



Certificate No. FM163

ISO 9001

spirax sarco

TI-S01-03
ST Issue 5

TD42L and TD42H Thermodynamic Steam Trap

Description

The TD42L and TD42H are maintainable thermodynamic steam traps. The TD42L is specifically designed for relatively small condensate loads and therefore is ideal for mains drainage applications. For process type loads the TD42H is available. For those applications where the release of air is a concern, an anti-air-binding disc is available i.e. TD42LA and TD42HA. All external body surfaces have an electroless nickel preparation (ENP) which is both energy saving and oxidation resistant.

Sizes and pipe connections

TD42L 3/8", 1/2", 3/4" and 1" screwed BSP or NPT

TD42H 1/2", 3/4" and 1" screwed BSP or NPT

TD42LA 3/8", 1/2", 3/4" and 1" screwed BSP or NPT

TD42HA 1/2" 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.

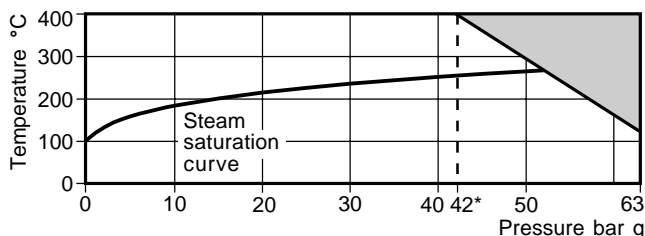
Integral blowdown valve - see TI-P153-01. Also, the strainer cap can be drilled, tapped and plugged 1/4" BSP or NPT

Limiting conditions (ISO 6552)

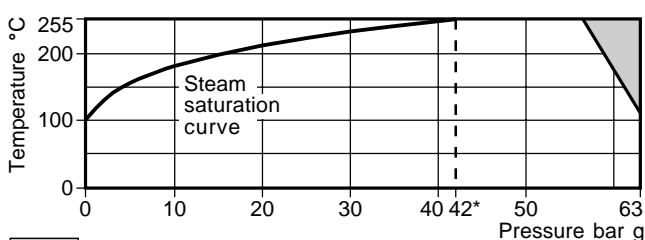
PMO - Maximum operating pressure	42 bar g recommended
TMO - Maximum operating temperature	TD42L & TD42H 400°C
	TD42LA & TD42HA 255°C
PMOB- Maximum back pressure should not exceed 80% of the inlet pressure under any conditions of operation otherwise the trap may not shut-off.	
Minimum operating differential pressure for satisfactory operation	TD42L & TD42H 0.25 bar
	TD42LA & TD42HA 0.80 bar
Maximum body design conditions	PN63
PMA - Maximum allowable pressure	63 bar g
TMA - Maximum allowable temperature	400°C
Cold hydraulic test pressure	95 bar g

Operating range

TD42L and TD42H

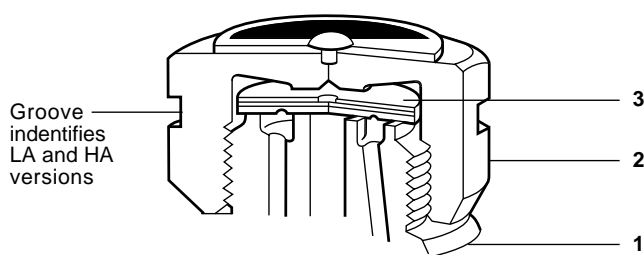
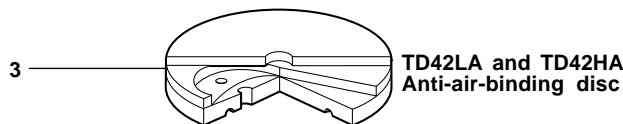
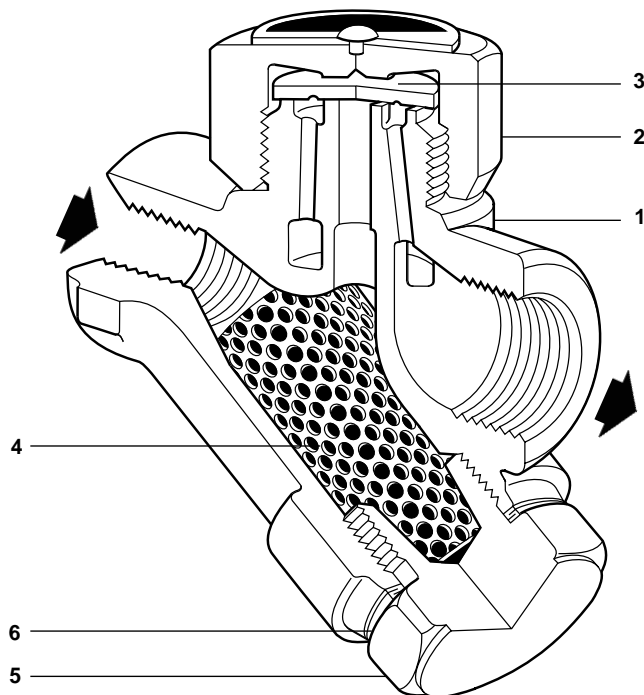


TD42LA and TD42HA



The product must not be used in this region.

*PMO - Maximum operating pressure recommended.



Materials

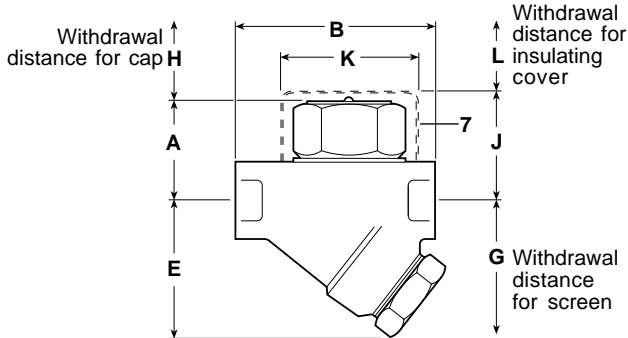
No	Part	Material
1	Body	Stainless steel (with ENP finish) ASTM A743 Gr. CA 40 F
2	Cap	Stainless steel AISI 416
3	Disc	Stainless steel BS 1449 420 S45
4	Strainer screen	Stainless steel BS 1449 304 S16
5	Strainer cap	Stainless steel AISI 416
6	Strainer cap gasket	Stainless steel BS 1449 304 S16
7	Insulating cover (optional extra)	Aluminium

Certification

This product is certified to EN 10204 2.2 as standard. Certification must be specified at the time of ordering.

Dimensions/weights (approximate) in mm and kg

Size	A	B	E	G	H	J	K	L	Weight
3/8" L	41	78	55	85	20	52	57	38	0.80
1/2" L	41	78	55	85	20	52	57	38	0.75
3/4" L	44	85	60	100	20	52	57	38	0.95
1" L	48	95	65	100	20	58	57	38	1.50
1/2" H	41	78	55	85	41	57	57	38	0.80
3/4" H	47	90	60	100	41	63	57	38	1.00
1" H	53	96	66	100	41	-	-	-	1.50



Safety information

Pressure

Before attempting any maintenance of the trap, consider what is or may have been in the pipeline. Ensure that any pressure is isolated upstream and downstream of the trap and safely vented to atmospheric pressure before attempting to maintain the trap. This is easily achieved by fitting Spirax Sarco depressurisation valves type DV (see separate literature for details). Do not assume that the system is depressurised even when a pressure gauge indicates zero.

Temperature

Allow time for temperature to normalise after isolation to avoid the danger of burns and consider whether protective clothing (including safety glasses) is required.

Installation

The trap should preferably be installed in the horizontal plane, with a small drop leg preceding it. Suitable isolation valves must be installed to allow for safe maintenance and trap replacement. Consideration should be given to a suitable method for testing the correct operation of the trap. This may be a sight glass or a Spiratec system. Sight glasses must be positioned a minimum of 1 m downstream of any blast-action traps. Where the trap discharges into a closed return system, a non-return valve should be fitted downstream to prevent return flow. Remove all packaging and protective covers and ensure all connection ports are clear from obstruction. Always open isolation valves slowly until normal operating conditions are achieved - this will avoid system shocks. Check for leaks and correct operation. Always ensure the correct tools, safety procedures and protective equipment are used at all times.

Maintenance

How to service

Remove insulating cover, if fitted, and unscrew the cap using a suitable spanner or socket. Do not use stillsons or a wrench of similar type which may cause distortion of the cap. If the seating faces on the body are only slightly worn, they can be refaced by lapping on a flat surface, such as a surface plate. A figure-of-eight motion and a little grinding compound, such as 'Carborundum Co's Compound I.F.' gives the best results.

If the wear is too great to be rectified by simple lapping, the seating faces on the body must be ground flat and then lapped. **Note: the disc should always be replaced with a new one.** The total amount of metal removed in this way should not exceed 0.25 mm. When reassembling, the disc is normally placed in position with the grooved side in contact with the body seating face. Screw on the cap to the recommend torque setting; no gasket is required but a suitable high temperature anti-seize grease should be applied to the threads.

To clean or replace the strainer

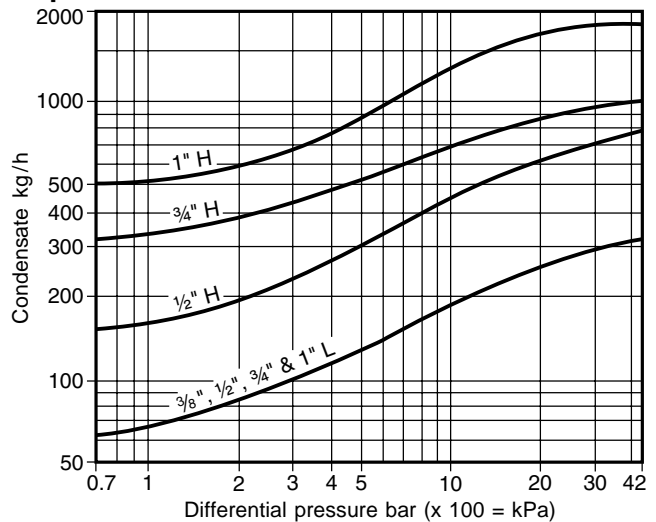
Unscrew the strainer cap using a suitable spanner, withdraw the screen and clean or, if damaged, replace with a new one.

To reassemble, insert the screen into the cap, then screw the cap into place. A fine smear of 'Molybdenum Disulphide' grease should be applied to the first few threads. Care should be taken to ensure that the gasket and gasket faces are clean. Tighten to the recommended torque.

Disposal

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

Capacities



How to order

1/2" Spirax Sarco TD42L thermodynamic steam trap screwed BSP.

Spare parts

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

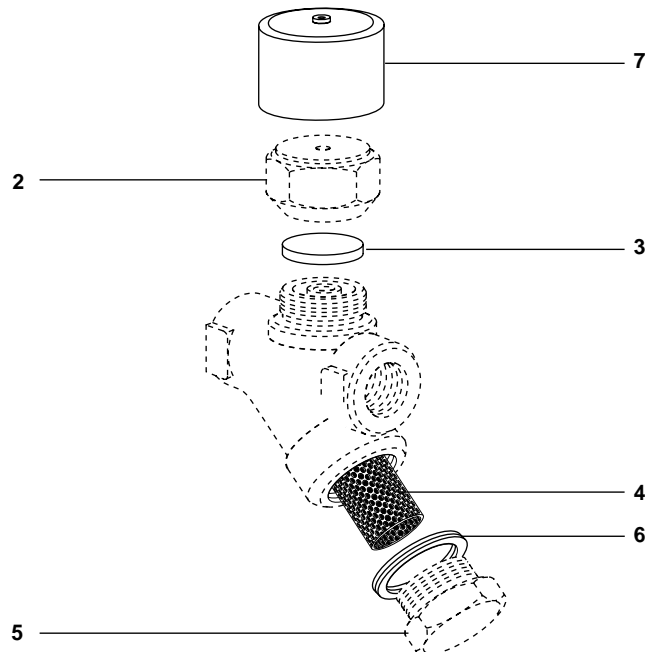
Available spares

Disc (packet of 3)	(TD42L or TD42H)	3
Disc and strainer screen	(TD42LA or TD42HA)	3, 4, 6
Strainer screen and gasket	(TD42L or TD42H)	4, 6
Insulating cover		7
Strainer cap gasket (packet of 3)		6

How to order

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

Example: 1 - Strainer screen and gasket for 1/2" Spirax Sarco TD42L thermodynamic steam trap.



Recommended tightening torques

Item	or mm	N m
(TD42L - all sizes)	36	135 - 150
2 (TD42H - 1/2", 3/4")	41	180 - 200
(TD42H - 1")	55	250 - 275
5	32 M28	170 - 190