

spirax  
sarco

IUTD30L and IUTD30H

Thermodynamic Steam Traps

with Integral Spiratec Sensors

TI-P614-03

ST Issue 3

Description

The **IUTD30L** and **IUTD30H** stainless steel thermodynamic steam traps with integral strainer are fitted to pipeline connectors. The **IUTD30L** is specifically designed for lower loads associated with mains drainage and tracing applications up to 30 bar g. The **IUTD30H** is designed for higher loads. Both traps are fitted with an integral Spiratec sensor for quick and accurate detection of steam leakage and/or system cooling. Traps can be supplied with sensors to detect waterlogging and steam wastage (WLS1) or for steam leakage only (SS1). All trap/sensor types can be simply integrated into all existing Spiratec monitoring systems. All trap bodies have an electroless nickel plated finish (ELNP) which is both energy efficient and corrosion resistant. The traps are fitted by two screws to a permanently installed stainless steel pipeline connector to ensure the maintenance is both quick and easily undertaken. Traps can be removed/replaced using a simple wrench with minimum system downtime.

Optional extras

**Insulating cover:** To prevent the trap being unduly influenced by excessive heat loss such as when subjected to low outside temperatures, wind, rain etc.

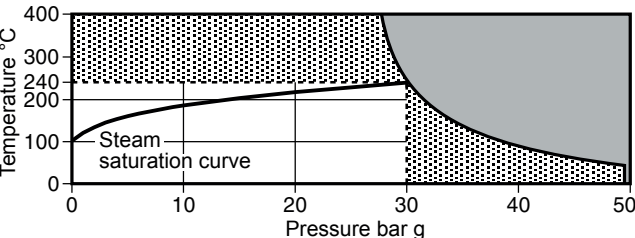
Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 97/23/EC.

Certification

These products are available with certification to EN 10204 3.1. **Note:** All certification / inspection requirements must be stated at the time of order placement.

Pressure / temperature limits (ISO 6552)



- The product **must not** be used in this region.
- The product should not be used in this region or beyond its operating range as damage to the internals may occur.

**Note:** The model of pipeline connector and connections selected will dictate the maximum operating limits of the complete assembly. Reference the specific pipeline connector Technical Information sheet as detailed in 'Pipeline connector options'.

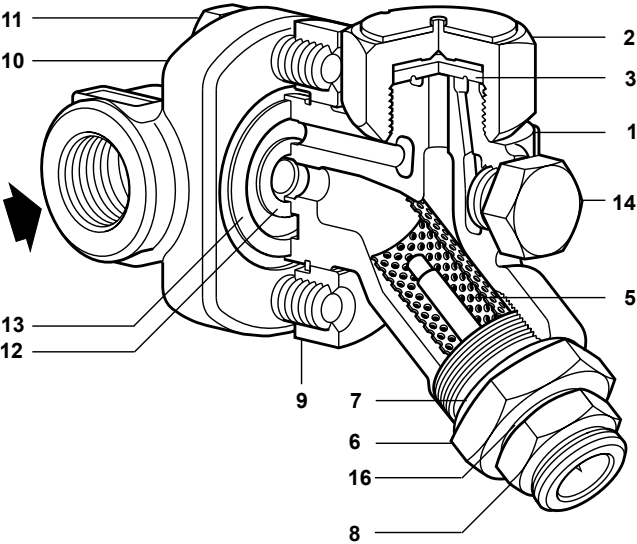
Body design conditions		PN50 (ASME 300)
PMA	Maximum allowable pressure	50 bar g @ 38°C
TMA	Maximum allowable temperature	400°C @ 27.5 bar g
Minimum allowable temperature		0°C
PMO	Maximum operating pressure for saturated steam service	30 bar g
Maximum operating temperature		240°C @ 30 bar g
Minimum operating temperature		0°C
<b>Note:</b> For lower operating temperatures consult Spirax Sarco		
ΔPMX	Maximum differential pressure	30 bar
PMOB	Maximum operating backpressure should not exceed 80% of the upstream pressure	
Minimum inlet pressure for satisfactory operation		0.25 bar g
Designed for a maximum cold hydraulic test pressure of 75 bar g		

Pipeline connector options

The IUTD30 can be fitted to a variety of pipeline connectors:

PC10HP	Straight connector	ASME 600	(TI-P128-10)
PC3_	Straight connector with one piston isolation valve	ASME 600	(TI-P128-02)
PC4_	Straight connector with two piston isolation valve	ASME 600	(TI-P128-03)

See the relevant Technical Information sheet as listed above for details of the connections available for each pipeline connector.



Materials

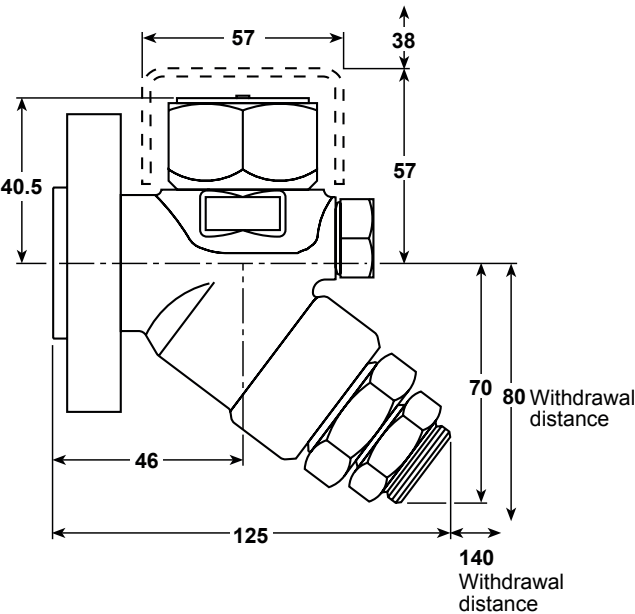
No.	Part	Material	
1	Body	Stainless steel - ELNP	ASTM A 743 Gr. CA 40 F
2	Cap	Stainless steel	ASTM A582 416
3	Disc	Stainless steel	BS 1449 420 S45
5	Strainer screen	Stainless steel	BS 1449 304 S16
6	Sensor adaptor	Stainless steel	BS 970 416 S37
7	Adaptor gasket	Stainless steel	BS 1449 304 S16
8	Sensor	Stainless steel	
9	Flange	Steel - ELNP	ASTM A193 B7
10	Pipeline connector	Stainless steel	ASTM A351 CF8
11	Connector screw	Steel	ASTM A193 B7
12	Inlet gasket	Graphite / Stainless steel laminate	AISI 316 strip
13	Outlet gasket	Graphite / Stainless steel laminate	AISI 316 strip
14	Plug	Stainless steel	ASTM A276 431
15	Insulating cover (optional extra)	Aluminium	
16	Sensor gasket	Stainless steel	
17	Blanking plug (not shown)	Steel	

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Steam traps  
Thermodynamic

Dimensions (approximate) in mm



Weight (approximate) in kg

IUTD30L and IUTD30H with SS1 sensor	2.50
IUTD30L and IUTD30H with WLS sensor	2.65

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P154-02) supplied with the product.

Installation note:

The pipework connector can be installed in either horizontal or vertical pipework.

The mating flange on the IUTD30 trap is free to rotate 360°. The steam trap should be fitted with the cap above the centre line of the trap. Ensure that the steam trap is in a horizontal position with the cap (2) uppermost.

It is recommended that a non-return valve is fitted when discharging condensate into return lines where backpressure is experienced. It is also recommended that a diffuser is fitted when discharging to atmosphere.

For ease of maintenance, consideration should be given to fitting isolation valves upstream and downstream of the steam trap e.g. PC3\_ and PC4\_.

Disposal

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

How to order The IUTD30L is supplied in two parts:-

	PC10HP	Standard connection
1. The swivel pipeline connector	PC3_	+ 1 integral ISO valve
	PC4_	+ 2 integral ISO valves
2. The IUTD30 trap	complete with inner and outer gaskets and two connector screws supplied in a box.	

**Note:** Any optional extras need to be specified at the time of order placement.

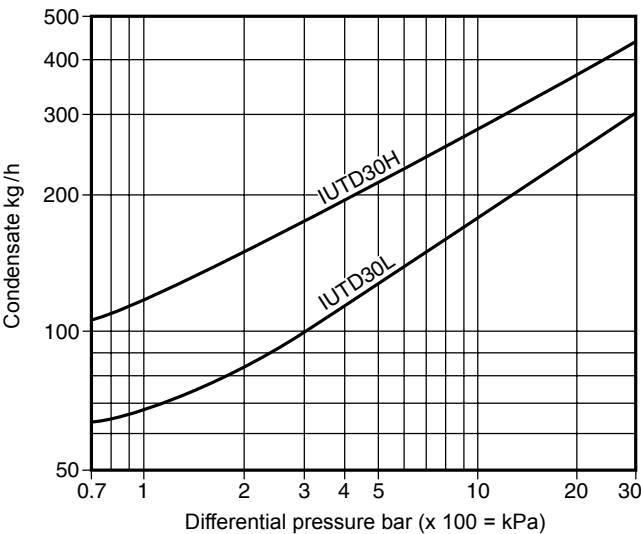
How to order example:

1 off Spirax Sarco DN20 PC10HP swivel pipeline connector with socket weld connections.

1 off Spirax Sarco IUTD30L thermodynamic steam trap fitted with SS1 sensor, complete with connector screws and gaskets.

1 off Insulating cover to fit an IUTD30L.

Capacities



Spare parts

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

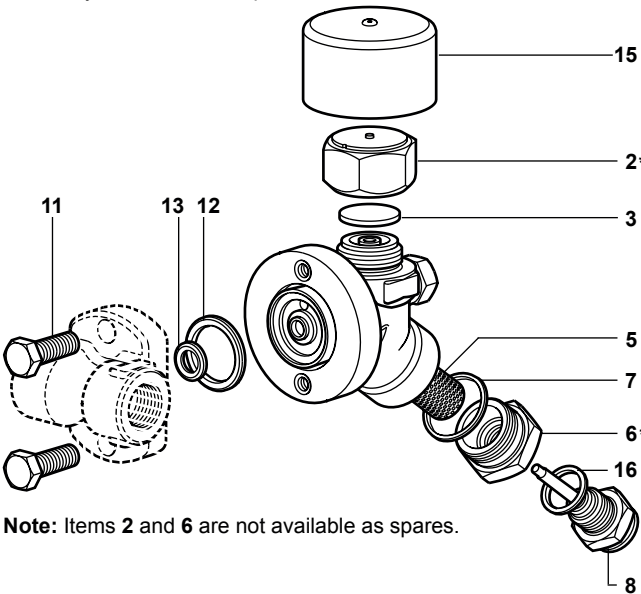
Available spares

Complete trap unit, excluding pipeline connector	
Connector screws and gasket	11, 12, 13
Disc (packet of 3)	3
Strainer screen	5
Strainer screen gasket	7
Insulating cover	15
Sensor assembly (state SS1 or WLS1)	8, 16

How to order



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

**Example:** 1 - Packet of 3 discs for a Spirax Sarco IUTD30L thermodynamic steam trap.



\* **Note:** Items 2 and 6 are not available as spares.

Recommended tightening torques

Item	 or 	Nm
2 (IUTD30L)	36 A/F	135 - 150
2 (IUTD30H)	41 A/F	135 - 150
6	32 A/F	170 - 190
8	24 A/F	50 - 55
11	9/16" A/F	30 - 35



TI-P614-01  
CMGT Issue 4

# ITD32

## Thermodynamic Steam Trap with Integral Spiratec Sensor

### Description

The ITD32 is a maintainable thermodynamic steam trap supplied fitted with an integral Spiratec sensor:

### Available sensor 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.

The ITD32 can be simply integrated into all existing Spiratec monitoring systems. All external body surfaces have an electroless nickel plate (ENP) finish which is both energy saving and oxidation resistant. For those applications where the release of air is a concern, an anti-air-binding disc is available i.e. ITD32LA and ITD32HA.

### ITD32 trap options:

ITD32L	Low capacity.
ITD32LA	Low capacity and anti-air-binding disc.
ITD32H	High capacity.
ITD32HA	High capacity and anti-air-binding disc.

### Standards

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

### Certification

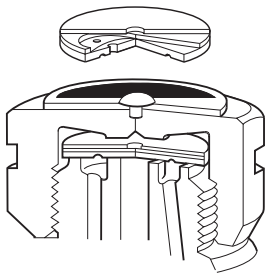
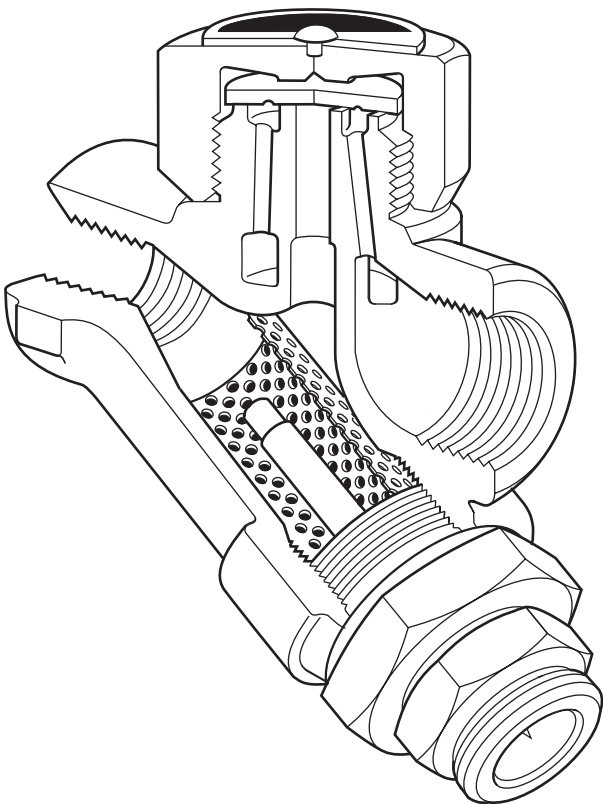
This product is available with a manufacturers' Typical Test Report.  
**Note:** All certification/inspection requirements must be stated at the time of order placement.

### Sizes and pipe connections

ITD32L and ITD32LA	½" and ¾" screwed BSP or NPT.
ITD32H and ITD32HA	½" screwed BSP or NPT.

### Optional extras

Insulating cover: to prevent the trap being unduly influenced by excessive heat loss such as when subjected to low outside temperatures, wind, rain etc.

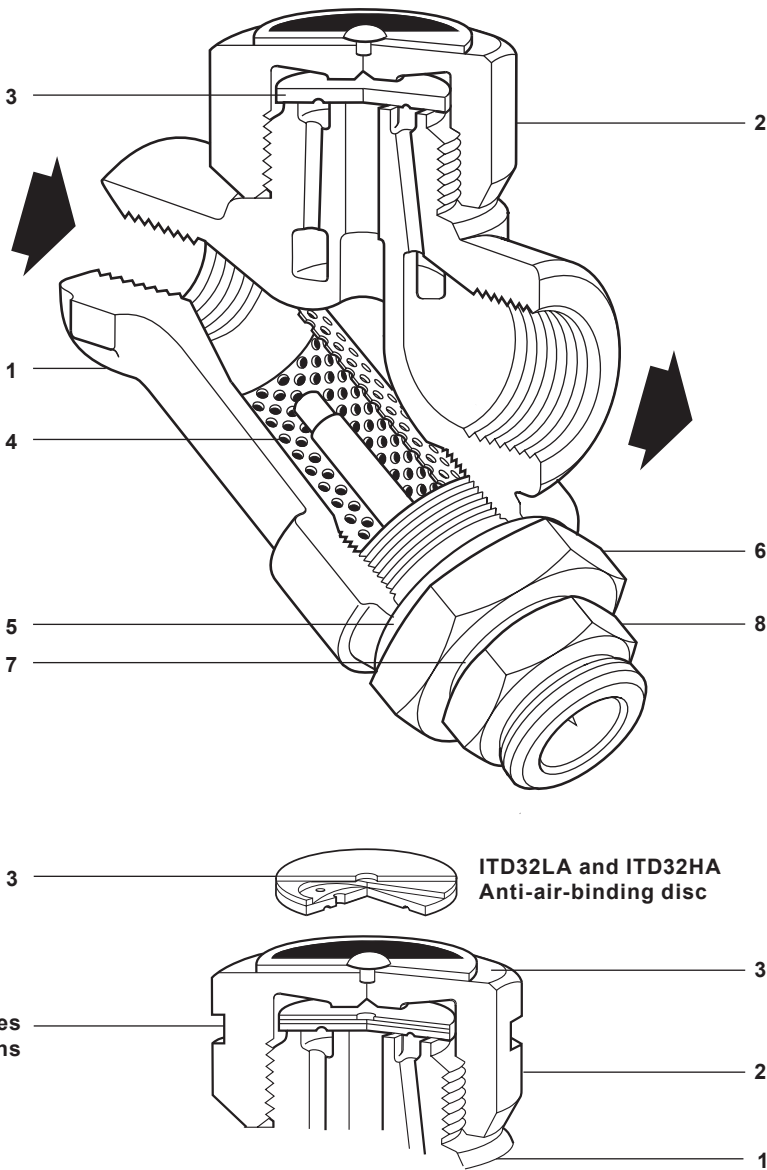


ITD32LA and ITD32HA  
Anti-air-binding disc

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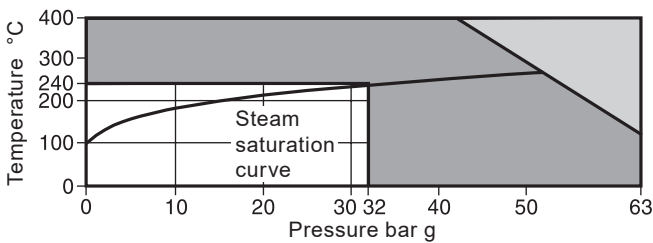
Steam traps  
Thermodynamic  
Materials



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12

No.	Part	Material	
1	Body	Stainless steel (with ENP finish)	ASTM A743 Gr. CA 40 F
2	Cap	Stainless steel	AISI 416
3	Disc	Stainless steel	BS 1449 420 S45
4	Strainer screen	Stainless steel	BS 1449 304 S16
5	Adapter gasket	Stainless steel	BS 1449 304 S16
6	Sensor adapter	Stainless steel	BS 970 416 S37
7	Sensor gasket	Stainless steel	BS 1449 304 S16
8	Sensor	Stainless steel	BS 1449 304 S16
9	Blanking plug (not shown)	Steel	
10	Insulating cover (optional extra)	Aluminium	

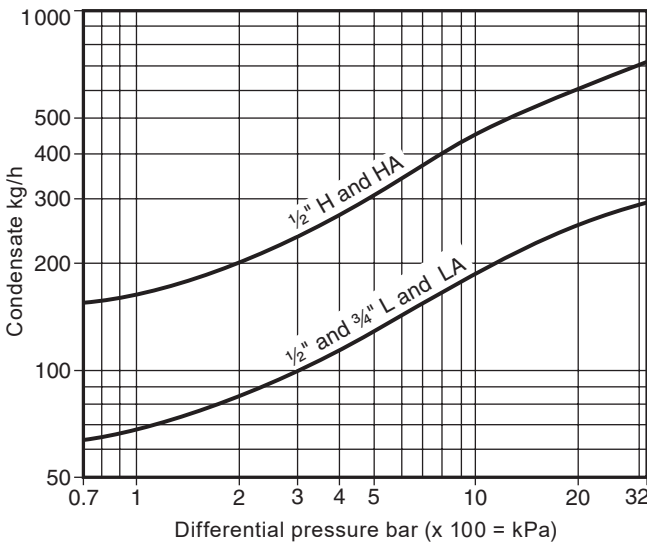
Pressure/temperature limits (ISO 6552)



- The product **must not** be used in this region.
- The sensor limits the PMA and TMA to 240 °C @ 32 bar g. \*

Body design conditions		PN63
PMA * Maximum allowable pressure		63 bar g @ 100 °C
TMA * Maximum allowable temperature		400 °C @ 42 bar g
Minimum allowable temperature		0 °C
PMO Maximum operating pressure		32 bar g
TMO Maximum operating temperature		240 °C @ 32 bar g
Minimum operating temperature		0 °C
Minimum inlet pressure for satisfactory operation	ITD42L and ITD42H	0.25 bar g
	ITD42LA and ITD42HA	0.80 bar g
PMOB Maximum operating backpressure should not exceed 80% of the upstream pressure		
Designed for a maximum cold hydraulic test pressure of:		95 bar g

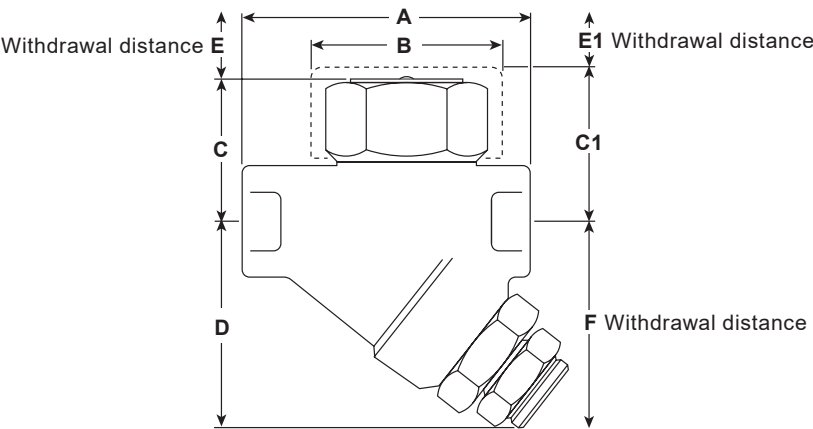
Capacities (in accordance with ISO 7842)



Steam traps  
Thermodynamic

Dimensions/weights (approximate) in mm and kg

Size	A	B	C	C1	D	E	E1	F	Weight
½" L and LA	78	57	41	52	59	20	38	90	0.80
½" H and HA	78	57	41	57	59	41	38	90	0.85
¾" L and LA	90	57	44	52	65	20	38	105	1.00



Safety information, installation and maintenance

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

Installation note

The ITD32 should be installed in horizontal pipework with a small drop leg preceding it. The sensor must be positioned directly below the trap body.

Maintenance note

It is recommended that new gaskets and spares are used whenever maintenance is undertaken. Maintenance may be completed with the trap in the pipeline.

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" ITD32L thermodynamic steam trap having an integral Spiratec sensor:

- WLS1 to identify waterlogging and steam wastage or
- SS1 for steam leakage only.  
Sensors are to be compatible with Spiratec indicators, automatic monitors and test points:
- R1 (single trap) remote test point
- R1C (single trap) automatic steam trap monitor with PNP/NPN output where appropriate
- R12 (12 trap) remote test point
- R16C (16 traps) automatic steam trap monitor
- Type 30 hand held indicator



Spare parts

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

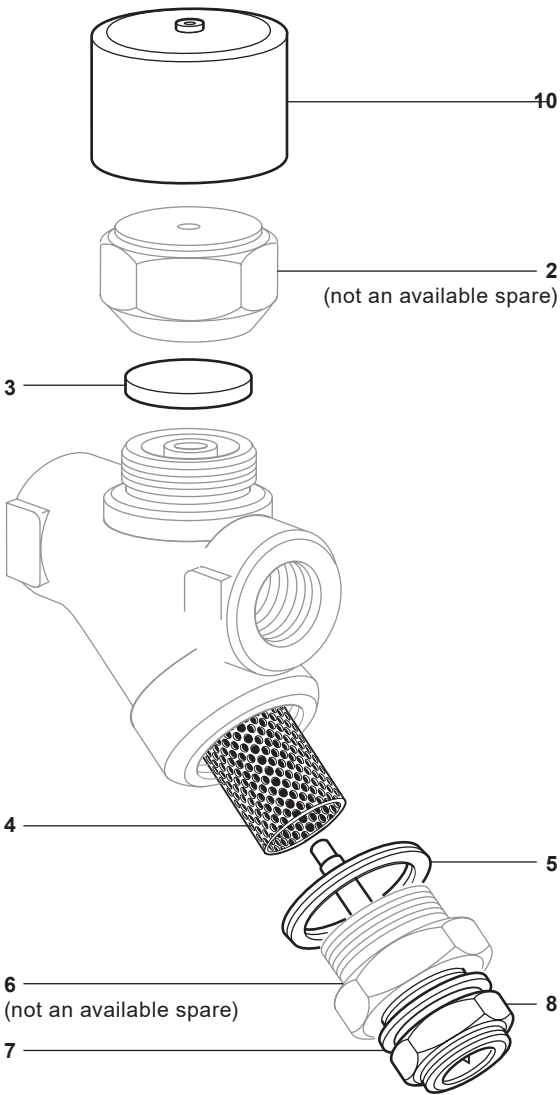
Available spares

Disc (packet of 3)	ITD32L or ITD32H	3
Disc and strainer screen	ITD32LA or ITD32HA	3, 4, 5
Y-type strainer screen and gasket	ITD32L or ITD32H	4, 5
Sensor adapter gasket (packet of 3)		5
Sensor and sensor gasket		7, 8
Insulating cover		10

How to order spares



Always order spare parts by using the description given in the column headed 'Available spares' and state the size, model number and pressure rating of the trap.

**Example:** 1 - Y-type strainer screen and gasket for a Spirax Sarco ½" ITD32L thermodynamic steam trap with integral sensor.



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Recommended tightening torques

Item	Part	 or 	N m
2	ITD32L and LA	36 A / F	135 - 150
	ITD32H and HA	41 A / F	135 - 150
6		32 A / F      M28	170 - 190
8		24 A / F	50 - 55

