

## Universal Thermodynamic Steam Traps UTD-3

### Description :

The UTD-3 is a stainless steel thermodynamic steam trap with integral strainer which is fitted to a pipeline connector. UTD-3 is designed for steam pressures up to 42 barg. Integral blowdown valve can be fitted for screen blowdown. UTD-3 traps are fitted by two screws to a permanently installed 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.

### Limiting Conditions :

PMO - Max. Operating Pressure : 42 barg  
TMO - Max. Operating Temperature : 427°C  
Cold hydraulic test pressure : 84 barg

### Note :

Minimum pressure for satisfactory operation is 0.25 barg.

PMOB - Max. Operating back pressure 80% of upstream pressure.

The model of pipeline connector and connection selected will dictate the maximum operating pressure and temperature of the complete assembly. Consult the specified technical information sheet for this information.

### Sizes and Pipe Connections :

UTD-3 can be fitted to Pipeline connector - PC01 which has  
Inlet : 15 NB, SWE / SCRD BSPT  
Outlet : 15 NB, SWE / BWE

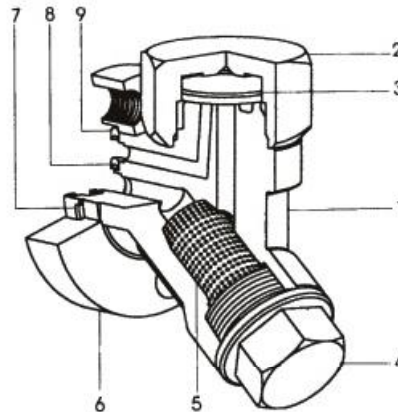
### Material :

Sr. No.	Item Description	Material	Standard
1	Body	St. Steel	ASTMA743 Gr-CA40
2	Main bore CAP	St. Steel	ASTMA743 Gr-CA40
3	Disc	St. Steel	ASTMA743 Gr-CA40
4	Strainer CAP	St. Steel	ASTMA743 Gr-CA40
5	Screen	St. Steel type 304	ASTMA 240
6	Flange	Carbon Steel	ASTMA 105
7	Retaining Ring	Spring Steel	
8	Inner Gasket	St. Steel & Graphite Filter (Nonasbestos)	
9	Outer Gasket	St. Steel & Graphite Filter (Nonasbestos)	
10.	Bolt	Carbon Steel-HT Gr. 8.8	

### Installation :

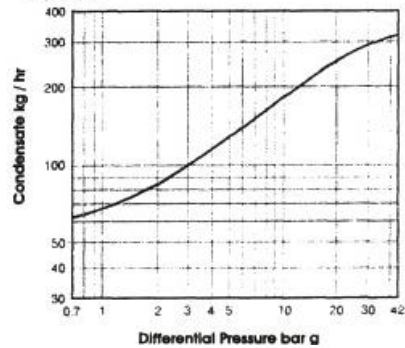
The pipework connector can be installed in either horizontal or vertical pipework. If the pipeline connector is to remain in the pipework for some time before the steam trap is coupled to it, the flange protector on the connector should be left in place. The mating flange on the UTD-3 trap is free to rotate 360°

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### Capacities



The steam trap should be fitted with the cap above the centre line of the trap. Ensure inner and outer gaskets are in place and secure trap pipeline connector using two connector screws. Apply anti-seize compound to the threads, tighten screws finger tight and ensure that the steam trap is in a horizontal position with the cap uppermost. Tighten connector screws, to the recommended tightening torque. Full installation instructions are supplied with each unit.

### How to specify :

SPIRAX MARSHALL UTD-3 Thermodynamic Steam Trap complete with swivel pipeline connector socket weld connections. Trap capable of being removed using a simple wrench for minimum process downtime and with no disturbance of the pipe work. Gasket to be spirally wound stainless steel.

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#### How to order :

UTD-3 is supplied in two parts :-

1. The swivel pipeline connector  
-PC01 - Standard  
-PC01 with optional Depressurisation valve.
2. The UTD-3 trap complete with inner and outer gasket and connector screws.

#### Example :

1. 015 PC01 Swivel pipeline connector with socket weld and connections.
2. UTD-3 trap with gaskets and connector screws.

#### Spare parts :

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

Available spares	
Discs (UTD-3) - Packet of Five	3
Gasket Kit (UTD-3) - Packet of Five	8, 9
Strainer screen (UTD-3 - Packet of Five	5

#### How to order spares :

Always order spare parts by using the description given in the Available Spares and state the size, Model No. and pressure rating of the trap.

Example : Strainer screen (UTD-3) - Packet of Five.

#### Maintenance :

Before undertaking any maintenance on the trap it must be isolated from both supply line and return line and any pressure allowed to safely normalize to atmosphere. The trap should then be allowed to cool to ambient temperature. Always ensure that the correct tools, safety procedures and protective equipment are used at all times.

#### To replace the disc

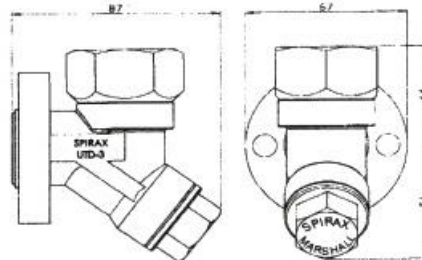
Remove the insulation cover if fitted and unscrew the cap using spanner. Do not use wrench of similar type which may cause distortion of the cap. If the disc and body seating faces are slightly worn they can be refaced by lapping individually on a flat surface such as surface plate. A figure of eight motions and a little grinding compound gives the best result.

If the wear is too great to be rectified by simple lapping, the seating surface on the body must be ground flat and then lapped and disc replaced by a new one. Total amount of metal removed in this way should not exceed 0.25 mm.

When reassembling, disc must be placed in position with the grooved side in contact with body seating face. Screw on cap; no gasket is required but suitable high temperature anti-seize compound should be applied to the threads.

#### To replace inner/outer gaskets

The gaskets are retained in the grooves of steam trap by means of a stacking process (in 3 locations). Gaskets can be removed by using small screw driver. Care must be taken not to damage gasket faces. Deformed metal lips can then be straightened and new gaskets installed and stacked to retain them.



#### To clean/replace Strainer

Unscrew strainer cap using spanner, withdraw screen and clean or if damaged replace with new one. To reassemble insert screen in to cap, then screw cap into place. Tighten cap to recommended torque.

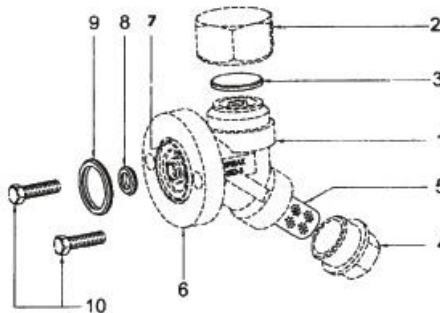
If integral blowdown valve is fitted it should be periodically blowdown to remove debris collected in the screen. Blowdown screw must be tighten to recommended torque. Ensure that adequate safety precautions are taken when opening the blowdown valve to atmosphere. Hand protection is recommended.

#### To replace complete trap unit

Loosen the connector screw and remove the UTD-3 trap unit. Clean the contact face on the connector. Position the new or reconditioned UTD-3 trap unit. Apply anti-seize compound to connector screws threads. Tighten screws finger tight and ensure trap is in horizontal position with top cap uppermost. Tighten the connector screws to the recommended torques.

#### Recommended Torques :

Item	Torque (Nm)
Main Bore cap (2)	180-200
Strainer cap (4)	170-190
Bolt M10 (10)	40-45



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