



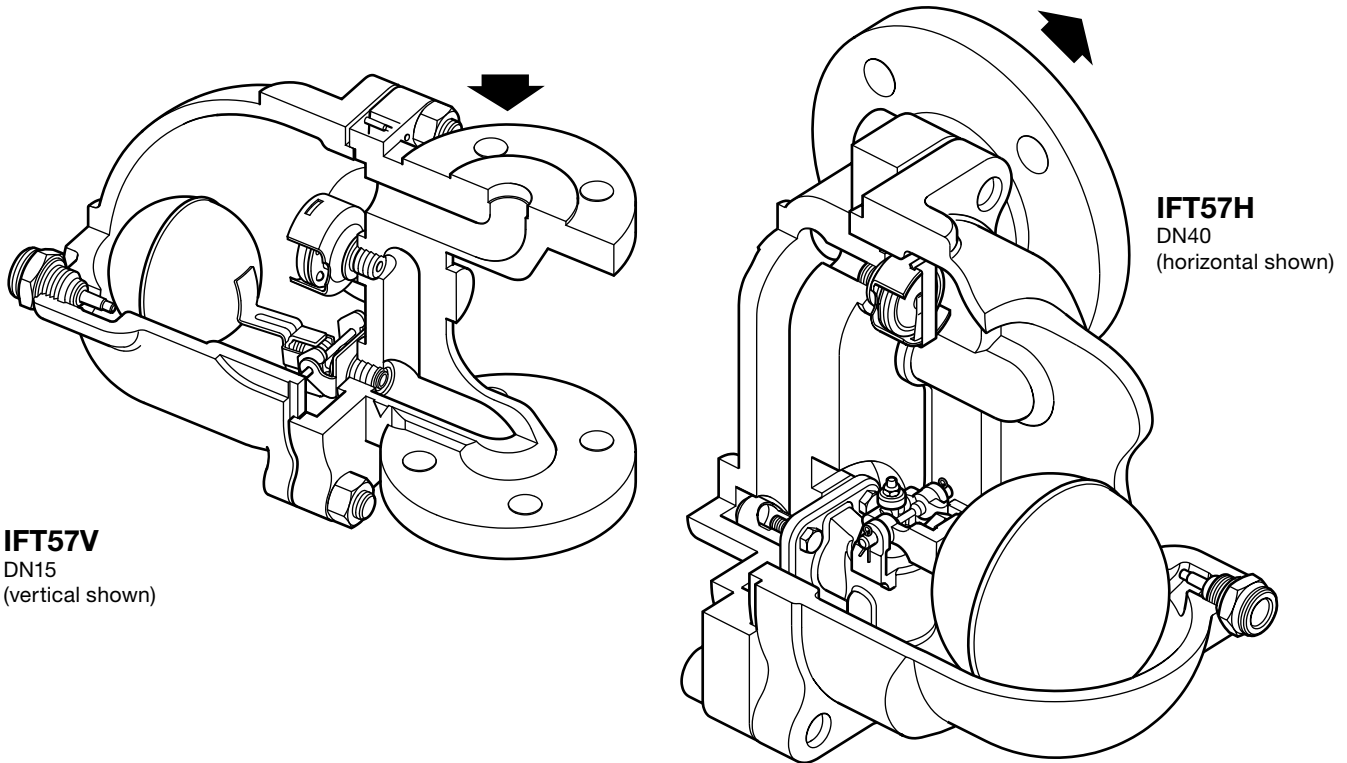
Cert. No. LRQ 0963008

ISO 9001

# spirax/sarco

**TI-P615-03**  
ST Issue 4

## IFT57 SG Iron Ball Float Steam Trap with Integral Spiratec Sensor and Flanged Connections



### Description

The IFT57 is an SG iron ball float steam trap having stainless steel working internals, an integral Spiratec sensor (SSI) for steam leakage detection and built-in automatic air venting facility for the prompt removal of large condensate loads from steam systems. The trap is supplied with integrally flanged connections and can be maintained without disturbing the pipework. Vertical flanged connections, designated IFT57V are available. Flow direction for the horizontal trap is from right to left only when facing the body. For vertically orientated traps the flow is downwards only. The body and cover are produced by TÜV approved foundries.

**Available options:**      **IFT57H** - Horizontal flow.      **IFT57V** - Vertical flow.

Sensors are compatible with Spiratec indicators, automatic monitors and test points:

**R1** (single trap) remote set point,

**R12** (12 trap) remote test point,

**Type 30** hand held indicator,

**R16C** (16 trap) automatic steam trap monitor with PNP/NPN output where applicable.

**Capsule** - The BP99/32 capsule used in the air vent assembly is suitable for 150°C superheat @ 0 bar g and 50°C superheat @ 32 bar g.

### Optional extras

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.

**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

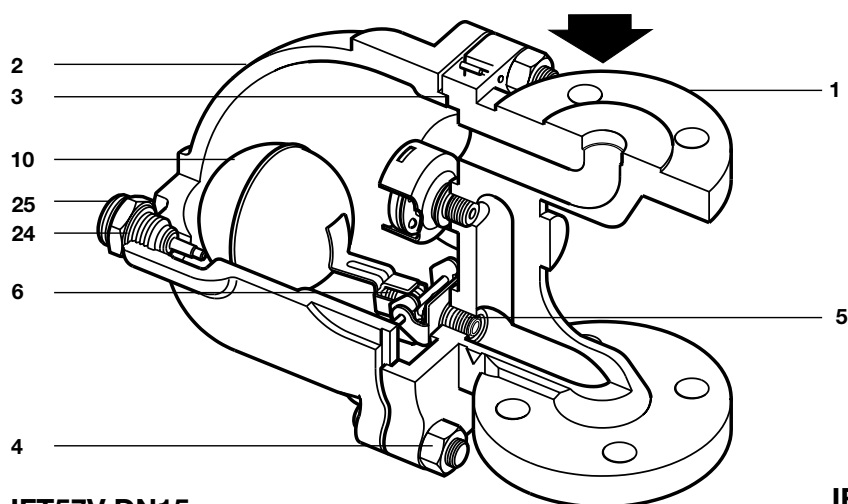
DN15, DN20, DN25, DN40 and DN50.

**Standard flanges** are EN 1092 PN40 (formerly DIN 2501) with face-to-face dimensions in accordance with EN 26554 (series 1).

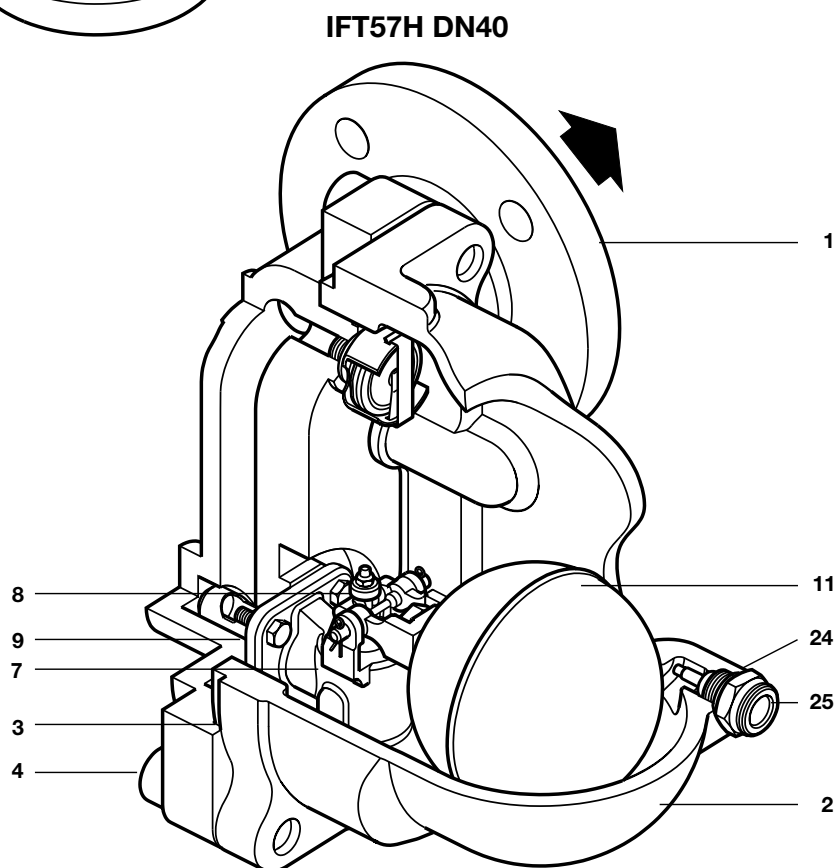
Local regulations may restrict the use of this product to below the conditions quoted.

In the interests of development and improvement of the product, we reserve the right to change the specification without notice.

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IFT57V DN15



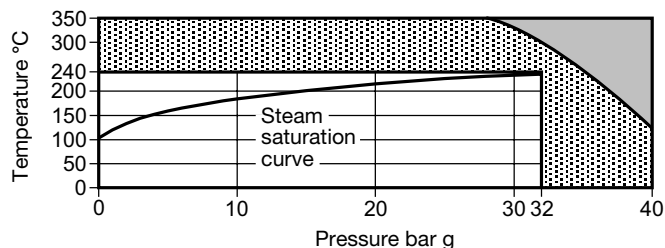
IFT57H DN40

## Materials


No.	Part	Material	
1	Body	SG iron	EN-GJS-400-18U-LT
2	Cover	SG iron	EN-GJS-400-18U-LT
3	Cover gasket	Reinforced exfoliated graphite	
	Cover bolts	FT57H	Steel 24 CrMo 5 (1.7258)
4	Cover studs	FT57V	Steel 24 CrMo 5 (1.7258)
	Cover nuts	FT57V	Steel CK 35 (1.1181)
5	Valve seat	(DN15-25)	Stainless steel X 22 CrNi172(1.4057)
6	Valve	(DN15-25)	Stainless steel X 105CrMo17(1.4125)
7	Valve seat	(DN40-50)	Stainless steel X 22 CrNi 172(1.4057)
8	Valve	(DN40-50)	Stainless steel X 22 CrNi 172(1.4057)
9	Main valve gasket	Exfoliated graphite	
10	Ball float	Stainless steel	X 5 CrNi 18 10 (1.4301)
11	Ball float	Stainless steel	X 5 CrNi 18 10 (1.4301)
24	Sensor gasket	Stainless steel	BS 1449 304 S16
25	Sensor	Stainless steel	BS 1449 304 S16

**Note:** All other internals are manufactured in stainless steel.

## Pressure/temperature limits



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

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

**Capsule** - The BP99/32 capsule used in the air vent assembly is suitable for 150°C superheat @ 0 bar g and 50°C superheat @ 32 bar g.

Body design conditions		PN40
PMA	Maximum allowable pressure	40 bar g @ 120°C
TMA	Maximum allowable temperature	350°C @ 28 bar g
Minimum allowable temperature		-10°C
PMO	Maximum operating pressure for saturated steam service	32 bar g
TMO	Maximum operating temperature	240°C @ 32 bar g
Minimum operating temperature		0°C

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

	Size	Model	IFT57H-4	IFT57H-8	IFT57H-12	IFT57H-16	IFT57H-20	IFT57H-32
			IFT57V-4	IFT57V-8	IFT57V-12	IFT57V-16	IFT57V-20	IFT57V-32
Maximum differential pressures	DN15, DN20 and DN25		4 bar	8 bar	12 bar	-	20 bar	32 bar
	DN40 and DN50		-	-	-	16 bar	-	32 bar

Designed for a maximum cold hydraulic test pressure of: 60 bar g

**Note:** With internals fitted, test pressure must not exceed ΔPMX

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

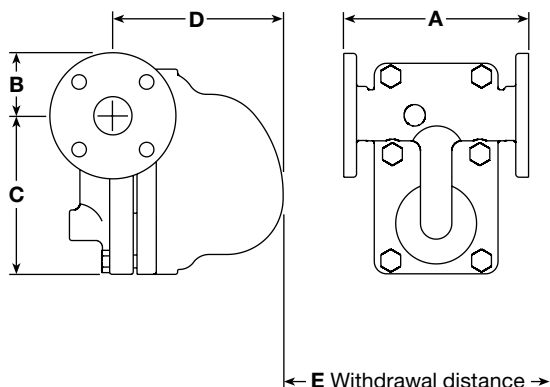
### IFT57H

Size	A	B	C	D	E	Weight
DN15	150	48	126	151	119	7.5
DN20	150	53	126	151	119	8.0
DN25	160	58	126	151	119	8.5
DN40	230	75.5	192	208	168	27.0
DN50	230	83	192	208	168	28.0

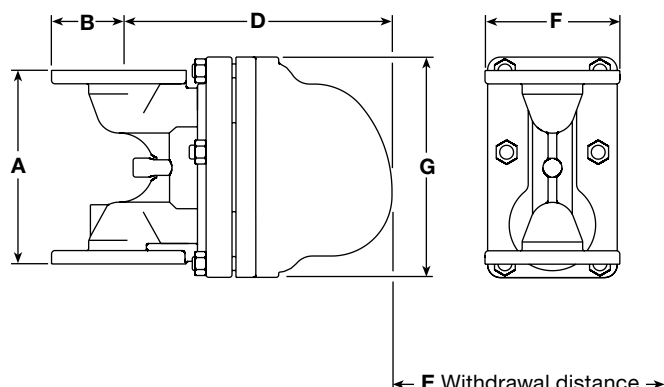
### IFT57V

Size	A	B	D	E	F	G	Weight
DN15	150	48	214	119	96	175	7.5
DN20	150	53	214	119	106	175	8.0
DN25	160	58	221	119	116	175	8.5
DN40	230	75.5	312	168	151	255	29.0
DN50	230	83	312	168	166	255	30.0

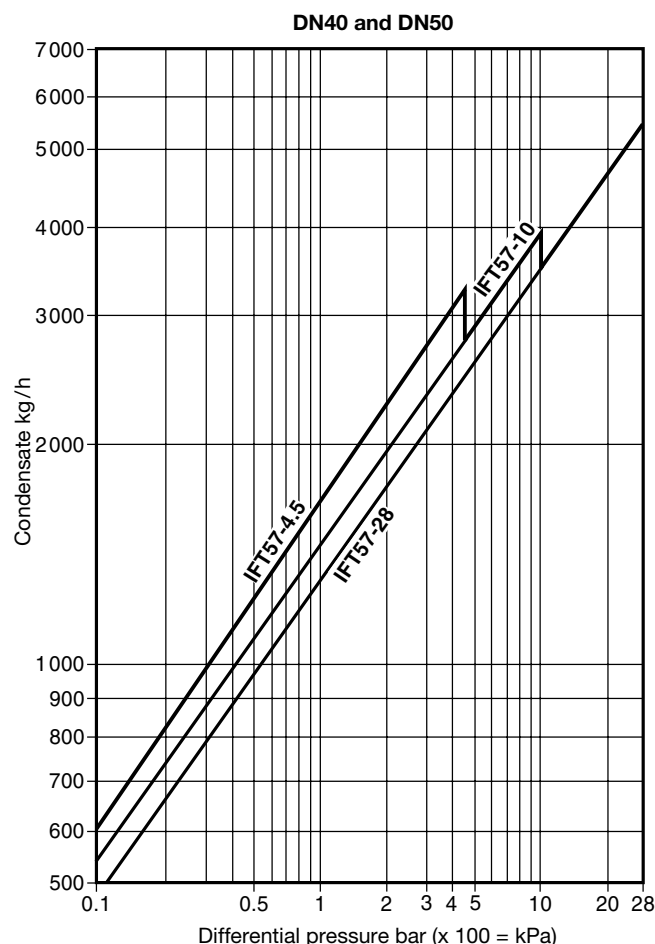
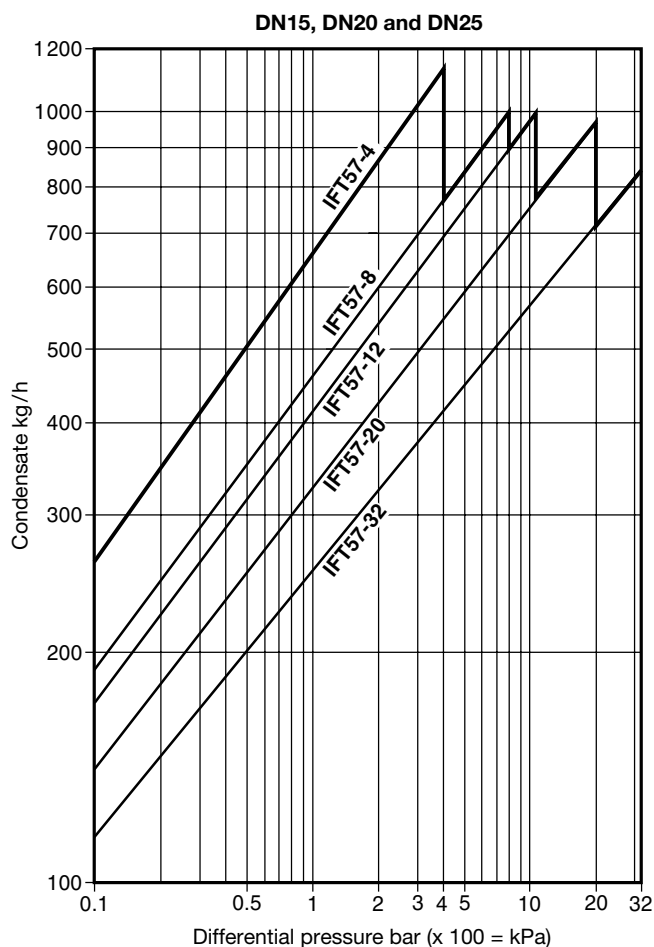
### IFT57H DN15 to DN50



### IFT57V DN15 to DN50



## Capacities (in accordance with ISO 7842)



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

Under star<sup>®</sup>

the main valve. The Table below gives the minimum additional cold water capacities from the air vent.

#### Minimum additional cold water capacities from the air vent (kg/h)

$\Delta P$ (bar)	0.5	1	2	3	4	4.5	8	10	12	16	20	28	32
<b>DN15, DN20 and DN25</b>	460	680	900	1080	1250	-	1700	-	2000	2250	2550	-	3000
<b>DN40 and DN50</b>	460	680	900	1080	-	1300	1700	1900	-	2250	2550	2900	-

## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P603-03) supplied with the product.

### Installation note:

The trap is designed for installation with the float arm in a horizontal plane so that it rises and falls vertically, ideally with a drop leg immediately preceding the trap. Suitable isolation valves must be installed to allow for safe maintenance/replacement. Where steam traps are fitted in exposed conditions, the possibility of freezing damage may be reduced by thermal insulation/draining/isolation.

### For DN15 – DN25 sizes

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.

### For DN40 – DN50 sizes

It is recommended that a strainer, with a 40 mesh screen, is installed upstream of the unit to ensure adequate removal of dirt from the steam system.

### Maintenance note:

Maintenance can be completed with the trap in the pipeline, once the safety procedures have been observed. It is recommended that new gaskets and spares are used whenever maintenance is undertaken.

**Caution:** The cover gasket and main valve assembly gasket may contain a thin stainless steel support ring which may cause physical injury if it is not handled and disposed of carefully.

### Disposal

No ecological hazard is anticipated with the disposal of this product provided due care is taken.

## How to order

**Example:** 1 off Spirax Sarco DN40 IFT57H-16 ball float steam trap with SG iron body and cover having an integral sensor (SSI) to identify steam leakage. Flanged connections to EN 1092 PN40. Trap to be fitted with the optional balance and drain connections.

## Spare parts

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

### Available spares

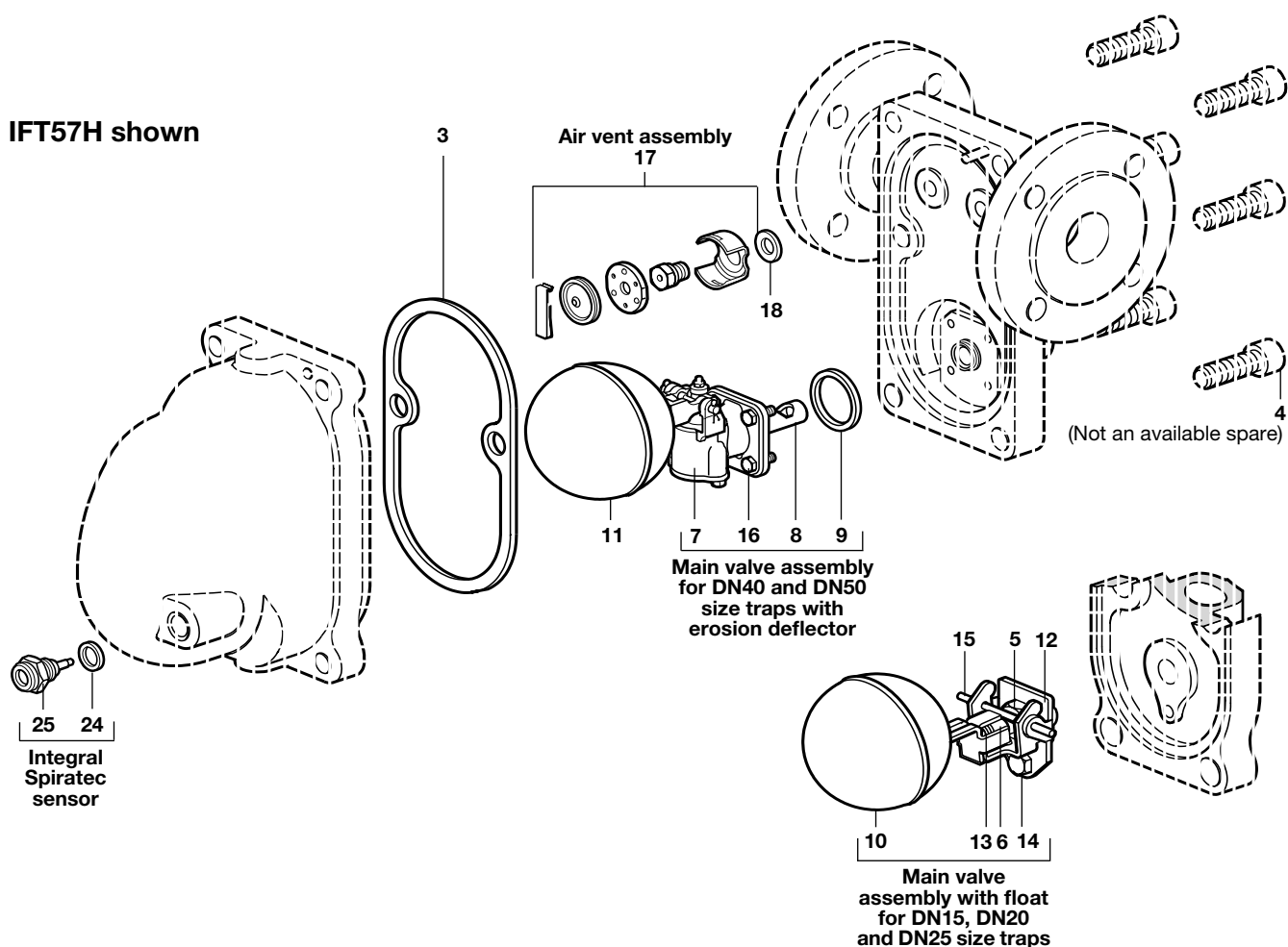
Main valve assembly with float	(DN15, DN20 and DN25)	5, 6, 10, 12, 13, 14, 15
Main valve assembly with erosion deflector	(DN40 and DN50)	7, 8, 9, 16
Ball float	(DN40 and DN50 only)	11
Air vent assembly		17, 18
Complete set of gaskets (packet of 3)		3, 9, 18, 20
Sensor and gasket		24, 25

### 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., orientation i.e. horizontal (H) or vertical (V) and pressure rating of the trap.

**Example:** 1 - Main valve assembly for a DN40 IFT54H-16 ball float steam trap. For operating pressures up to 16 bar.

### IFT57H shown



### Recommended tightening torques

Item No. and part				or mm		N m
2	DN15, DN20 and DN25	IFT57H Bolt	10 A/F (socket)		M12 x 35	70 - 75
		IFT57V Stud			M12	35 - 40
		Nut	19 A/F		M12	70 - 75
	DN40 and DN50	IFT57H Bolt	24 A/F		M16 x 55	150 - 165
		IFT57V Stud			M16	70 - 80
		Nut	24 A/F		M16	150 - 165
5	DN15, DN20 and DN25	Valve seat	17 A/F		M12	50 - 55
7	DN15, DN20 and DN25	Pivot frame assembly screws	10 A/F		M6 x 10	10 - 12
15	DN40 and DN50	Servo-mechanism screws	10 A/F		M6 x 10	10 - 12
17		Air vent assembly	17 A/F			50 - 55
24		Sensor	24 A/F			50 - 55