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### 1.Product Overview:-

Air and other non condensable gases reduces the heat transfer rate and increases corrosion in the system. Thus decreases the efficiency and life of system. It is necessary to remove this trapped air and other non condensable gases from system.

This can be achieved by UKL Air Vent Module.

UKL Air Vent has Thermostatic Balanced pressure trap with unique Simple design, minimum number of components and where the Bellow is enclosed and protected, thus ensuring long life for the Bellows.

The UKL Air vent is available as a complete module to assemble on pipelines and equipments or as a individual vent to be fitted as required.

UKL Air Vent made in Carbon Steel and Klinger piston valve is provided for isolation purpose. A temperature Gauge is provided with the complete module.

### 2. Working Principal :-

Air temperature is used to open the outlet port of Air vent by contracting the capsule, discharging trapped air in low temperature. This module works on the difference in Enthalpy of steam and air. A capsule attached to a Bellow filled with fluid, which expands and contracts in response to the rising/lowering of Enthalpy. Thereby shutting and opening the valve. Trapped air has lower Enthalpy, causing the bellow to contract and the seat to retract which opens the valve and allow air to flow out and expands as soon as it comes in contact of hot steam, causing seat to close the valve.



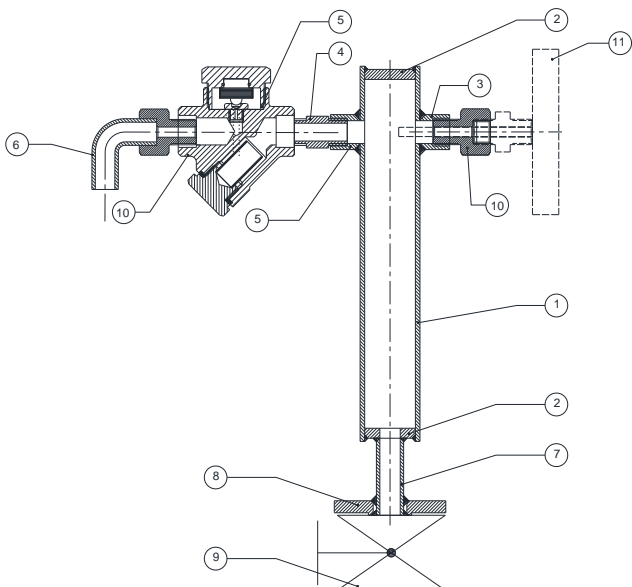
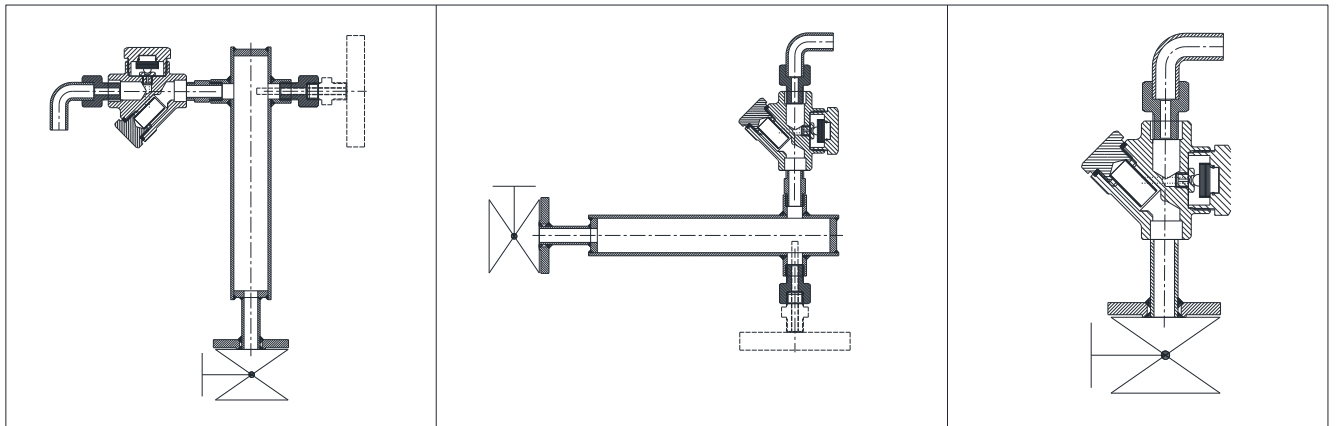
### 3. Installation and Commissioning Instructions:

UKL make Air vent will provide you with long, trouble-free service if they are correctly installed and maintained.

A few minutes of your time spend reading these instructions now may save hours of trouble and downtime later.

- Before installing Air vent, the inlet piping should be carefully blown down to remove any existing pipe debris.
- The drain point of air vent should located at higher elevation so that air flows easily into the vent. This point needs to be properly placed.
- An arrow mark is punched on every trap body showing the flow direction. Install the air vent by fixing the inlet & outlet ports accordingly.
- It must be carefully noted that air vent consist of Thermostatic trap which works on expansion/compression of capsule containing hydrocarbon, so can be mounted vertical as well as horizontal.
- The Air vent can be installed at steam lines, steam headers and on process equipment to remove the trapped air.

### AV MODULE/AIR VENT RECOMMENDED MOUNTING:-



PART NO.	PART NAME	MATERIAL	MATE. CODE
1	SEAMLESS PIPE 1 1/2" SCH. 40	CARBON STEEL	ASTM A 106 Gr. B
2	END PLATE .	CARBON STEEL	ASTM A 515 Gr. 60 OR ASTM A 515 Gr. 70
3	HALF COUPLING (F) 1/2" NPT CLASS 3000	FORGED STEEL	ASTM A 105
4	DOUBLE ENDED NIPPLE (M) 1/2" NPT	FORGED STEEL	ASTM A 105
5	THERMOSTATIC TRAP 1/2" NPT [F]	FORGED STEEL	ASTM A 105
6	BEND 1/2" SCH. 40	CARBON STEEL	ASTM A 106 Gr. B
7	SEAMLESS PIPE 1/2" SCH. 40	CARBON STEEL	ASTM A 106 Gr. B
8	SORF / SWRF FLANGE 1/2" A 300	CARBON STEEL	ASTM A 515 Gr. 70 OR ASTM A 105
9	ISOLATION VALVE 15 N.B. CLASS 300 CONNECTED WITH GASKET, BOLT & NUT.	CAST STEEL	ASTM A 216 Gr. WCB
10	CONNECTOR	FORGED STEEL	ASTM A 105
11	TEMP. GAUGE 1/2" BSP, 3" DIAL	S.S.	S.S.

## **4. Maintenance and Troubleshooting:**

### **MAINTENANCE:**

#### **Strainers**

This trap is fitted with an in-built strainer.

Please ensure that the strainer is clean.

It is necessary to clean the strainer periodically.

Unscrew filter cap using spanner.

Withdraw filter and clean.

If damaged replace with new one.

### **TROUBLESHOOTING:**

#### **Air Vent is leaking live steam.**

The most likely reason for this is possible deposition of dirt on the valve seating area. Please ensure that the strainer screen is removed and cleaned properly. It is necessary to inspect the seat and spindle of any dirt deposition. If this is noticed, clean the surfaces and refit. If the problem persists, contact UKL.

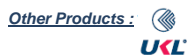
#### **Isolation valve leaks when the valve is closed.**

Close the hand wheel fully and make sure that the valve is closed. Tighten the bonnet bolts evenly. This compresses the valve sealing rings against the body and the Piston. This process can be repeated whenever valve leaks till the bonnet touches and seats on the body. When bonnet is resting on body, this is the indication that valve sealing rings are worn out and needs to be replaced.

Attend to the isolation valves as soon as leakage starts for getting long life of resilient rings. Prolonged internal leakage can cause scratches/wear on the metallic Piston or resilient valve sealing rings. Damaged components will have to be replaced, if leakage continues.

### **5. Storage:**

- Air Vent Module and the respective spares should be stored only in enclosed dry rooms in a non-aggressive atmosphere. Fully assembled Air Vent must be stored as supplied by UNI KLINGER. Spare parts must be handled with care and should be stored in their original packing.
- It is recommended to take protective measures if parts are stored in dusty conditions.
- The ambient temperature in store room must be between -4 °F and +122 °F.
- Sudden change in temperatures must be avoided.
- Any damage due to inappropriate storage shall release UNI KLINGER of any obligations derived from warranty, guarantee, and product liability.



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**

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

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