cast Iron****Ball Float Steam Traps DN80 and DN100****Description**

The FT43 is a cast iron bodied ball float steam trap having stainless steel working internals and automatic air venting facility. It is available with horizontal flanged connections only. If required, the covers can be drilled and tapped $\frac{3}{8}$ " BSP or NPT for the purpose of fitting drain cocks.

Standards

This product fully complies with the requirements of the Pressure Equipment Directive (PED) and carries the **CE** mark when so required.

Certification

This product is available with a manufacturer's Typical Test Report.

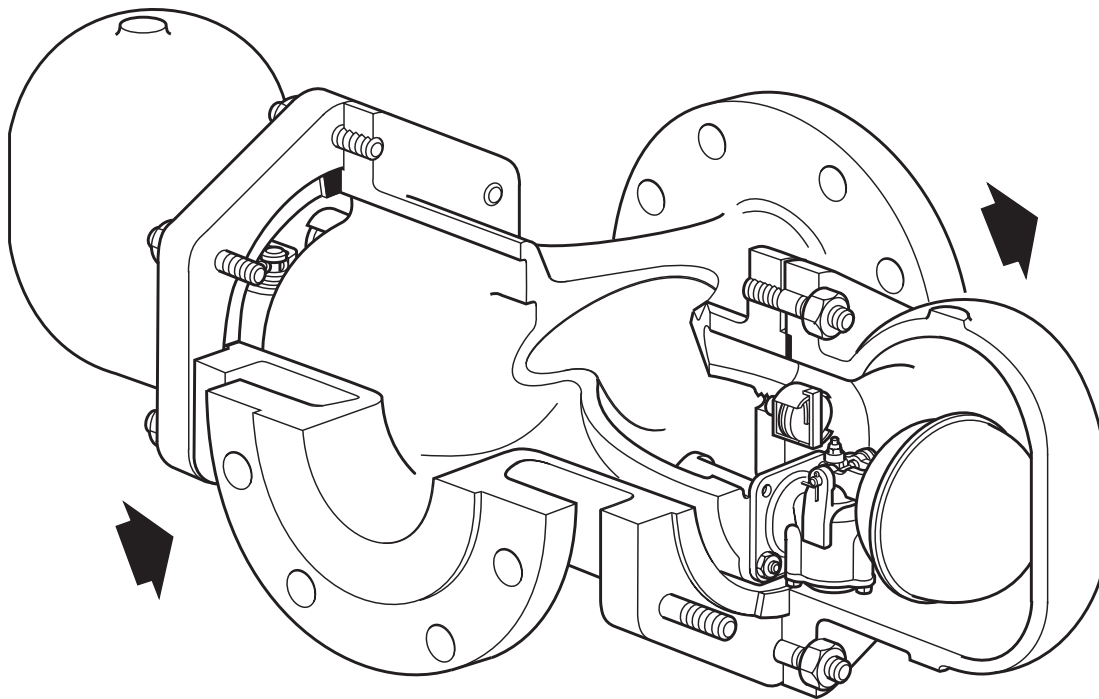
Note: All certification/inspection requirements must be specified at the time of order placement.

Sizes and pipe connections

DN80 and DN100

Standard flange: EN 1092 PN16.

Flanges available on request: JIS 10, KS 10 and ASME 125.

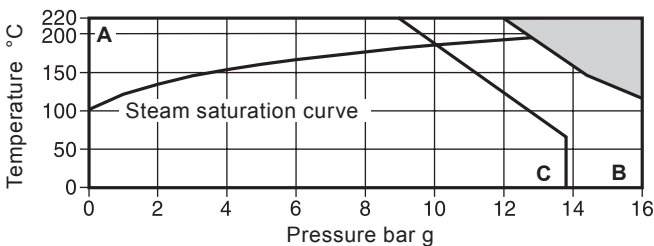


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Steam traps
Ball float

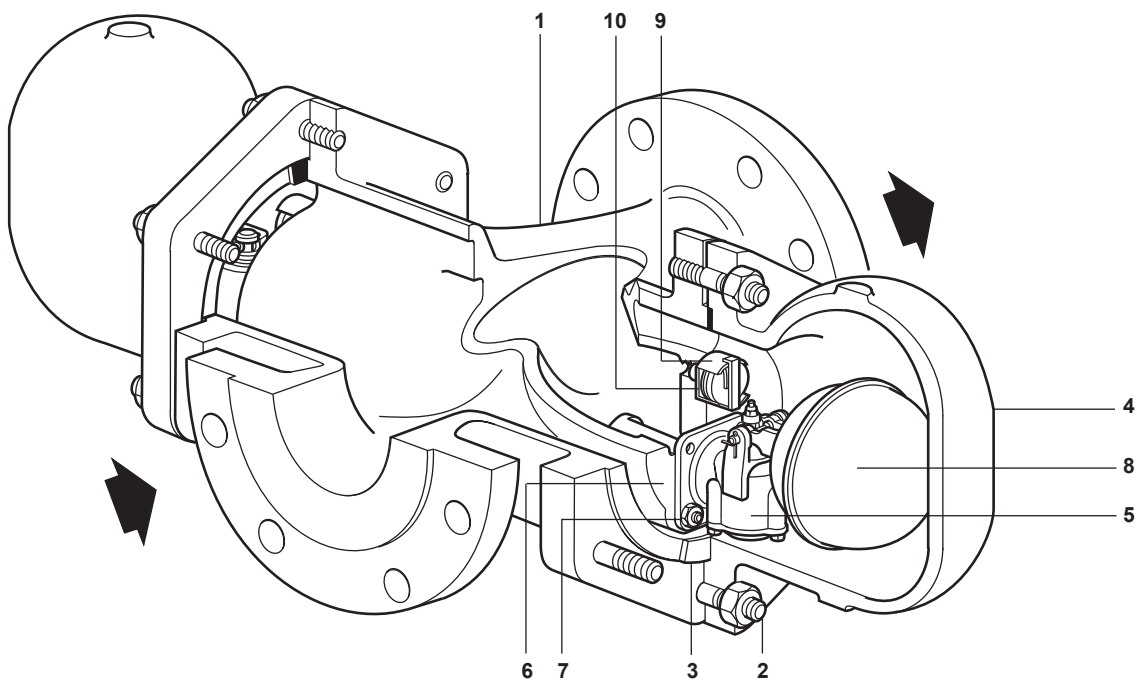
Pressure/temperature limits (ISO 6552)



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

Body design conditions		PN16	
PMA	Maximum allowable pressure	16 bar g @ 120 °C	
TMA	Maximum allowable temperature	220 °C @ 12.1 bar g	
Minimum allowable temperature		0 °C	
PMO	Maximum operating pressure for saturated steam service	limited to ΔPMX	
TMO	Maximum operating temperature	220 °C @ 12.1 bar g	
Minimum operating temperature		0 °C	
Note: For lower operating temperatures consult Spirax Sarco			
ΔPMX	Maximum different pressure	FT43-4.5	4.5 bar
		FT43-10	10 bar
		FT43-14	13 bar
Designed for a maximum cold hydraulic test pressure of		24 bar g	

Materials



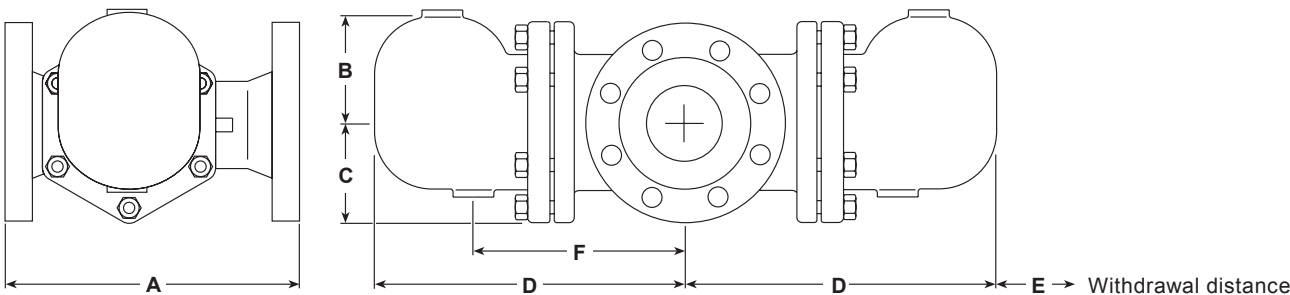
No. Part		Material	
1	Body	Cast iron	EN-JL1040
2	Cover studs and nuts	Steel	BS 4439 Gr. 8.8 BS 3692 Gr. 8
3	Cover gasket	Reinforced exfoliated graphite	
4	Cover	Cast iron	EN JL 1040
5	Main valve assembly	Stainless steel	BS 3146 Pt. 2 ANC 2
6	Main valve assembly gasket	Reinforced exfoliated graphite	
7	Main valve assembly studs and nuts	Stainless steel	BS 6105 A4-80
8	Ball float and lever	Stainless steel	BS 1449 304 S16
9	Air vent assembly	Stainless steel	
10	Air vent seat gasket	Stainless steel	BS 1449 409 S19

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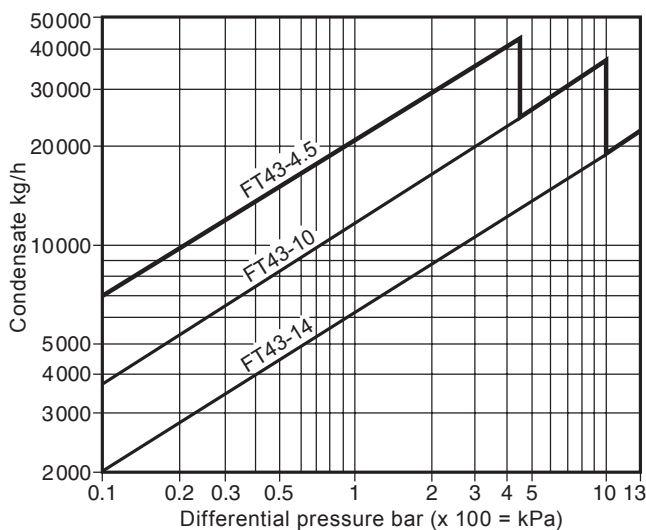
Dimensions/weights (approximate) in mm and kg

Size	PN16 A	JIS/KS 10 A	ASME A	B	C	D	E	F	Weight
DN80	350	350	343	140	123	387	200	310	72
DN100	352	350	350	140	123	387	200	310	74



Steam traps
Ball float

Capacities - DN80 and DN100



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	13
Size	Minimum additional cold water capacity (kg/h)							
DN80	1080	1200	1240	1340	1400	2000	2600	3200
DN100								

Safety information and maintenance

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

Installation note

The FT43 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. Providing due care is taken no ecological hazard is anticipated with its disposal.

How to order

Example: 1 off Spirax Sarco DN100 FT43-4.5 ball float steam trap flanged to EN 1092 PN16, with cast iron body and cover with thermostatic air vent.

Spare parts

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

Available spares

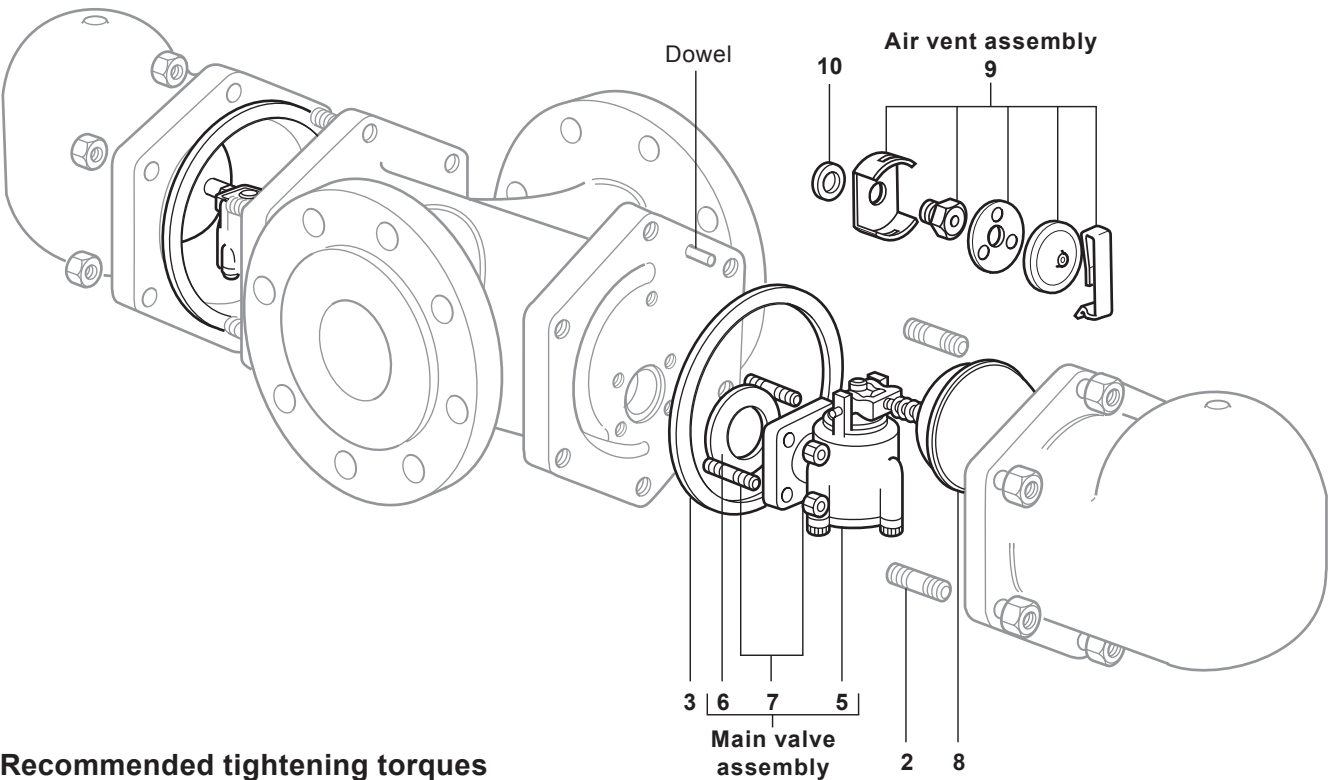
Main valve assembly	5, 6, 7
Ball float and lever	8
Air vent assembly	9, 10
Set of gaskets	3, 6, 10

Note: For a complete overhaul 2 x each spare is required, with the exception of the gaskets and main valve assembly kit.



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.

Example: 1 - Air vent assembly for a Spirax Sarco DN80 FT43-4.5 ball float steam trap.



Recommended tightening torques

Item		or mm		N m
2	24 A/F	M16 x 45		80 - 88
7	13 A/F	M8 x 20		20 - 24
9	17 A/F			50 - 55

8

Steam traps
Ball float

8.5

80