

UKL HIGH PRESSURE INTEGRAL TRAP VALVE STATION WITH THERMODYNAMIC STEAM TRAP (REPLACEABLE SEAT):

This unit offers a compact one piece solution, with inbuilt Piston Valves and Replaceable Thermodynamic Steam Traps, replacing the conventional complex & elaborate Trap Modules.

UITVS-6DR is compact design which includes Upstream Isolation valve & Down stream Isolation valve to isolate steam while doing any maintenance work, Other valves like By pass valve to draining or divert steam, De-pressurisation (Trap vent) valve for de-pressurisation of trap and Trap test valve to monitor the trap are separately attached as per requirement.

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 UITVS-6DR is a steam trap module with replaceable seat & integral strainer gives eases inline maintenance & specifically designed to meet above application. An insulating cover can be fitted as a option on superheated steam mains.

MATERIAL OF CONSTRUCTION:

ASTM A105 / ASTM A182 Gr. F11

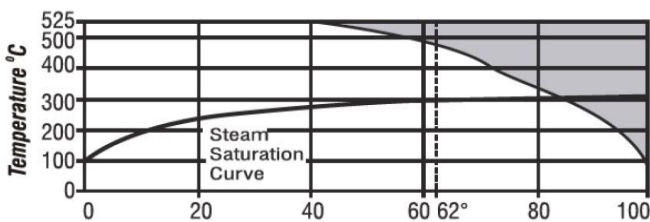
SIZES AVAILABLE:-

Socket Weld End	
15 NB	#6000
20 NB	#6000

Socket Weld to ASME B 16.11

Other Sizes on request

Operating range for Socket weld End IBR :-



The product must not be used in this region
Max. operating back pressure 80% of upstream pressure

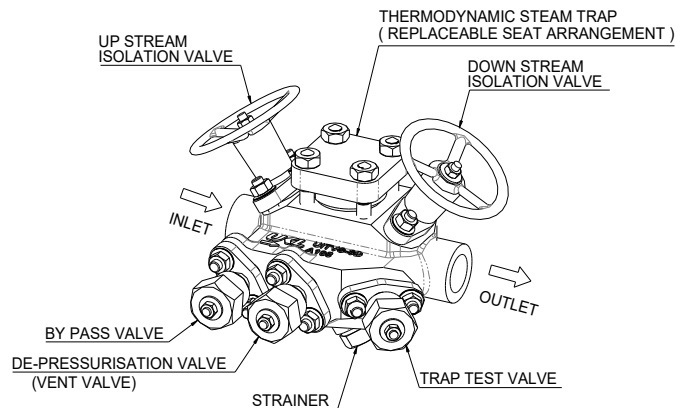


OPERATING CONDITIONS

MOC- ASTM A105	
End Conn.	Socket weld End
Max. Allowable Pressure.	63 bar [64.3 Kg/cm2] @ 100 °C
Max Allowable Temperature	425 °C @ 42 bar [42.8 Kg/cm2]
Max. Operating Pressure	42.0 bar [42.8 Kg/cm2] @ 425 °C
Max. Operating Temperature	425 °C @ 42 bar [42.8 Kg/cm2]
Hydro Test Pressure	84 bar [86 Kg/cm2]

MOC- ASTM A182 Gr. F11	
End Conn.	Socket weld End
Max. Allowable Pressure.	103 bar [105 Kg/cm2] @ 93 °C
Max Allowable Temperature	525 °C @ 42.5 bar [43.3 Kg/cm2]
Max. Operating Pressure	62.5 bar [63.7 Kg/cm2] @ 482 °C
Max. Operating Temperature	525 °C @ 42.7 bar [43.5 Kg/cm2]
Hydro Test Pressure	155 bar [158 Kg/cm2]

GENERAL ARRANGMENT OF UITVS-6DR



INSTALLATION:-

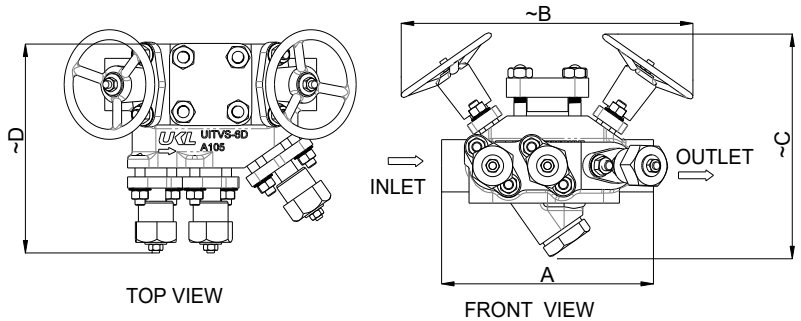
Preferably in horizontal position.

ON REQUEST:-

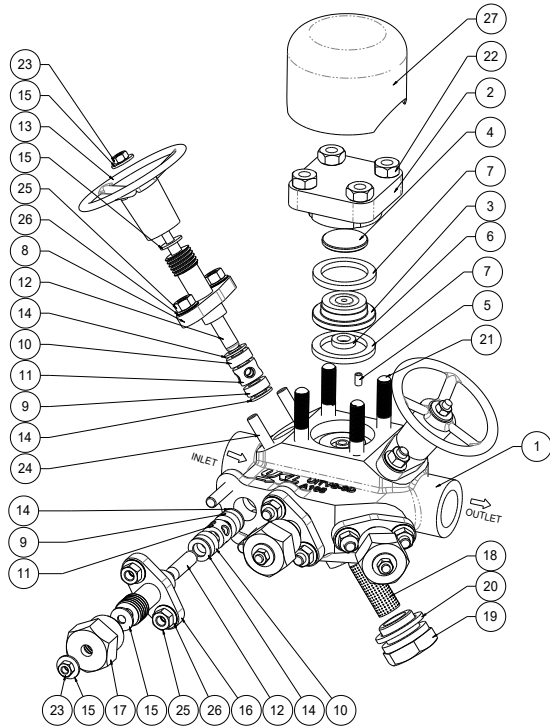
- IBR/Non-IBR
- Isotub
- Flanges weld on type

GENERAL DIMENSIONS OF UITVS-6DR:-

Notations	Dimensions (mm)	
	15 NB	20 NB
A	170	170
B (Open)	265	265
C (Open)	200	200
D (Open)	190	190
Approx Weight(kg)	7.5 Kg	7.5 Kg



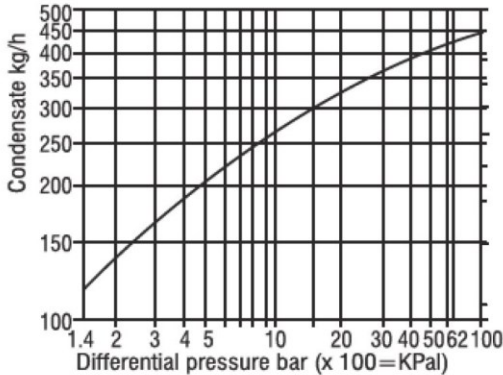
BILL OF MATERIAL OF UITVS-6DR:-



BILL OF MATERIAL OF UITVS-6DR		
No.	PART NAME	MATERIAL CODE
1	Body	ASTM A105 / ASTM A182 Gr.F11
2	Top Cover	ASTM A105 / ASTM A182 Gr.F11 /WC6
3	Replaceable Seat	ASTM A681 Gr. D2
4	Disc	ASTM A681 Gr. D2
5	Locator	AISI 304
6	SPW Gasket for Seat	AISI 304 / 316 with Graphite
7	SPW Gasket for Top cover	AISI 304 / 316 with Graphite
8	Bonnet	ASTM A105 / ASTM A182 Gr.F11
9	Lower Valve Ring	Klinger Std
10	Upper Valve Ring	Klinger Std
11	Lantern Bush	ASTM A276 Gr. TP 410
12	Spindle (Integral Piston)	ASTM A276 Gr. TP 410
13	Hand wheel	ASTM A216 Gr. WCB
14	Plain Washer	AISI 304 / 316
15	Hand wheel Washer	AISI 304 / 316
16	Bottom Bonnet	ASTM A105 / ASTM A182 Gr.F11
17	Bottom Hand wheel	ASTM A105
18	Strainer	AISI 304 / 316
19	Strainer Cap	ASTM A105 / ASTM A182 Gr.F11
20	SPW Gasket for Strainer Cap	AISI 304 / 316 with Graphite
21	Stud for Top Cover	ASTM A 193 Gr B7 / B16
22	Nut for Top Cover	ASTM A194 Gr. 2H / 8M
23	Hand wheel nut	AISI 316
24	Stud for Bonnet	ASTM A 193 Gr B7 / B16
25	Nut for Bonnet	ASTM A194 Gr. 2H / 8M
26	Belleville Washer	50 Cr. V4
27*	Isotub (Optional)	AISI 304 / 316

Item No- 3,4,5,6,7,9,10,11,12,18,20, 27 Available as Spares.

Flowchart :-



Note: Minimum Differential pressure for satisfactory operation 1.4bar g with Positive Pressure and Discharge to atmosphere.

Item	Recommended Tightening Torque			
	Part	Size	A/F	Nm
9	Filter Cap	--	36	145-158
22	Nut	M10	17	55-60
25	Nut	M8	13	10-15

How to Replace Seat & disc :-

Unscrew the four nuts and remove the top cover. Lift off the disc. Lift of Seat and remove gasket, insert new two gasket on groove below seat, Properly locate locator, fit new seat and 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.



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 Sheetting / Cut Gaskets. Spiral Wound Gaskets.



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