Ball Float Steam Trap
UFT-14/20 SIZE 40(1-1/2“) & 50 NB(2”)

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, [density 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.

END CONNECTIONS:

UFT-14 CAST IRON MODEL
Threaded to NPT , BSP and BSPT.
Flanged - #150/#300

UFT-20 CAST CARBON STEEL MODEL :-
Threaded to NPT , BSP and BSPT.
Socket Weld to ASME B 16.11
Flanged - #150/#300/#600

MATERIAL OF CONSTRUCTION:

CAST IRON MODEL
UFT 14- CI – IS 210 FG260
PMO: 14 Kg/cm²(g) [199.13 PSI(g)]
TMO: 193 °C [379.4 °F]

CAST CARBON STEEL MODEL
UFT 20- CS- ASTM A216 Gr. WCB
PMO: 32 Kg/cm²(g) [455.15 PSI(g)]
TMO: 238 °C [460.4 °F]

SIZES AVAILABLE:-

40(1-1/2”) NB and 50(2”) NB

INSTALLATION:- *Horizontal position.*

OPTIONAL:-

IBR/Non-IBR
With Thermostatic Air vent.

SPARES AVAILABLE:

SLR Assembly
Float
Main controller assembly
Cover Gasket

Model	Max Diff. Pressure	
	Kg/cm²(g)	PSI(g)
UFT 14-4.5	4.5	64.00
UFT 14-10	10	142.23
UFT 14-14	14	199.13
UFT 20-4.5	4.5	64.00
UFT 20-10	10	142.23
UFT 20-14	14	199.13
UFT 20-21	21	298.69
UFT 20-32	32	455.15

AVAILABLE DIFFERENTIAL PRESSURE

Model	Kg/cm² (g)	PSI (g)	Kg/cm² (g)	PSI(g)	Kg/cm² (g)	PSI(g)	Kg/cm² (g)	PSI(g)	Kg/cm² (g)	PSI(g)
UFT 14	4.5	64.00	10	142.23	14	199.13	N. A.	N. A.	N. A.	N. A.
UFT 20	4.5	64.00	10	142.23	14	199.13	21	298.69	32	455.15

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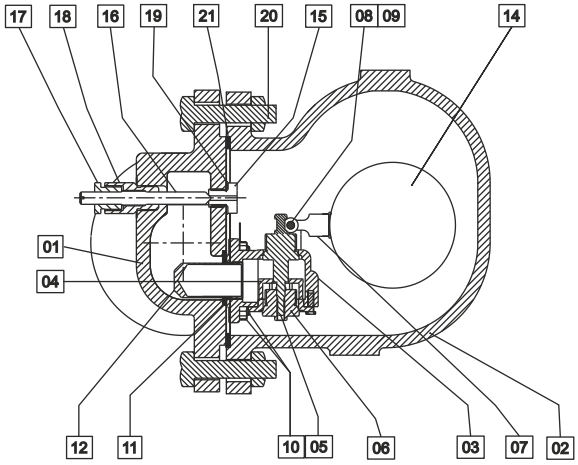
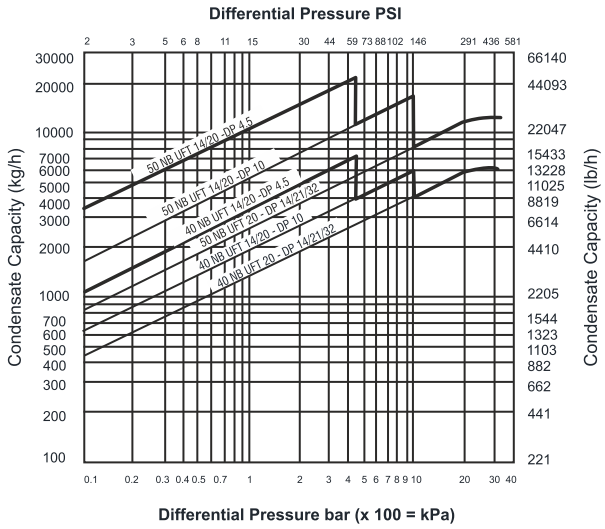


		UFT 14 Cast Iron Model		UFT 20 Cast Steel Model	
No.	PART NAME	MATERIAL	MATERIAL CODE	MATERIAL	MATERIAL CODE
1	Body	Cast Iron	IS 210 FG 260	Cast Steel	ASTM A 216 Gr WCB
2	Cover	Cast Iron	IS 210 FG 260	Cast Steel	ASTM A 216 Gr WCB
3	Controller Housing	Stainless Steel	ASTM A 743 Gr CA 40	Stainless Steel	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	Non CAF	Non CAF	Non CAF	Non CAF

Capacity Chart : For UFT 40(1-1/2") & 50(2") NB CI/CS TRAP



Screwed / Socket Weld End Connection													
Size		L1		H		E		F		ØD		Weigh	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Kg.	Lb.
40	1-1/2“	299	11.77	255	10.04	45	1.77	34	1.34	48.8	1.92	22.0	48.50
50	2"	321	12.64	255	10.04	45	1.77	36	1.42	61.7	2.43	27.4	60.41

Flanged End Connections #150													
Size		L1		H		E		F		ØD		Weigh	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Kg.	Lb.
40	1-1/2“	299	11.77	255	10.04	45	1.77	34	1.34	125	4.92	26.0	57.32
50	2"	321	12.64	255	10.04	45	1.77	36	1.42	150	5.91	33.0	72.75

Flanged End Connections #300													
Size		L1		H		E		F		ØD		Weigh	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Kg.	Lb.
40	1-1/2“	299	11.77	255	10.04	45	1.77	34	1.34	155	6.10	28.0	61.73
50	2"	321	12.64	255	10.04	45	1.77	36	1.42	165	6.50	35.0	77.16

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.*

MOST IMPORTANT:-

Before doing any maintenance on the trap it is necessary to isolate both supply and return lines and any pressure to normalize to atmosphere pressure by opening SLR. Allow the trap to cool before doing any maintenance and clean all sealing faces before assembling it.

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