

**UKL BALL FLOAT TYPE 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.

UKL Ball Float Trap discharge condensate near to steam saturation temperature, which works on the principle of Buoyancy, [densities difference of Water and Steam].The rising condensate level elevates the Float open the valve and discharges the condensate. When the level of condensate drops, valve close the trap.

It is commonly used for most process heating applications. Wherever steam is used for indirect heating application, the trap to be used must be of mechanical design. It is a continuous discharge type steam trap. This trap can handle very high condensate loads and the discharge will be proportional to the differential pressure across the trap. There may be other similar process applications where the heat load is small and a mechanical trap can handle small as well as fluctuating loads.

This trap is provided with two optional features called Steam Lock release (SLR) and Thermostatic Vent (TV). The SLR is a manual operation to release steam that may hamper free movement of the float on water level. The TV will ensure that air and such un dissolved gases will be automatically vented out when present in condensate.

**MATERIAL OF CONSTRUCTION:**

**CAST IRON MODEL**

UFT 14- CI – IS 210 FG260

**CAST CARBON STEEL MODEL**

UFT 20- CS- ASTM A216 Gr. WCB

**SIZES AVAILABLE:-**

UFT 14 Model: 40 NB and 50 NB

UFT 20 Model: 40 NB and 50 NB



**END CONNECTIONS:**

**UFT-14 CAST IRON MODEL**

Threaded to NPT , BSP and BSPT.

**UFT-20 CAST CARBON STEEL MODEL :-**

Threaded to NPT , BSP and BSPT.

Socket Weld to ASME B 16.11

Flanged - #150/#300/#600

**INSTALLATION:-**

Horizontal position.

**OPTIONAL:-**

UFT-14 Available in Non-IBR

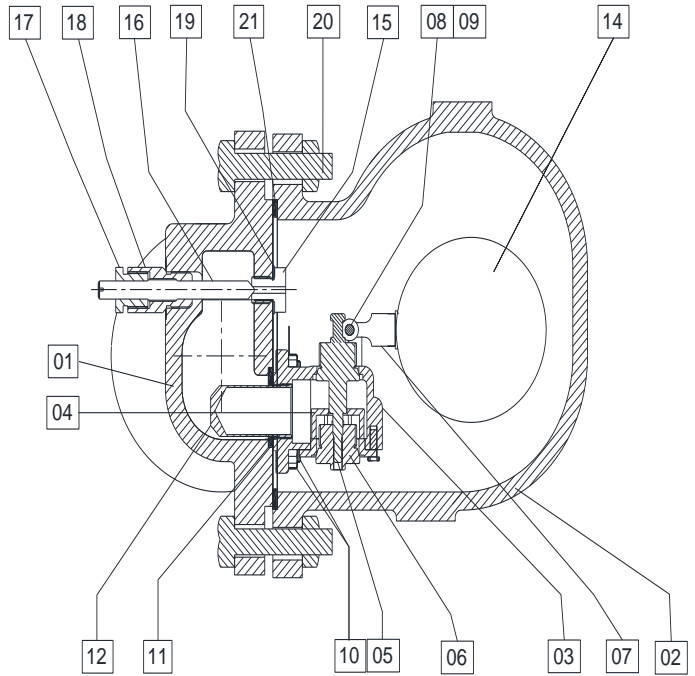
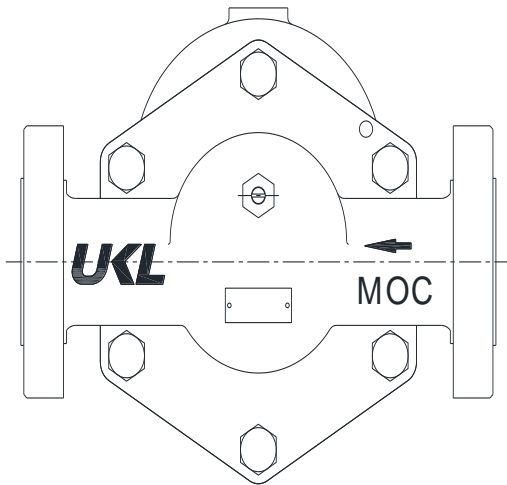
UFT-20 Available in IBR/Non-IBR

Thermostatic Air vent

**BILL OF MATERIAL:**

**UFT-14/UFT-20**

**Size- 40 NB and 50 NB**

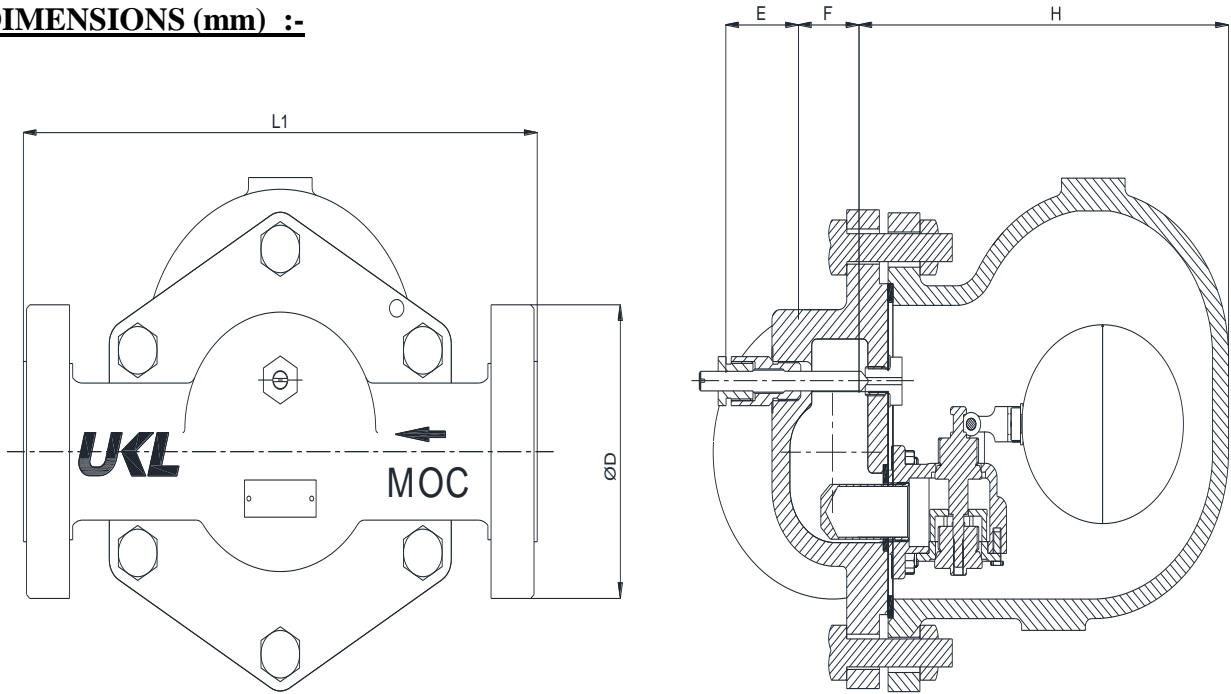


No.	PART NAME	UFT 14 Cast Iron Model		UFT 20 Cast Steel Model	
		MATERIAL	MATERIAL CODE	MATERIAL	MATERIAL CODE
1	Body	Cast Iron	IS 210 FG 260	Cast Steel	ASTM A 216 Gr WCB
2	Cover	Cast Iron	IS 210 FG 260	Cast Steel	ASTM A 216 Gr WCB
3	Controller Housing	Stainless Steel	ASTM A 743 Gr CA 40	Stainless Steel	ASTM A 743 Gr CA 40
4	Valve Seat	Stainless Steel	ASTM A 743 Gr CA 40	Stainless Steel	ASTM A 743 Gr CA 40
5	Stem	Stainless Steel	ASTM A 743 Gr CA 40	Stainless Steel	ASTM A 743 Gr CA 40
6	Lower Valve	Stainless Steel	ASTM A 743 Gr CA 40	Stainless Steel	ASTM A 743 Gr CA 40
7	Lever	Stainless Steel	ASTM A 743 Gr CA 40	Stainless Steel	ASTM A 743 Gr CA 40
8	Pivot Pin	Stainless Steel	AISI 304	Stainless Steel	AISI 304
9	Split Pin	Stainless Steel	AISI 304	Stainless Steel	AISI 304
10	Stud & Nut	Carbon Steel	Gr 8.8 / 8	Carbon Steel	Gr 8.8 / 8
11	C. H. Gasket	Graphite	Graphite	Graphite	Graphite
12	Errosion Deflector	Stainless Steel	AISI 304	Stainless Steel	AISI 304
13	Baffle Plate	Stainless Steel	AISI 304	Stainless Steel	AISI 304
14	Float	Stainless Steel	AISI 304	Stainless Steel	AISI 304
15	SLR Valve Seat	Stainless Steel	AISI 304	Stainless Steel	AISI 304
16	SLR Stem	Stainless Steel	AISI 304	Stainless Steel	AISI 304
17	Stem Guide	Stainless Steel	AISI 304	Stainless Steel	AISI 304
18	Stem Guide Lock Nut	Stainless Steel	AISI 304	Stainless Steel	AISI 304
19	SLR Valve Seat Gasket	Stainless Steel	AISI 304	Stainless Steel	AISI 304
20	Bolts & Nut	Carbon Steel	Gr 8.8 / 8	Carbon Steel	Gr 8.8 / 8
21	Cover Gasket	CAF	CAF	CAF	CAF

UKL-DS-UFT40-50-R00-MAY 2017



**DIMENSIONS (mm) :-**



SOCKET WELD / Screwed End Connections:-						
Size	Overall Length	H	E	F	ØD	Weight (kg)
40 NB	299.00	255.00	45.00	34.00	48.80	22.000
50 NB	321.00	255.00	45.00	36.00	61.70	27.400

Flanged End Connections #150						
Size	L1	H	E	F	ØD	Weight(kg)
40 NB	299.00	255.00	45.00	34.00	125.00	26.0
50 NB	321.00	255.00	45.00	36.00	150.00	33.0

Flanged End Connections #300						
Size	L1	H	E	F	ØD	Weight(kg)
40 NB	299.00	255.00	45.00	34.00	125.00	28.0
50 NB	321.00	255.00	45.00	36.00	150.00	35.0

**INSTALLATION:-**

The trap must be fitted with the float arm in a horizontal plane so that it rises and falls vertically. Hence the arrow on the name plate must point downwards.

Traps will be generally supplied in horizontal connections with flow from right to left outlet (R-L) horizontal connections.

The SLR has to be opened at the time of start up to avoid steam locking of the trap.

**STORAGE**

UNI KLINGER UFT and the respective spares should be stored only in enclosed dry rooms in a non-aggressive atmosphere. Fully assembled Ball Float Traps must be stored as supplied by UNI KLINGER. Spare parts must be handled with care and should be stored in their original packing.



## OPERATING CONDITIONS

Model	Max Diff. Pressure	PMO (Bar)	Sat. Temp °C
UFT 14-4.5	4.5 Bar	14	193
UFT 14-10	10 Bar	14	193
UFT-14-14	14 Bar	14	193
UFT 20-4.5	4.5 Bar	32	237
UFT 20-10	10 Bar	32	237
UFT 20-21	21 Bar	32	237
UFT 20-32	32 Bar	32	237
UFT 20-14	14 Bar	32	237

### For referring the capacity charts, please note following:

- Select the model of UFT based on P/T range and MOC
- Select flow capacity on Y axis of the chart for selected model.
- Work out actual differential pressure across the UFT.
- Consider all possible pressure losses in the lines.
- Select differential pressure on X axis.
- Move horizontally on Y axis & vertically on X axis.
- The point of cross section will give you the trap size required.

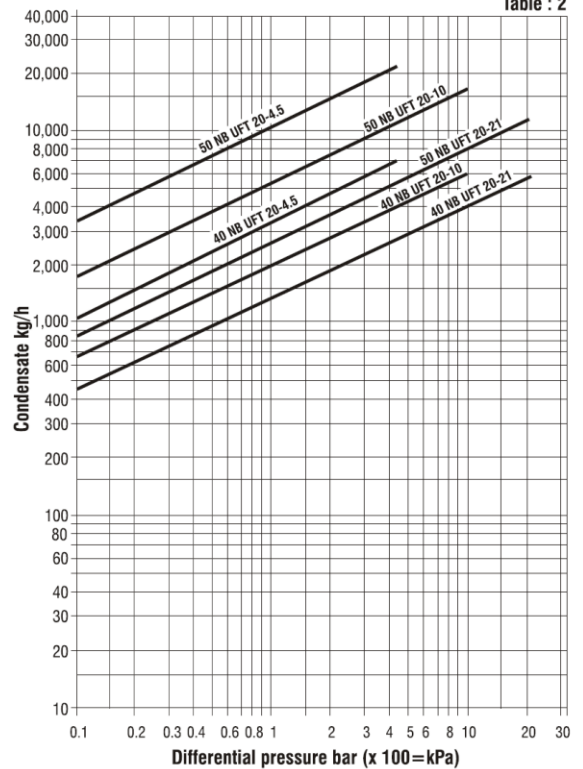
### How to order and Specify:

40 NB UKL UFT 14- 4.5 Bar, TV, Float Trap, SW End

Always order spares by stating the type and differential pressure, specify-

**Controller Assembly- valve seat for 40 NB UFT14-4.5 Bar**

Capacity Chart: For UFT 40 & 50 NB UFT CI/CS Traps Table : 2



### SPARES AVAILABLE:

- SLR Assembly
- Float
- Main controller assembly
- Cover Gasket



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.



**UNI KLINGER LIMITED**

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