

UKL THERMODYNAMIC STEAM TRAP

The enthalpy in the steam basically has two components : The Latent heat and the Sensible heat. Whereas condensate has only sensible heat. This condensate has to be removed as soon as it is formed, because it hinders to efficient heat transfer as well as leads to water hammer phenomenon as it is hot water (having more Specific Gravity) that moves with high velocity of steam (8 to 10 times higher than water), carrying enough momentum to rupture pipes and which is damaging to the plant pipelines as well as piping equipments. Hence, need to remove condensate from steam main and trap steam. This is done by steam trap.

The thermodynamic traps separate condensate and steam based on velocity which in case of steam is higher than that of condensate. These are used mainly on drip lines of the main steam distribution line, platen presses and super heated steam lines to remove condensate.

Condensate pressure is used to open the trap by lifting the disc, discharging condensate in low pressure. Due to low pressure flashing of condensate takes place. High flash steam velocity (approximately 5 times of condensate) creates a low pressure zone below the disc. Accumulated flash steam force over the disc becomes greater than the incoming condensate pressure this leads to closure of the disc. Subsequently the flash steam condenses and the incoming higher pressure condensate pushes the disc opening the trap and thus the cycle continues.

The UTD 62 is a steam trap with integral strainer specifically designed to meet above application. An insulating cover can be fitted as a option on superheated steam mains.



MATERIAL OF CONSTRUCTION:

ASTM A 217 Gr. WC6

SIZES AVAILABLE:-

½”, ¾” ,and 1”

END CONNECTIONS:

- Threaded to NPT
- BSPT/SW to ASME B 16.11
- Flanged End- #600/#900 (On Request)

INSTALLATION:-

Preferably in horizontal position.

ON REQUEST:-

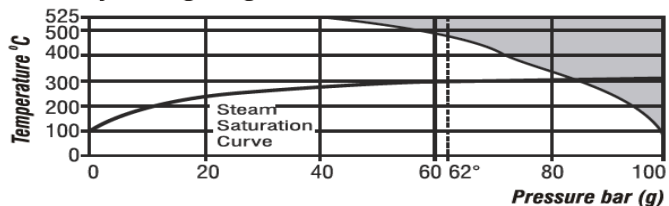
- Iso-tub
- Flanges weld on type

OPERATING CONDITIONS

PMA Max allowable pressure	1500 psig 977 °F	103 barg 525 °C
TMA Max allowable temperature	977 °F/0-1500 psig	525 °C/0-103 barg
PMO Max operating pressure	908 psig	63 barg
TMO Max operating temperature	977 °F	525 °C at operating pressures

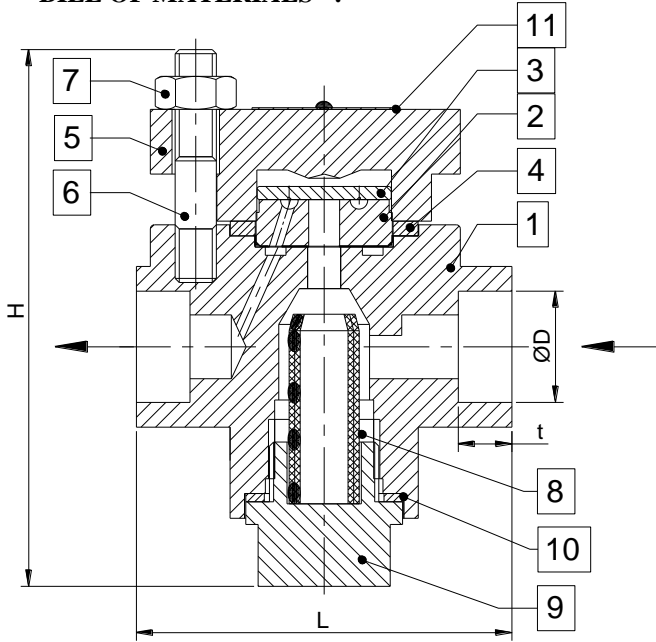
Cold hydraulic test pressure will be max. 2250 psig

Operating range for SWE IBR



■ The product must not be used in this region.
 *PMO - Max. operating pressure recommended
 PMOB - Max. operating back pressure 80% of upstream pressure.

BILL OF MATERIALS :-

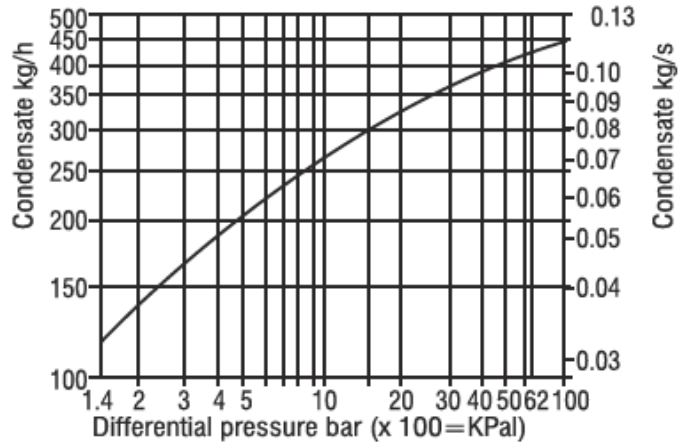


No.	PART NAME	MATERIAL	MATERIAL CODE
1	Body	Alloy Steel	ASTM A217 WC6
2#	Disc	Tool Steel	ASTM A 681 Gr D2
3	Seat	Tool Steel	ASTM A 681 Gr D2
4#	Gasket	Spiral Wound	Reinforced Exfoliated S.W. AISI304 With Graphite Filler
5	Top Cover	Alloy Steel	ASTM A217 WC6
6#	Stud	Alloy Steel	ASTM A 193 Gr B16
7#	Nut	Alloy Steel	ASTM A 194 Gr 8M
8#	Filter	Stainless Steel	AISI 304
9	Filter Cap	Alloy Steel	ASTM A217 WC6
10#	Gasket For Filter Cap	Spiral Wound	Reinforced Exfoliated S.W. AISI304 With Graphite Filler
11	Name Plate	Stainless Steel	AISI 304
12	Isotub (Optional)		

Available as spares

Notations	Dimensions (in)		
	1/2"	3/4"	1"
L	3.6	3.6	4.7
H	5.1	5.1	5.1
ØD	0.9	1.1	1.3
t	0.4	0.5	0.5
Weight(lb)	4.9	4.9	5.6

UTD-62 Flowchart :-



Note: Minimum Differential pressure for satisfactory operation 19.9 psig with Positive Pressure and Discharge to atmosphere.

How to fit disc :-

Unscrew the four nuts and remove the top cover. Lift off the disc. Fit the new disc. Ensure that the seating surface is not unduly worn. Lapping is necessary for worn out seats. Re-assemble cover using a new gasket making sure that gasket faces are perfectly clean.

To clean or replace strainer remove strainer cap. Remove strainer screen. Fit new or cleaned strainer screen into recess in cap. A new gasket should be fitted and the cap screwed into the body.

To replace cover studs after removing old cover studs fit new cover studs.



Other Products : Cast / Forged Steel Piston Valves, Bellow seal valves, High Pressure valves (Gate/Globe), Strainers – "Y" Type, ITVS Steam Traps (Thermodynamic, Thermostatic, Ball Float Traps and IBT), Pressure Reducing Station, Condensate Recovery Products. Level Gauges (Reflex, Transparent, Bicolor), Sight Glass, Hot Water Generation System, Safety and Relief Valves.
FSD Products : Compressed Asbestos / Non Asbestos Fiber Sheeting / Cut Gaskets, Spiral Wound Gaskets.

In view of technical progress design and dimensions are subjected to change without notice.



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A joint venture of the Neterwala group of companies and KLINGER AG. Switzerland.

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