

**UKL DOUBLE ORIFICE BALL FLOAT STEAM TRAP MODULE**

Patent Applied

Steam has two different kind of heat : The Latent heat and the Sensible heat. Whereas condensate has only sensible heat. This condensate must be removed as soon as it is formed, because it hampers the efficient heat transfer and leads to water hammer phenomenon due to 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, damaging the plant pipelines and 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, the float falls and the valve close the trap.

It is commonly used in most of the process heating applications, where steam is used for indirect heating application. Normally these traps are of mechanical design. A double orifice float trap is a mechanical type having continuous discharge. A double orifice pin is connected to a single float by unique interlink lever bracket arrangement. This trap efficiently handles different load condition like initial load, running load and peak load. DOFT-M is having in-built Inlet isolation valve, outlet isolation valve, By-pass valve and integral strainer.

This trap is provided with SLR valve seat arrangement or Thermostatic vent. The TV will ensure effective removal of air and other un-dissolved gases will be automatically vented out when present in condensate.

**MATERIAL OF CONSTRUCTION:**

ENJS 1025 ( SG Iron)

SIZES AVAILABLE	
Class Rating	Size
Flange End # 150	15 / 20 / 25 NB
Flange End # 300	15 / 20 NB
Flange End # PN10	15 / 20 / 25 NB
Flange End # PN16	15 / 20 / 25 NB

Flanged End - #150 / #300 to ASME B 16.5  
 PN 10 & PN 16 to DIN 1092



DESIGN CONDITIONS FOR #150 / #300		
1	Max Allowable Pressure	17 bar (g) @ 220 °C
2	Max Allowable Temperature	220 °C
3	Max Working Pressure	15 bar (g)
4	Max Working Temperature	220 °C
5	Max Cold hydro pressure	30 bar (g)
DESIGN CONDITIONS FOR #PN 10		
1	Max Allowable Pressure	10 bar (g) @ 38 °C
2	Max Allowable Temperature	220 °C
3	Max Working Pressure	10 bar (g) @ 184 °C
4	Max Working Temperature	220 °C @ 5.6 bar (g)
5	Max Cold hydro pressure	15 bar (g)
DESIGN CONDITIONS FOR #PN 16		
1	Max Allowable Pressure	16 bar (g) @ 38 °C
2	Max Allowable Temperature	220 °C
3	Max Working Pressure	16 bar (g) @ 204 °C
4	Max Working Temperature	220 °C @ 9.1 bar (g)
5	Max Cold hydro pressure	24 bar (g)

**INSTALLATION :-** Horizontal Position

**OPTIONAL:** IBR / NON IBR

STEAM LOCK RELEASE ( SLR ) VALVE /

THERMOSTATIC AIR VENT (T.V) /

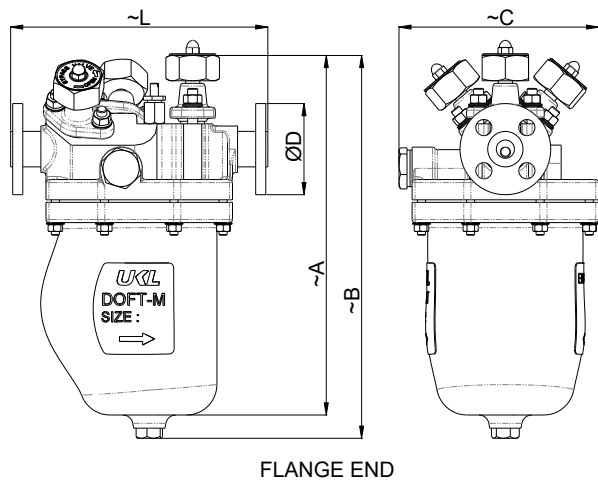
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# Double Orifice Ball Float Steam Trap Module

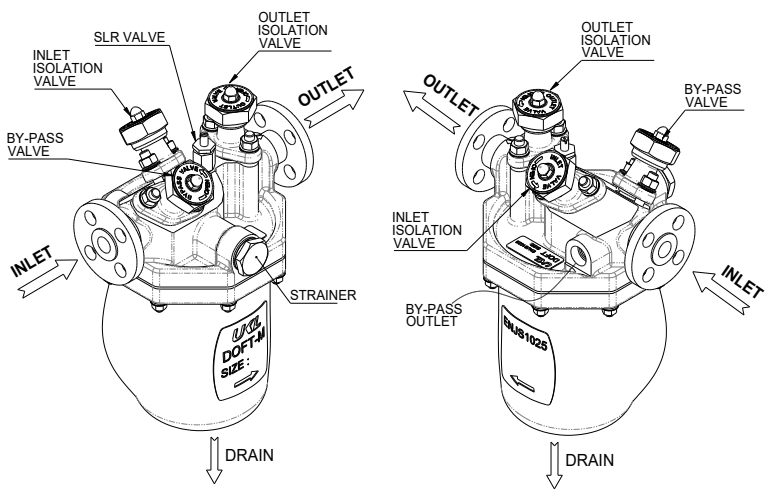
## Model :DOFT-M

### Compact Module with high discharge capacity

#### GENERAL ARRANGMENT:



GENERAL DIMENSIONS						
SIZE	END CONNECTION	~L	ØD	A	B	C
15 NB	Flange End #150	255	90	375	400	200
20 NB	Flange End #150	255	100	375	400	200
25 NB	Flange End #150	259	110	375	400	200
15 NB	Flange End #300	259	95	375	400	200
20 NB	Flange End #300	259	115	375	400	200
15 NB	Flange End #PN10 / PN 16	259	95	375	400	200
20 NB	Flange End #PN10 / PN 16	263	105	375	400	200
25 NB	Flange End #PN10 / PN 16	263	115	375	400	200

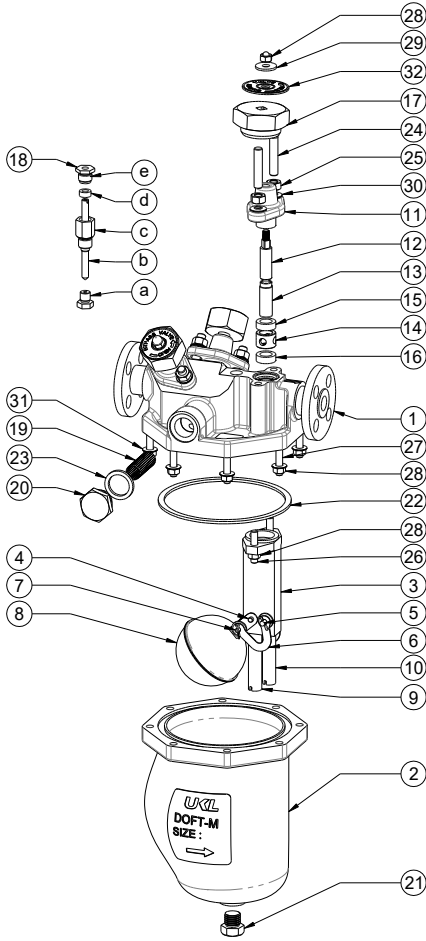


RECOMMENDED TIGHTENING TORQUES		
Sr.	PART NAME	TORQUE Nm
20	Strainer Cap 3/4" NPT – A/F-36mm	110-120
21	Drain Plug 1/2" NPT – A/F- 24mm	100-110
24	Stud M10x50L	47-50
25	Nut M10	55-60
26	Stud M8x40L	47-50
27	Stud M8x50L	47-50
28	Nut M8	55-60

UKL-DOFT-M-R00-OCT-2021



## Double Orifice Ball Float Steam Trap Module Model : DOFT-M Compact Module with high discharge capacity



BILL OF MATERIAL OF DOFT		
No.	PART NAME	MATERIAL CODE
01	Body	ENJS 1025
02	Cover	ENJS 1025
03	Controller Housing	ASTM A276 Gr. TP.316 / AISI 316
04	Main Valve Pin	ASTM A276 Gr. TP.316 / AISI 316
05	Secondary Valve Pin	ASTM A276 Gr. TP.316 / AISI 316
06	Lever Bracket assly	AISI 316
07	Floating Pin	AISI 304 / AISI 316
08	Float assly	AISI 304 / AISI 316
09	Main inlet pipe	AISI 304 / AISI 316
10	Secondary inlet pipe	AISI 304 / AISI 316
11	Bonnet	ASTM A105
12	Spindle	ASTM A276 Gr. TP.410 / AISI 410 / AISI 316
13	Piston	AISI 430
14	Lantern Bush	ASTM A276 Gr. TP.410 / AISI 410 / AISI 316
15	Upper Valve Ring	KLINGER STD.
16	Lower Valve Ring	KLINGER STD.
17	Hex Handwheel	ASTM A105
*18	SLR Assly / TV	AISI 304
19	Strainer	AISI 304
20	Strainer Cap	ASTM A105
21	Drain plug	ASTM A105
22	Cover Gasket	SPW SS316 / SS 304 WITH GRAPHITE FILLER
23	Gasket for Strainer Cap	SPW SS316 / SS 304 WITH GRAPHITE FILLER
24	Stud for bonnet	ASTM A193 Gr. B7
25	Nut for Bonnet	ASTM A194 Gr. 2H
26	Stud for Controller Housing	ASTM A193 Gr. B7
27	Stud for Cover	ASTM A193 Gr. B8 / B7
28	Nut for cover	ASTM A194 Gr. 8 / 2H
29	Plain washer	AISI 304
30	Belleville Washer for bonnet	50 Cr V4
31	Belleville Washer for Cover	50 Cr V4
32	NAME PLATES	AISI 304

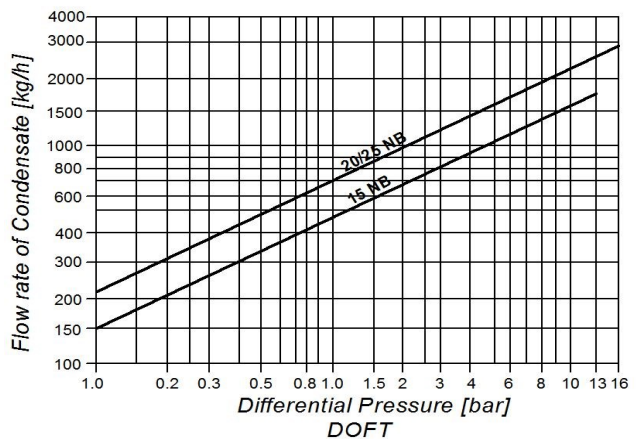
\*Note: Optional

BILL OF MATERIAL OF SLR – PART NO 18		
No.	PART NAME	MATERIAL CODE
a	SLR Valve Seat	AISI 304
b	SLR Stem	AISI 304
c	SLR Stem guide	AISI 304
d	SLR Graphite Packing	GRAPHITE
e	SLR Stem guide lock nut	AISI 304

### SPARES AVAILABLE:

Controller Assembly –(3, 4, 5, 6, 7, 8, 9, 10) Full set  
 Valve Assembly- 11, 12, 13, 14, 15, 16, 17  
 SLR / Thermostatic Air Vent- 18  
 Gasket- 22, 23  
 Strainer -19

### CAPACITY CHART :-



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**Double Orifice Ball Float Steam Trap Module  
Model :DOFT-M  
Compact Module with high discharge capacity**

**Product range**

- UTD 55 | UTD 62 | UTD 120**  
Thermodynamic steam Trap
- UTST | UCT10**  
Thermostatic steam trap & Sanitary steam trap
- UFT 15 to 100 NB | UCA 20**  
Float trap for steam and compressed air application
- UG 25/45 | UP 64Ti | UP 110Ti | UP 215Ti**  
Bi-metallic steam trap
- UITVS**  
Compact trap valve station
- UIBT 28US**  
Inverted bucket steam trap in complete stainless steel Construction
- UIBT 1701 to UIBT 7004**  
Inverted bucket steam trap in cast carbon steel Construction
- UDCV**  
Non-slam disc check valve
- UMS**  
Baffle type moisture separator for steam and air
- UAV**  
Air vent(thermostatic type) with air bottle for steam
- UAE**  
Air eliminator for liquid application
- UBSV**  
Bellow seal globe/gate valve
- UHPV**  
High pressure(#1500/#2500) globe/gate valve
- USTR**  
Y & T type strainers in cast carbon steel and stainless steel
- USG**  
Double window sight glass
- USI**  
Steam injector for boiler feedwater
- UFV**  
Flash separator(recovery) vessel
- UPPPU**  
Condensate pressure powered pump unit
- UDH**  
Deaerator head(atmospheric) for boiler feedwater tank
- UAPT**  
Automatic pumping trap – Combination of a conventional trap and pump for effective condensate discharge
- UCCDS**  
Online(24X7) condensate contamination detection system
- UBBHRS**  
Boiler blowdown heat recovery system
- UPRS**  
Pressure reducing station
- UCCM / USDM**  
Condensate collection and steam supply manifold
- UAM**  
Utility Automation Module

**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 Sheetting / Cut Gaskets, Spiral Wound Gaskets.

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



**UNI KLINGER LIMITED**

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

**Central Sales Office & Pune Branch :** SC1, 5<sup>th</sup> Fl., Kohinoor Est. Mumbai-Pune Highway, Kadaki, Pune-411 003. Tel.: +91-20-4102 3000 Fax.: (020) 4102 3001  
e-mail : [salescsco@uniklinger.com](mailto:salescsco@uniklinger.com), [salespune@uniklinger.com](mailto:salespune@uniklinger.com). Website : [www.uniklinger.com](http://www.uniklinger.com)

**Factory :** C-37, M.I.D.C., Ahmednagar – 414 111, Maharashtra, Tel. : 0241 – 2777223 / 2777512 Fax : 0241 – 2777294, E-mail : [fdworks@uniklinger.com](mailto:fdworks@uniklinger.com)

**Branch Offices :**

**Baroda :** 102, 1st Floor, Ofel Towers-II R.C. Dutt Road, Baroda-390 005, Tel.: 91-0265-2312343 / 2340660, Fax.: 91-265-2341419. E-mail : [salesbar@uniklinger.com](mailto:salesbar@uniklinger.com)  
**Chennai :** East Coast Centre, 5<sup>th</sup> Floor, 553, Mount road, Teyanampet, Chennai- 600 018, Tel.: 91 - 44 - 24345707. Fax.: 91 - 44 - 24343960. E-mail : [saleschen@uniklinger.com](mailto:saleschen@uniklinger.com)  
**Kolkata :** 9, Chittrakoot, 8th Floor, 230 A, A.J.C Bose road, Kolkatta-700 020, Tel.: 91-33-22872510, Fax.: 91-33-22876494. E-mail : [salescal@uniklinger.com](mailto:salescal@uniklinger.com)  
**Mumbai :** 714, ECSTASY, City of Joy complex J.S.D road, Mulund (w) 400080, Tel.: 91-22-25421140 / 91-22-25440461, Fax.: 91-22-25440463. E-mail : [salesmum@uniklinger.com](mailto:salesmum@uniklinger.com)  
**Delhi :** 1003, 10<sup>th</sup> floor, Indraprakash bldg, 21 Barakhamba Rd, Cannanught place, New Delhi 110001 Tel.: 91-11-41658767 / 91-11-26193847, Fax.: 91-11-41658768. E-mail : [salesdel@uniklinger.com](mailto:salesdel@uniklinger.com)