TI-P615-01
CMGT Issue 7

IFT14
Ball Float Steam Trap with Integral Spiratec Sensor

Description
The IFT14 is an SG iron bodied ball float steam trap having stainless steel working internals, integral Spiratec sensor and automatic air venting facility. It can be supplied with either a WLS1 sensor to detect waterlogging and steam leakage or a SS1 sensor for steam leakage only. The IFT14 is supplied with horizontal connections, having flow from right to left (R – L), and can be simply integrated into all existing Spiratec monitoring systems.

Capsule
The BP99/32 capsule which is used in the FT14 is suitable for use on 150 °C superheat @ 0 bar g and 50 °C superheat @ 32 bar g.

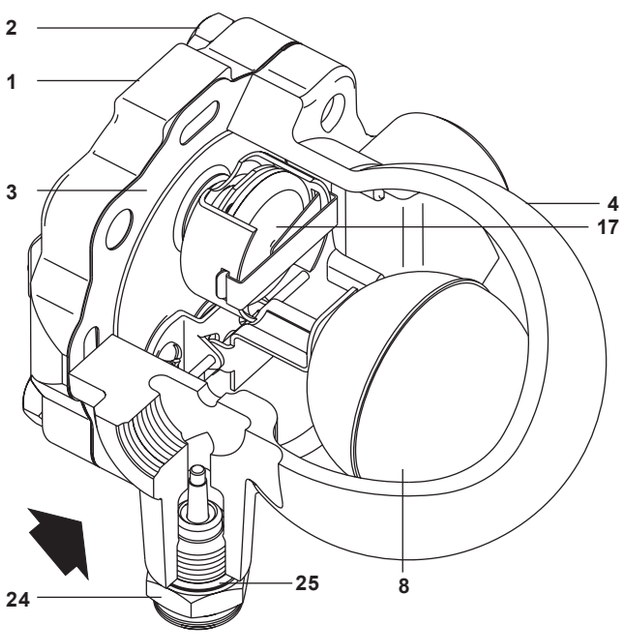
Standards
The product fully complies with the requirements of the Pressure Equipment Directive (PED).

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.

Sizes and pipe connections
½" and ¾" screwed BSP or NPT.

Materials

No.	Part	Material	
1	Body	SG iron	DIN 1693 GGG 40
2	Cover bolts	Steel	BS 3692 Gr. 8.8
3	Cover gasket	Stainless steel reinforced exfoliated graphite	
4	Cover	SG iron	DIN 1693 GGG 40
5 *	Valve seat	Stainless steel	BS 970 431 S29
6 *	Valve seat gasket	Stainless steel	BS 1449 304 S11
7 *	Pivot frame assembly screws	Stainless steel	BS 6105 CI A2-70
8	Ball float and lever	Stainless steel	BS 1449 304 S16
10 *	Pivot frame	Stainless steel	BS 1449 304 S16
11 *	Pivot pin	Stainless steel	
17	Air vent assembly	Stainless steel	
18 *	Air vent seat gasket	Stainless steel	BS 1449 304 S11
24	Sensor	Stainless steel	BS 1449 304 S16
25	Sensor gasket	Stainless steel	BS 1449 304 S16
27	Blanking plug (not shown)	Steel	



*** Note:**
Items 5, 6, 7, 10, 11 and 18 are shown more clearly on page 5.

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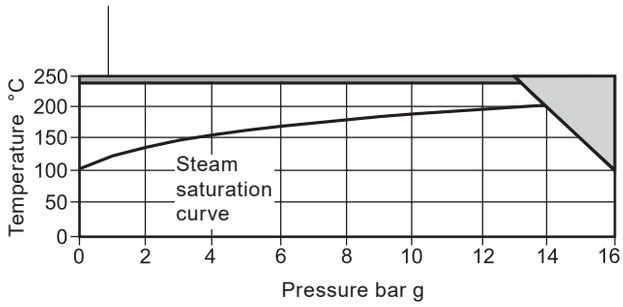
Steam traps
Ball float

Pressure/temperature limits (ISO 6552)

The product should not be used in this region due to the limitations of the sensor.



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

Body design conditions			PN16
PMA	Maximum allowable pressure		16 bar g @ 100 °C
TMA	Maximum allowable temperature		250 °C @ 13 bar g
Minimum allowable temperature			-10 °C
PMO	Maximum operating pressure for saturated steam service		14 bar g
TMO	Maximum operating temperature		240 °C @ 13 bar g
Minimum operating temperature			0 °C
ΔPMX	Maximum differential pressure	**IFT14-4.5**	4.5 bar
		IFT14-10	10 bar
		IFT14-14	14 bar
Designed for a maximum cold hydraulic test pressure of:			24 bar g

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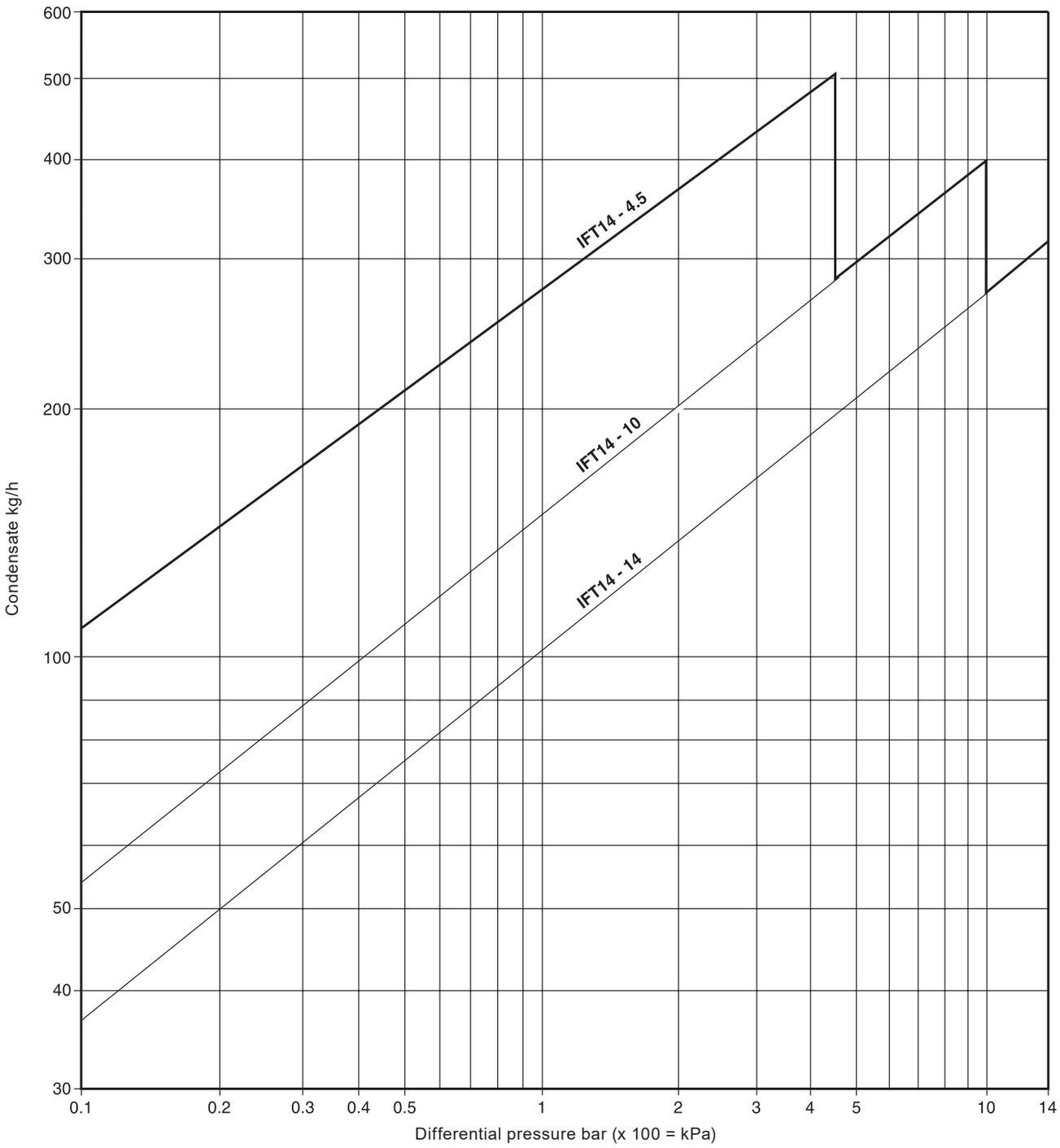
Capacities



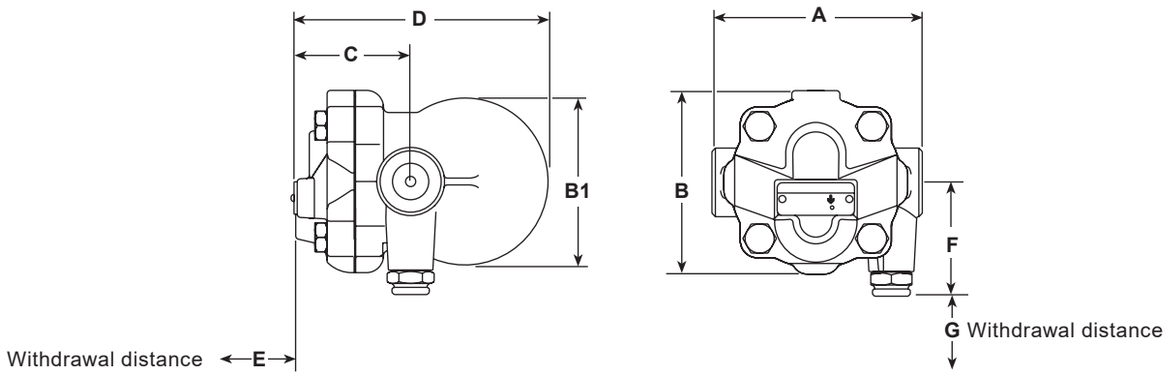
Additional cold water capacities from the thermostatic air vent under start-up conditions

Capacities shown above are based on condensate at saturation temperature. When discharging sub-cooled condensate the air vent provides extra capacity. 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. On the IFT14-4.5 units, this will provide a minimum of 50% increased capacity above the hot condensate figures shown. On the IFT14-10 and IFT14-14 units there will be a minimum increase of 100% on the published capacity. 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)							
½" and ¾"	70	140	250	380	560	870	1130	1500

Dimensions/weights (approximate) in mm and kg

Size	A	B	B1	C	D	E	F	G	Weight
½"	122.5	107	96	67	147	105	66	33	2.9
¾"	122.5	107	96	67	147	105	66	33	2.9



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-F01-30) supplied with the product.

Installation note:

The IFT14 must be installed with the direction of flow as indicated on the body, and with the float arm in a horizontal plain so that it rises and falls vertically. It is recommended that a strainer, with a screen having 0.8 mm perforations, is installed upstream of the unit to ensure adequate removal of dirt from the steam system.

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 ½" IFT14-4.5 ball float steam trap with screwed BSP connections having either an integral sensor to identify waterlogging and steam wastage (WLSI sensor) or for steam leakage only (SSI sensor). Sensors to be compatible with Spiratec indicators, automatic monitors and test points:

- R1 (single trap) remote test point,
- R12 (12 trap) remote test point,
- Type 30 hand held indicator,
- R16C (16 traps) automatic steam trap monitor with PNP/NPN output where appropriate.

Spare parts

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

Available spares

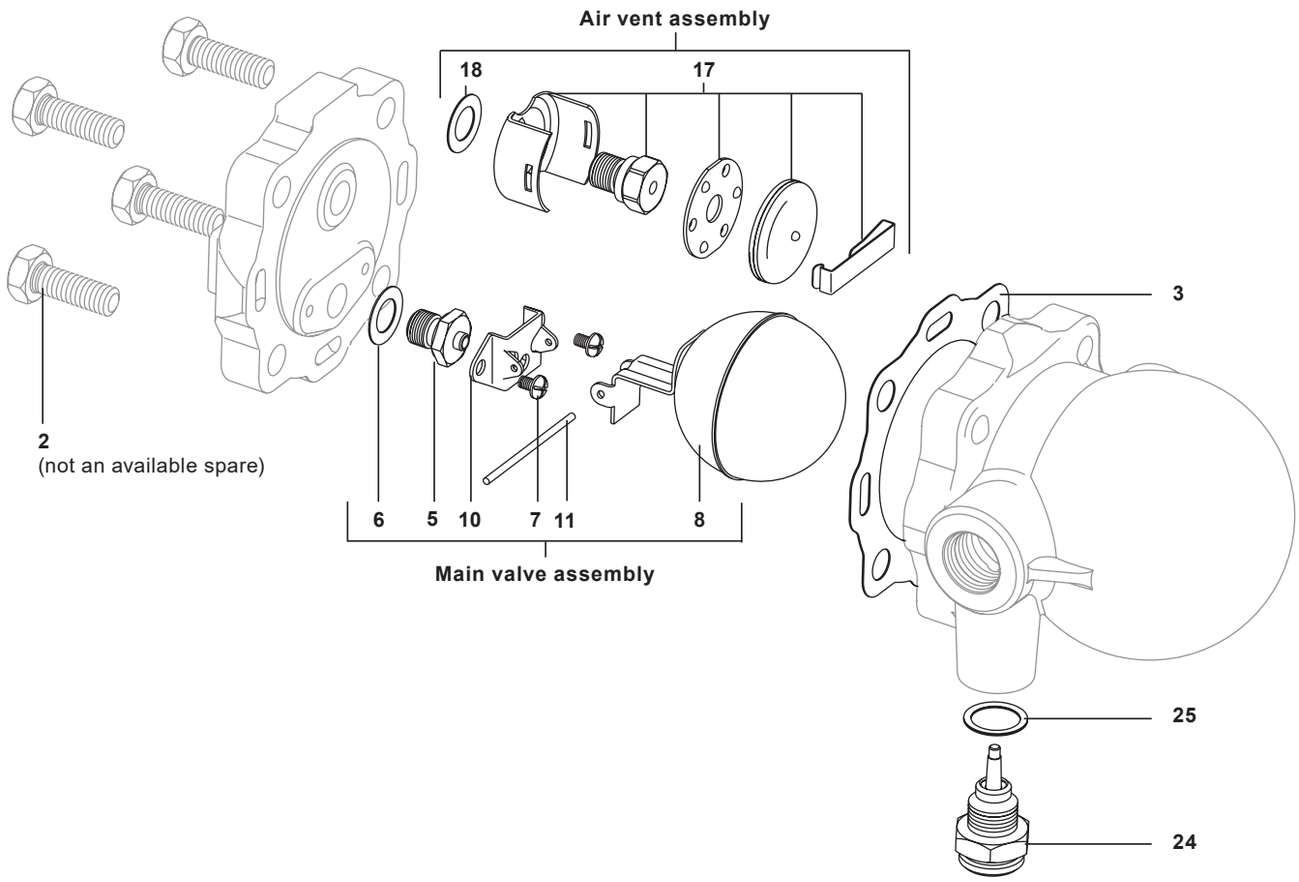
Main valve assembly with float	**3, 5, 6, 7 (2 off), 8, 10, 11**
Air vent assembly	**3, 17, 18**
Cover gasket (packet of 3)	**3**
Sensor and sensor gasket	**24, 25**

How to order spares

Always order spare parts by using the description given in the column headed 'Available spares' and state the size, Model no. and pressure rating of the trap.

Example: 1 - Main valve assembly for a Spirax Sarco ½" IFT14-4.5 ball float steam trap with integral Spiratec sensor.

Note: The pressure range is either 4.5, 10 or 14 bar.



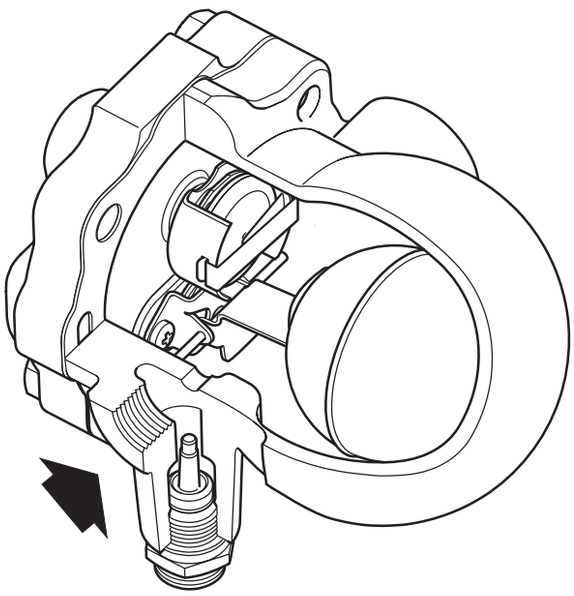
Recommended tightening torques

Item	or mm		N m
2	17 A/F	M10 x 30	45 - 55
5	17 A/F		50 - 55
7	Pozidrive	M4 x 6	2.5 - 3.0
17	17 A/F		50 - 55
24	24 A/F		50 - 55

8 Steam traps
Ball float

TI-P615-11
CMGT Issue 5

IFTGS14
Ball Float Steam Trap with Integral Spiratec Sensor



Description
The IFTGS14 is a maintainable ball float steam trap with integral automatic air venting facility. It is available with horizontal connections and has a stainless steel body and an electroless nickel plated SG iron cover offering increased resistance to erosion.
The IFTGS14 can be simply integrated into all existing Spiratec monitoring systems.

Available options

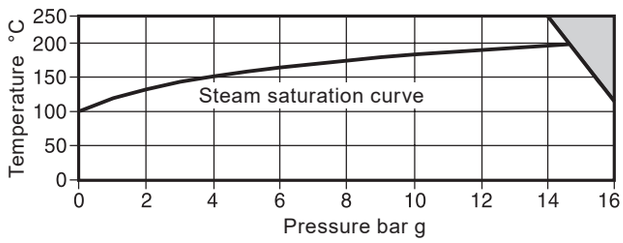
SS1	Sensor to detect steam leakage only.
WLS1	Sensor to detect waterlogging and steam leakage.
WLS1 and Diode pack	Sensor to detect waterlogging and steam leakage for use with R16C steam trap monitor.

Standards
The product fully complies with the requirements of the EU Pressure Equipment Directive/UK Pressure Equipment 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.

Sizes and pipe connections
½" and ¾" screwed BSP or NPT.

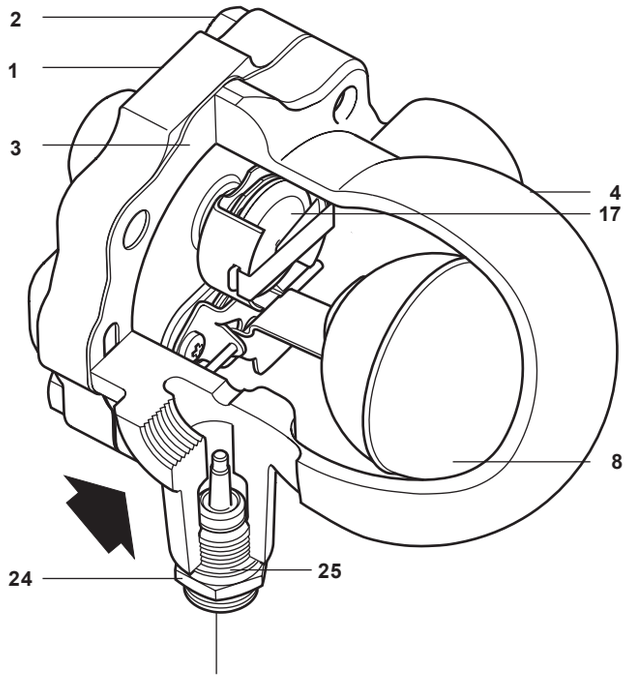
Pressure/temperature limits (ISO 6552)



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		250 °C
Minimum allowable temperature			-10 °C
PMO	Maximum operating pressure for saturated steam service		14.6 bar g
TMO	Maximum operating temperature		250 °C @ 13.8 bar g
Minimum operating temperature			0 °C
ΔPMX	Maximum differential pressure	IFTGS14-4.5	4.5 bar
		IFTGS14-10	10 bar
		IFTGS14-14	14 bar

Materials



Note: The IFTGS14 is supplied with a steel plug (**27**, not shown) in the sensor adaptor, remove and fit sensor on site.

No.	Part	Material	
1	Body	Austenitic stainless steel	EN 10213-4 (1.4308) ASTM A351 CF8
2	Cover bolts	Steel	
3	Cover gasket	Reinforced exfoliated graphite	
4	Cover	Electroless nickel plated SG iron	DIN 1693 GGG 40
5 *	Valve seat	Stainless steel	
6 *	Valve seat gasket	Stainless steel	
7 *	Pivot frame assembly screws	Stainless steel	
8	Ball float and lever	Stainless steel	
10 *	Pivot frame	Stainless steel	
11 *	Pivot pin	Stainless steel	
17	Air vent assembly	Stainless steel	
18	Air vent seat gasket	Stainless steel	
20 *	Gasket	Stainless steel	
24	Sensor	Stainless steel	
25	Sensor gasket	Stainless steel	
27	Blanking plug (not shown)	Steel	

* **Note:** Items 5, 6, 7, 10, 11 and 20 are shown more clearly in the Spare parts section.

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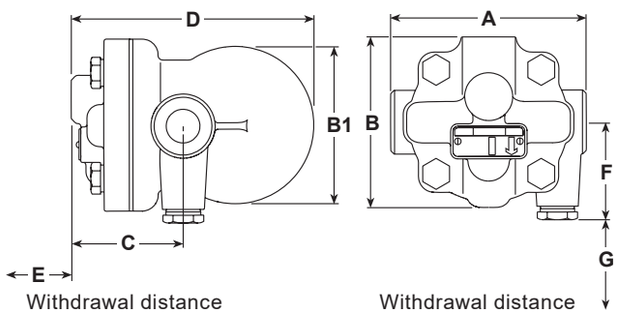
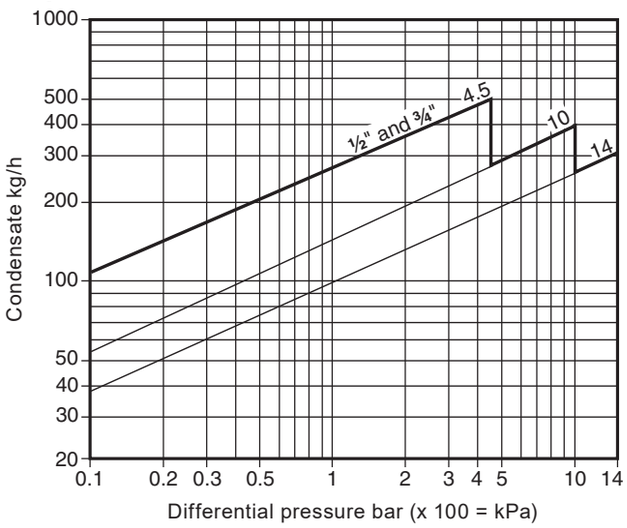
Steam traps
Ball float

Dimensions/weights (approximate) in mm and kg

Size	A	B	B1	C	D	E	F	G	Weight
½"	121	107	96	70	151	105	60	130	3.6
¾"	121	107	96	70	151	105	60	130	3.6



Capacities



Note: Capacities shown are based on discharge at steam saturation temperature. When discharging sub-cooled condensate the air vent provides extra capacity. Under start-up conditions the thermostatic air vent will be open, and will provide additional condensate capacity to the main valve assembly. On 4.5 bar units this will provide a minimum of 50% increased capacity above the hot condensate figures shown. On 10 and 14 bar units this will be a minimum increase of 100% on the published capacity.
For full details see TI-S02-28.

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Safety information, installation and maintenance
For full details see the Installation and Maintenance Instructions (IM-P145-12) supplied with the product.

Installation note
The IFTGS14 is supplied with a blanking plug in the sensor adaptor: The sensor is to be fitted on site.
The IFTGS14 must be installed with the direction of flow as indicated on the cover, and with the float arm in a horizontal plain so that it rises and falls vertically. The IFTGS14 has been designed for use in a right to left flow direction when viewed from the name-plate end, however, it can also be installed in a left to right orientation, by simply rotating the complete trap through 180°.
Caution: Ensure that adequate distance is allowed for removal of the body and internals in the event of maintenance. See 'Dimensions/weights' for withdrawal distances.

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

Spare parts

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

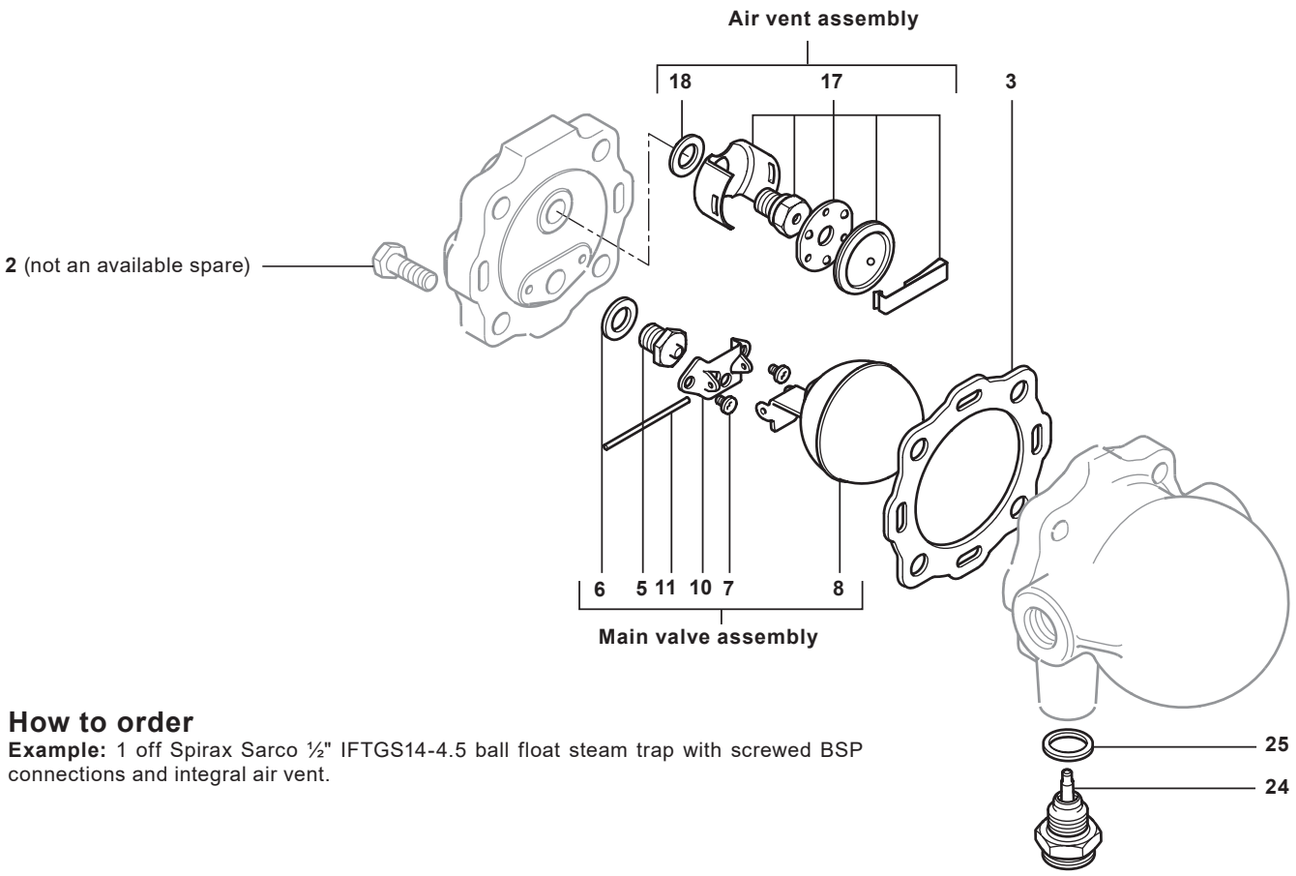
Available spares

Maintenance kit	**3, 5, 6, 7 (2 off), 8, 10, 11, 17, 18**
Main valve assembly	**3, 5, 6, 7 (2 off), 8, 10, 11**
Air vent assembly	**3, 17, 18**
Sensor and sensor gasket	**24, 25**
Cover gasket (packet of 3)	**3**

How to order spares

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

Example: 1 - Maintenance kit for a Spirax Sarco ½" IFTGS14-10 ball float steam trap.



How to order

Example: 1 off Spirax Sarco ½" IFTGS14-4.5 ball float steam trap with screwed BSP connections and integral air vent.

Blanking plug **27** not shown

Recommended tightening torques

Item	or mm		N m
2	17 A/F	M10 x 30	47 - 50
5	17 A/F		50 - 55
7	Pozidrive	M4 x 6	2.5 - 3.0
9	17 A/F		50 - 55
24	24 A/F		50 - 56
27	22 A/F		50 - 56

8 Steam traps
Ball float